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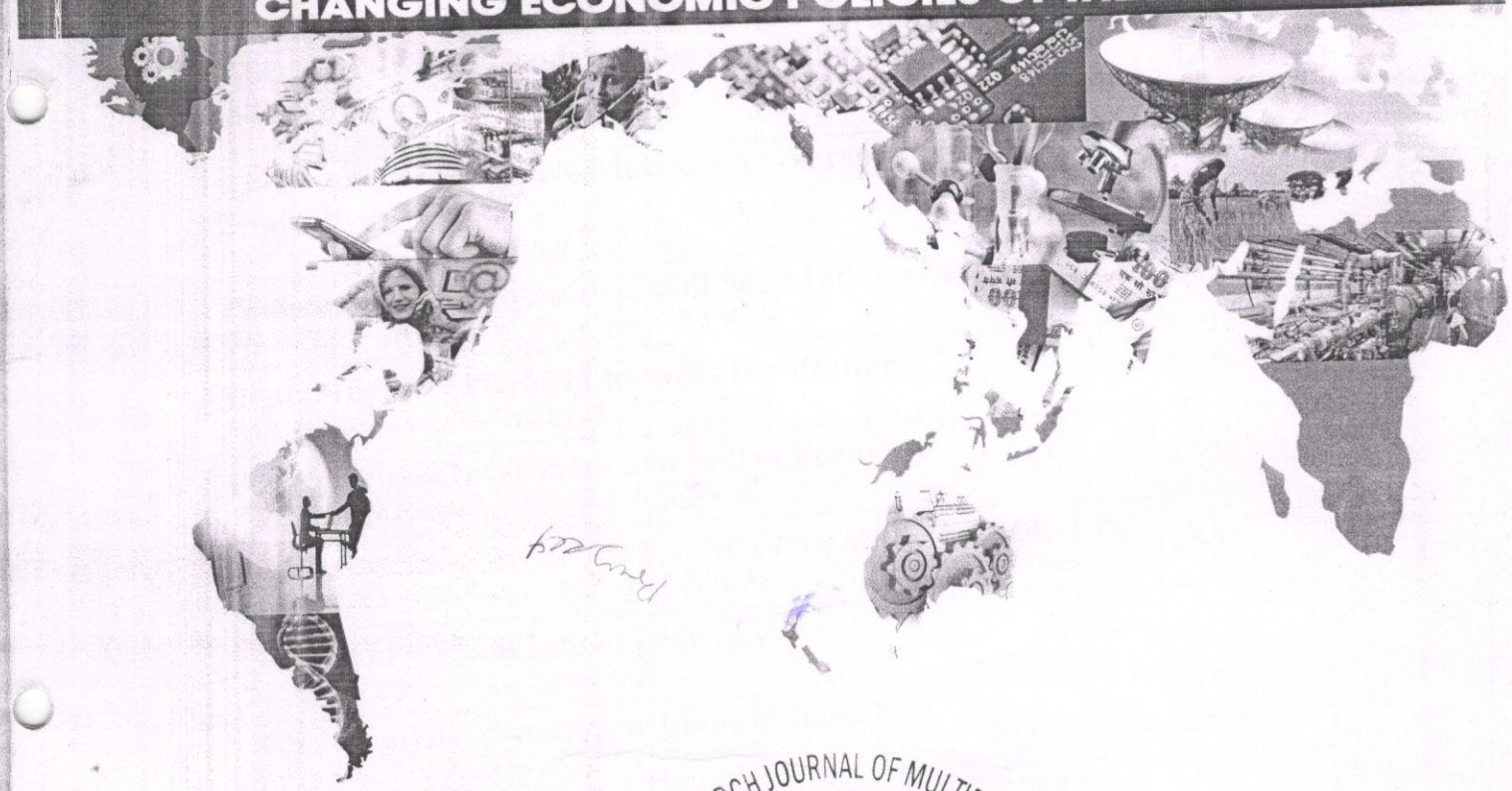
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT



INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES

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The Need and Objectives of GST Reform

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Abstract

The paper describes alternatives to the Dual GST already endorsed by the Empowered Committee, not because they are superior in any way to the Dual GST, but to allow a fuller discussion of the trade-offs involved in the choice among them. The last section provides a discussion of the issues that arise in the taxation of cross-border transactions, both inter-state and international. It is some of these aspects of the proposed GST that are the subject matter of this paper. We focus on the essential questions relating to the Dual GST design, and first discuss the need for, and the objectives of GST reform. An important question in this regard is the feasibility of, and the rules for, taxation of inter-state supplies of services.

Introduction

The basic objective of tax reform would be to address the problems of the current system discussed above. It should establish a tax system that is economically efficient and neutral in its application and simple to administer. The important objective of tax reform is simplification of tax administration and compliance, which is dependent on three factors. The first determining factor for simplicity is the tax design itself.

The second factor is the infrastructure for tax administration, including the design of tax forms, data requirement s, system of tax rulings and interpretations, and the procedures for registration, filing and processing of tax returns, tax payments and refunds, audits, and appeals. A modern tax administration focuses on providing services to taxpayers to facilitate compliance. It harnesses information technology to enhance the quality of services, and to ensure greater transparency in administration and enforcement.

The third factor in a federation such as India is the degree of harmonization among the taxes levied by the Centre and the States. The Empowered Committee has already indicated a preference for a dual GST, consisting of a Centre GST and a State GST. Under this model, harmonization of the Centre and State GSTs would be critical to keep the overall compliance burden low. Equally important is harmonization of GSTs across the states.

Ahmad and Stern (1991) analyze the optimal pattern of tax rates implied by a given degree of aversion to poverty and concern for the poor. At high levels of concern for the poor, one would reduce the tax on cereals (but not dairy products) and increase the taxes on non- food items (specified). Thus, a differentiated overall structure appears desirable for a country in which the government has consistently expressed a concern for the poor.

However, individual taxes should not be highly differentiated, as that complicates administration and makes it difficult to evaluate the overall effects of the tax design. This applies particularly to value-added type of taxes. In principle, a single rate (or at the most two-rate) VAT, together with subsidy and spending measures could achieve the desired distributional effects, for reasonable degrees of inequality aversion of policy makers. In particular, it is important from an administrative perspective that close substitutes should not be taxed at very different rates—to avoid leakages and distortions. Revenue considerations suggest that the tax base should be broad, and comprise all items in the consumer basket, including goods, services, as well as real property. As argued in Ahmad and Stern (1991), distributional or sectoral concerns have been at the heart of the excessive differentiation of the Indian tax system —but that the objectives are negated by the cascading effects

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of the taxes. While an optimal design of the consumption tax system, taking into account both production efficiency and distributional concerns, would not imply uniformity of the overall tax structure, the desired structure can be achieved by a combination of taxes and transfers.

Generally, the more rational and neutral the tax design, the simpler it would be to administer and encourage compliance. If the tax is levied on a broad base at a single rate, there would be few classification disputes and the tax-specific record keeping requirements for vendors would be minimal. The tax return for such a system can be as short as the size of a postcard. It would simplify enforcement, and encourage voluntary compliance. Multiple VAT rates become a source of complexity, and disputes, for example, over borderlines, adding to the costs of tax administration and compliance. It is for this reason that countries like New Zealand, Singapore, and Japan have chosen to apply the tax at a low and uniform rate, and address any concerns about vertical equity through other fiscal instruments, including spending programs targeted to lower-income households (Bagchi et al 1994)

Fiscal Autonomy and Harmonization

In Australia, the GST is a single national levy and all the GST revenues collected by the center are returned to the states. Indeed, such political-economy compromises have been adopted by China and Australia. Should the Centre and the States then have complete autonomy in levying and collecting the taxes within the parameters specified in the Constitution, or should they voluntarily or otherwise conform to certain common principles or constraints? Should they collectively agree to have their individual taxes consolidated into a single national tax, the revenues from which get shared in some agreed manner among the constituent units? Such a system would have much to commend itself from the perspectives of economic efficiency and the establishment of a common market within India. It goes without saying that the power to govern and to raise revenues go together. An important consideration in the design of reform options is the degree of fiscal autonomy of the Centre and the States. China moved to a centralized VAT with revenue sharing with the provinces — ensuring that provinces got as much revenues as under the prior arrangements, plus a share of the increment. The Constitution of India lays down a clear division of powers between the Centre and the States, including the power to levy taxes.

The Central Sales Tax (CST) in India provides a very useful for model for such harmonization. This was the case under the previous State sales tax system, under which inter-state tax rate wars became a race to the bottom. Harmonization should allow greater exploitation of the benefits of a common market. The CST is a state-level tax, applied to inter-state sales of goods, based on the origin principle. Rather, this is a framework that facilitates more efficient exercise of taxation powers, and all jurisdictions would be worse off without harmonization Even today, they all suffer because of lack of harmonization of information and technology architectures, as a result of which they are unable to share information on inter-state trade. It is a perfect example of absolute harmonization with the States enjoying the risks and rewards of ownership of the tax.

It is worth emphasizing that harmonization should not be viewed as constraining the fiscal autonomy of the Centre or the States. The tax law (including the base, rates, and the procedures) is enacted by Parliament, but the States collect and keep the tax.

Centre and State Taxation Powers

The Constitution divides taxation powers between the Centre and the States by sector (e.g. agriculture, manufacturing, and land and property) or type of taxes (e.g., luxury tax, tax on the sale or purchase of goods, and excise duty). The current division of taxation of powers under the Constitution is constraining for both the Centre and the States. Neither is able to design

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comprehensive and neutral tax on goods and services of the type found in modern tax systems. A notable feature of the current division is that the two levels of government have no area of exclusive jurisdiction, with the exception of stamp duties (Ahmad et al. 2008)

While such a review is beyond the scope of this paper, our discussion of alternative options in the next section proceeds with the assumption that suitable constitutional amendments would be made to enable the implementation of the chosen option. Thus, the current search for options for tax reform assumes a review of the existing Constitutional arrangements, which may well require a substantial realignment. For example, the dual GST would require giving the Centre and the States concurrent indirect taxation powers, subject to prohibition on extra-territorial taxation, i.e., that the incidence of tax be restricted to consumption within the territory of the taxing jurisdiction.

Dual GST

Even the more recent variant recognizes that there would be a set of inter-state services for which the place of destination would be difficult to determine. Both the Central Government and the Empowered Committee appear to favor this model. While full details of the model are still awaited, two variants have been identified in public discussions so far. The State GSTs would largely be confined to goods only, with minor changes from the current State VATs. Under the more recent variant (Rajaraman, et al. 1999),11 both goods and services would be subject to concurrent taxation by the Centre and the States. The initial variant, discussed in November, 2007, entailed both the Centre and the States levying concurrently the GSTon goods, but most of the services (except services of a local nature) remaining subject to the Centre GSTonly. The State tax on these services would be collected by the Centre, and then apportioned among the States in some manner. This variant is closer to the model recommended by the Kelkar Committee in 2002. (Kelkar et al. 2004)

The main difference between the two variants is in the treatment of services, reflecting apprehensions about the feasibility of defining the place of supply (i.e., destination) of inter-state services. The Central GST would thus apply to both goods and services, extending to the entire supply chain, including wholesale and retail trade. Under this model, the tax is levied concurrently by the Centre as well as the States.

National GST

Tax design and collection are controlled by the Centre, but the provinces have some flexibility to vary their tax rate. The revenues from the tax are shared among the participating provinces on the basis of consumer expenditure data for the participating provinces. In Austria, and Germany, the tax design is controlled by the Centre, but states collect the taxes. The States may also be apprehensive that the revenue sharing arrangements would over time become subject to social and political considerations, deviating from the benchmark distribution based on the place of final consumption. Indeed, some control over tax rates is a critical issue in achieving accountable sub-national government and hard budget constraints (Ambrosiano and Bordignon, 2006). However, the States may worry about the loss of control over the tax design and rates. There are several models for such a tax. The Rajaraman Report also did not favor this option for the fear that it would lead to too much centralization of taxation powers. In going to this model, the Centre had assure the provinces that they would continue to get what they did under the previous arrangement and that changes in revenue shares would be phased in over an extended period of 15 years.

Under the Canadian model of the Harmonized Sales Tax (HST), the tax is levied at a combined federal and provincial rate of 13 percent (5% federal rate, 8% provincial rate) in the three participating provinces. Australia is the most recent example of a national GST, which is levied and

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collected by the Centre, but the proceeds of which are allocated entirely to the States (Can Department of Finance,1987).

In China, the VAT law and administration is centralized, but the revenues are shared with provinces. Under this option, the two levels of government would combine their levies in the fo of a single national GST, with appropriate revenue sharing arrangements among them. The could be controlled and administered by the Centre, States, or a separate agency reporting to the In Mexico, the establishment of a VAT at the center replaced state sales taxes, but had to be part a political-economy compromise that assured the states an automatic share of the revenu generated from all federal taxes. A single national VAT has great appeal from the perspective establishment and promotion of a common market in India. This has led to incentive problems. some of the Länder have begun to use tax administration measures to achieve tax policy goals.

Conclusion

Opportunities for a fundamental reform present themselves only infrequently, and thus need to b pursued vigorously as and when they do become available. Achieving the correct choice is then political economy balancing act that takes into account the technical options and the differing need and constraints of the main partners. As the choices made today would not be reversible in the nea future, one needs a longer-term perspective. It can pave the way for modernization of ta administration - make it simpler and more transparent – and significant enhancement in voluntar compliance. The Empowered Committee describes the GST as "a further significant improvement the next logical step - towards a comprehensive indirect tax reforms in the country." Indeed, it ha the potential to be the single most important initiative in the fiscal history of India.

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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Review on Green computing to save environment and power management

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Abstract:.
Computers are used everywhere in human life hence computer consumes more electricity.Toxic, carbon dioxide produce by computer material. But use of computer is necessary in human life. Existence of Green Computing to overcome negative effect of computer to environment.Green computer solves the problem of power consumption of computer system. It also provides technique to minimize pollution by computer material. Moreover, thousands of computing devices are manufactured every day and the same amount of old computers is being thrown away loading up the e-wastes. So it is highly important to manage these computing devices in such a way that they last longer and even if they are disposed of, they shouldn't cause much harm to the nature. Green computing can take many forms in itself. Green technology focuses on reducing the environmental impact of industrial processes and innovative technologies caused by Earths growing population It has taken upon itself the goal to provide society's needs in ways that do not damage or reduce natural resources. It is mainly used to protect environment, optimize energy consumption and keeps Green environment. The main goal of green computing is that increasing energy efficiency and reducing the use of harmful materials. Green computing ultimately focuses on ways in reducing overall environmental impacts. It require the integration of Green computing Practices such as recycling, electronic waste removal power consumption, virtualization, improving cooling technology, and optimization of the requirements. The major power consumption components are processors and the main memory in the servers.This paper gives idea of saving energy & environment which helps to save money.

Keywords - Energy Efficiency, Electronic Waste, Green Computing, Power Consumption, and Recycling.

Introduction

In today's world computers are most important part of human life. Because of speed, storage capacity & programming ability computers are used in everywhere in human life. But more use of computer creates harm to environment.With increasing energy cost and growing environmental concerns, green computing is receiving more and more attention. It is because the pollution or effect of harmful rays in the environment has started to affect the health of the individuals directly.Green computing refers to the study of designing, engineering, and proper usage and disposal of computing devices in such a way that it reduces their impact on the environment. Green computing holds green infrastructure and refers to the efficient and effective handling of computers, servers and accessories such as, printers, monitors ,networking/communicationgadgets and storage devices with minimal or zero environmental impact by studying and adoptingglobal best practice in their design, manufacture, usage, and disposal. The goal of green computing is reduce the use of harmful material, maximize energy efficiency during the product's lifetime, and promote recyclability of obsolete product and factory waste.

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Technology Environment

Many of the technologies we use every day consume a lot more resources and power than they need to, and using and manufacturing them can create a mess. Here are a few of the ways that technology can harm the environment:

- **Consuming resources** - Non-renewable resources, including precious metals like gold, are used to make technology. Many others, such as coal, are consumed to generate the electricity to use technology. Even some renewable resources, like trees and water, are becoming contaminated or are used up faster than they can renew themselves because of technology.
- **Waste** - Manufacturing technology creates large amounts of waste, and used computers and electronics get thrown out when they break or become outdated. Called "techno trash," these electronics contain all sorts of harmful materials that are very unsafe for the environment. They need to be disposed of using special methods.
- **Health Hazards**- Using toxic materials that can harm our health can cause cancer, and technology addiction can lead to other health problems like obesity and carpal tunnel syndrome.

You can encourage manufacturers by choosing to buy more energy-efficient and less hazardous electronics and by supporting companies that make protecting the environment a priority. You can also do your own part to reduce environmental impact by not being wasteful and disposing of your electronics safely and properly.

Negative effects of E-waste

E-waste refers to thrown out electronic equipment like printers, Televisions, mobile phones, computers etc. which are harmful to our ecosystem if not disposed properly. Proper recycling and disposal of E-waste is important to safeguard our earth from Environmental pollution.

Electronics for consumers are being treated like disposable items more and more every day. One major factor causing this trend is that companies are endlessly marketing new technologies to us, which effectively render recent products as obsolete. . By 2005 the lifespan had shrunk down to less than two years. In 2016, that number shrunk even further with the introduction of more and more devices. Compounding the problem is the fact that we are disposing of electronic waste (e waste) improperly.

Effect of e-waste on Human Health

Electronic waste affects nearly every system in the human body because they contain a plethora of toxic components including **Mercury, Lead, Cadmium, Polybrominated Flame Retardants, Barium** and **Lithium**. Even the plastic casings of electronics products contain **Polyvinyl Chloride**. The health effects of these toxins on humans include birth defects, brain, heart, liver, kidney and skeletal system damage. They will also significantly affect the nervous and reproductive systems of the human body.

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Toxic Materials	Birth Defects	Brain Damage	Heart, Liver, Lung & Spleen Damage	Kidney Damage	Nervous/ Reproductive System Damage	Skeletal System Damage
Barium		X	X			
Cadmium	X		X	X	X	X
Lead	X	X		X	X	
Lithium	X	X	X	X	X	
Mercury	X	X	X	X		
Nickel	X		X	X	X	
Palladium	X	X	X	X		
Rhodium			X			
Silver	X	X	X	X	X	

Effects of E-waste on Environments in Third World Countries

E-waste adversely affects our developing nations. Instead of responsibly recycling our electronic devices, America sends our e-waste to these countries. when e-waste disposal is not subsidized, the pollutants from our electronic waste can end up in toys for our children that are sent back to us. Instead of exporting e-waste, or letting it rot in landfills, we can help our environment by returning our electrical products to stores and manufacturers, sending them to responsible recycling centers, selling them to people that will find them useful, or donating them to stores such as Goodwill donation center.

Poor E-Waste Management Effects Data Security through Improper Data Destruction

Proper recycling and disposal of electronics is not only important for the environment but it also has a big impact on data security as well. When e-waste is disposed of improperly and without the use of a company that specializes in proper data destruction, there is a severe risk of identity theft, data breaches and massive liability for the companies involved. Prior to disposing of IT Equipment improperly, always consider all aspects, including data security and liability in addition to the environmentwaste is not a problem . In fact it is only going to get worse. By 2017, the volume of our thrown away e-products throughout the world is expected to rise by

33 % from 2012, and we can expect the weight of this garbage to equal eight of the Great Pyramids of Egypt. The amount of e-waste that we produce, including computers, DVD players, cell phones and global positioning products, could rise by a whopping 500% over the next decade in countries such as India. It is crucial to know the effects of e-waste on the environment, and what we can do to stop it.

Before you recycle your **techno trash**, check out these tips:

Sanitize your Hard Drive

Before donating a machine, be sure to remove all of your files and data from it. Most people will just try to drag everything to the trash can or recycle bin, but this only partially erases the information! Cyber criminals can find this “deleted” information and use it however they want. To really protect yourself, you need to run a program that “sanitizes” your hard drive. These programs, which can be found online, work by replacing all your data with a jumble of useless nonsense. That way, your information is safe, and your good deed goes unpunished!

Consider Donating your Mobile Device

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There are actually a LOT of great things your old mobile devices can do for people. Whether that means helping soldiers overseas talk to their families or helping victims of domestic violence, they can be a lot more than clutter for your junk drawer.

Raise Some Funds

Because electronics contain precious metals including gold, silver andcopper,technotrashcan actually be worth a little money.

Reuse Those Ink Cartridges

Many locations that sell new printer ink cartridges will refill your old cartridge for a fraction of the cost. Each cartridge you throw away takes anywhere between 400 and 1,000 years to decompose, and on average, there are 11 cartridges thrown out every minute across the globe! Not all cartridges can be refilled, and even cartridges that you've filled in the past will eventually break down after continual use.

While some of the impact of computers and the Internet has unfortunately been negative, much of it has also been positive. Here's just a few of the ways that technology is helping to improve the environment:

- It helps us develop and produce new materials and technologies that are sustainable and do not harm the environment, so we can eventually stop using ones that do harm it.
- It allows for paperless communication like email and online bill paying to reduce the amount of trees cut down
- It allow us to monitor and study our environment to better understand how it works and the impact of our actions on it
- It allows us to have a worldwide virtual laboratory, so that experts from all fields can share their research, experience and ideas to come up with better, smarter solutions. Not only does this allow people far away from each other to work together, but it also reduces the environmental impact people would normally cause from traveling to meet with each other
- It helps us create smarter technologies that respond to how we use them and adjust themselves to reduce their environmental impact, such as lights that can sense when no one is in the room and automatically turn off.
- It allows companies to reduce shipping and manufacturing impact and to reach a broader audience

Green Computing

Green computing refers to the study of designing, engineering, and proper usage and disposal of computing devices in such a way that it reduces their impact on the environment.Now we will discuss green computing in detail.

Advantages and Disadvantages

Advantages:-

- Saving energy and recourses save money.
- Green computing includes changing government policy to encourage recycling and lowering energy used by individuals and business..
- Conserving resources means less energy is required to produce,use and dispose products therefore automatically lower energy cost.
- reduced health risk for computer workers and recyclers.
- Reduced environmental impact..

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Disadvantages:

- Green computing could actually be quit costly.
- Rapid technology change.
- .Green computing could actually be quit costly.

GREEN COMPUTING SAVE ENVIRONMENT

Green Computing save the environment from pollution by computer material .Different ways are provided in green computing for environmental benefit

- Recycle the computer material
- Minimize carbon Emission: The computer material generate gaseous such as methane(CH4), nitrous oxide (NO2) and fluorocarbons (CCl4).Temperature of earth is increasing because of this gases .In green computing companies are started manufacturing computer material which generate less amount of such gases.
- Reduce Paper wastage. In computer operation we use more papers for printout purpose which is wastage.

Here are some suggestions for reducing waste:

- Take less amount of printout to save paper or indirectly save trees. Try to use store much amount of data on storage devices.
- Recycle waste paper as many times as you can.
- It is necessary to plant trees to maintain environmental stability
- Reuse ink cartridge.

Sometimes people can get so excited about using a new technology that they overlook the negative impact on the environment. But, it's very important that we use technology in the smartest and most responsible manner, so that we are solving problems, not creating more for the future.

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e-CycleRecycling Old Tech - It's the Law

Takeaway: *Many people are accustomed to throwing out their old technology with the trash, but new laws are enforcing proper disposal of unwanted electronic devices.*

- More companies are making the effort to "go green" and are responsibly recycling their used and outdated electronic devices. However with the hazardous chemicals and confidential data contained inside of these devices, recycling e-Waste is more involved than taking your used mobile phones and tablets to a recycling center or trading them to reseller companies online.
- Now more than ever, it is essential for businesses to partner with a credible electronics recycler and ensure that their mobile phones and tablets, as well as the sensitive data stored inside, are recycled properly. Companies need to research their current asset recovery companies and their processes. Partnering with the wrong electronics recycler can be extremely hazardous not only for the environment but also for the business.
- Many organizations may think that they are acting responsibly when recycling with an electronic buyback company when in fact, their mobile devices could be causing severe damage to the environment. The EPA reports that 70-80% of "reputable" recyclers are sending e-Waste to remote villages in developing countries where the use of cheap and sometimes slave labor is used to reclaim the precious metals inside electronic devices.
- In addition to the impact e-Waste has on developing nations, the improper handling of electronic devices also poses a threat to the confidential business information stored on these devices. Many enterprises rely on corporate-liable smartphones and tablets for their day-to-day business and consequently mobile devices contain an abundance of private data. For these reasons, businesses must investigate their mobile recycling partners and trust that they will provide the utmost data security and deletion processes.

Green Computing Saves Power

One of the advantages of green computing to reduce the Power Consumption. Different technics are used to save power

- Keep computer in Standby mode when it is not in use and therefore it can be reduced the energy consumption by 70% to 80%.
- Activate "hibernate" or "deep sleep" mode can reduce the energy consumption by 96% as offering greater savings.

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- Desktop computer uses six times more energy than laptop as much as 80% less? When we consider about monitors, large Cathode Ray Tube (CRT) monitors and high resolution models use more energy than small ones. The Liquid Crystal Displays (LCDs) which are used in laptop computers are more energy efficient and also the use 10% - 20% of power.
- Power management devices are used in computing environment.
- GE's data centre is one of the first in the world to be awarded the Leadership in Energy and Environmental Design (LEED) Platinum Certification. The award is presented by the US Green Building Council for IT projects that go beyond standing codes, implement green technology, and create energy efficient buildings.
- These hot and cold aisle energy efficiency tips aim to help you reduce your energy consumption within the data centre. Take a look to see if you're using a cooling technique that is wasting energy rather than saving it.
- Software programs like Local Cooling can calculate how much electricity your computer uses and adjust the settings of your power options to help minimize it. Physical devices like the Earth Watts Power Supply can help increase the efficiency of your computer's power supply and keep the computer cooler, so the fan doesn't have to work as hard.

The various ways in which one can adopt green computing are as follows:

1. E-waste must never be mixed with the ordinary organic wastes as they become useless once they come in contact with such organic wastes. There are e-waste farms available where all these e-wastes must be disposed of. These e-wastes can then be reused or recycled depending upon the condition in which it is. In any case, this minimizes the stress on the nature and also reduces the piling up of e-wastes.
2. A more friendly approach of green computing is to implement the green design. All the computing devices must me designed in such a way that they pose minimal threat to the nature and their manufacturing doesn't cause much harm either. Designing energy-efficient computers, scanners, printers, projectors and other computing devices holds the key in green design aspect of the green computing.
3. The manufacturing units of the big and established companies and all the subsystems must contribute to minimizing the environmental impacts of the manufacturing processes.
4. Green use refers to a sensible approach towards minimizing the usage of the computing devices, controlling the rate of usage of output devices and having a good check of the machines so that they do not get disposed because of getting out of order.
5. More efficient power supply units must be manufactured. Most of the times it is seen that the systems give the same amount of power no matter how much work are being done. Even if a small task is being performed, a large amount of power is dissipated. Similarly, if the computing device is being operated for many tasks at the same time, still the same amount of energy is being dissipated. This is what causes a waste in power unit dissipation. Hence, efficient power unit manufacturing is the demand of the green computing tactics.
6. Put laptops in "sleep" mode when not in use. The EPA has estimated that this reduces their energy use by 60 to 70 percent –
7. E-cycle used computer equipment. Find a recycler in your area. Also, Staples, the office supply retailer, has now started a recycling program. They will accept any brands of used desktop and

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notebook computers, monitors, printers, fax machines and all-in-one devices with a fee of $10. Smaller items like keyboards, mice and speakers are free to drop off.

8. Buy the new "Smart Strip" power strip. The Smart Strip actually senses how much power your computer peripherals use. And when the Smart Strip senses that you've turned your computer off, it automatically shuts off your peripherals, too, preventing them from drawing an idle current, which is the current drawn even after equipment is shut off.
9. Even better, turn OFF computers and other equipment when not in use. Despite the debate over whether it's better for your computer to be left on or shut off, the fact is it's better for the environment to shut it off. Trust me, your computer can handle it just fine; in fact, computers were designed to be turned off and back on!

Conclusion:The advantage of Green Computing is that saving and conserving energy and resources saves money which will support Economy of the country. Green computing can lead to changing government policy to encourage recycling and lowering energy use by individuals and businesses but could actually be quite costly. Environmental and health risks can be minimized. Regular practices like turning off devices when not in use, or buying energy efficient products to begin with. This will enable the promotion and widespread implementation of green computing principles.Green Computing helps to save environment as well as power. It indirectly help to save money. We know that all companies are moving towards the green computing in order to improve the efficiency of resources they have and to reused the harmful pollutions creating by the companies. A lots of researchers are going in order to improve the quality of the green computing by developing the low power consuming software's and recycling the electronic wastes. If we want to really support the green computing its our individual responsibility to **GO Green.**

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"SPORTS PSYCHOLOGY: STATUS AND IMPORTANCE"

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Abstract

The importance of sports psychology is as academic discipline and applied practice has grown from last three decades. Sports psychology plays a very vital role in enhancing the performance of sportspersons. It deals with the various mental qualities such as concentration, confidence, emotional control and commitment etc., which are important for successful performance in sports and games. Personality, youth sport and coaching are common areas of study of sports psychology. Goal setting, self talk ,imagery and arousal regulations are major techniques used in sports psychology. This paper reviews a status and importance of sports psychology in today's perspective.

Key Words: Sports Psychology, Personality, Goal Setting, self talk, imagery and arousal regulation

Introduction:

Sport psychology has a relatively short past, and in recent years is it becoming far more accepted and utilized as a valuable competitive edge among athletes and coaches.

In 1897, an Indiana University psychologist, Dr. Norman Triplett, wrote what was considered the first scientific paper on sport psychology, on the social facilitation behavior of bicyclists.

In the early 1920's, the first sport psychology laboratory was created in Berlin, Germany, by Dr. Carl Diem. Soon after, sport psychology arrived in America when Dr. Coleman R. Griffith created the first sport psychology laboratory in the U.S., in the state of Illinois. Dr. Griffith also created and taught the first university level courses in sport psychology at the University of Illinois, in 1923. In addition, Dr. Griffith was the first sport psychologist ever hired by a professional sports team, the Chicago Cubs baseball team. For his pioneering efforts, he is considered the father of the science of sport psychology in the United States.

We can define psychology as the study of the human mind, emotions and behavior. Psychology is an academic and applied field. The American Psychological Association (APA) states that sport psychology is the "scientific study of the psychological factors that are associated with participation and performance in sport, exercise, and other types of physical activity." The most important certifying body in sport psychology, the Association for Applied Sport Psychology (AASP), states that they "promote the ethical practice, science, and advocacy of sport and exercise psychology". The first journal "The Journal of Sports Psychology" came out in 1979; and in 1985, several applied sport psychology practitioners, headed by John Silva, believed an organization was needed to focus on professional issues in sport psychology, and therefore formed the Association for the Advancement of Applied Sport Psychology (AAASP). In 2007, AAASP dropped "Advancement" from its name to become the Association for Applied Sport Psychology (AASP), as it is currently known

It can be said that sports psychology plays a very vital role in enhancing the performance of sportspersons. It deals with the various mental qualities such as concentration, confidence, emotional control and commitment etc., which are important for successful performance in sports

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and games. Applied sport and exercise psychology consists of instructing athletes, coaches, teams, exercisers, parents, fitness professionals, groups, and other performers on the psychological aspects of their sport or activity. The goal of applied practice is to optimize performance and enjoyment through the use of psychological skills and the use of psychometrics and psychological assessment.

It is pertinent to mention that the practice of applied sport psychology is not legally restricted to individuals who possess one type of certification or licensure. The subject of "what exactly constitutes applied sport psychology and who can practice it?" has been debated amongst sport psychology professionals, and as of 2011, still lacks formal legal resolution in the United States. For instance, some question the ability of professionals who possess only sport science or kinesiology training to practice "psychology" with clients, while others counter that clinical and counseling psychologists without training in sport science do not have the professional competency to work with athletes. However, this debate should not overshadow the reality that many professionals express the desire to work together to promote best practices among all practitioners, regardless of training or academic background.

There are different approaches that a sports psychologist can use while working with his clients. For example, the social-psychological approach focuses on the social environment and the individual's personality, and on how complex interactions between the two influence behavior. The psycho-physiological approach focuses on the processes of the brain and their influence on physical activity, and the cognitive-behavioral approach analyzes the ways in which individual thoughts determine behavior. Recently some studies have been influenced by an evolutionary psychology perspective.[45] This includes studies on testosterone changes in sports which at least for males are similar to those in status conflicts in non-human primates with testosterone levels increasing and decreasing as an individual's status changes. A decreased testosterone level may decrease dominant and competitive behaviors which when the status conflicts involved fighting may have been important for preventing physical injury to the loser as further competition is avoided. Testosterone levels also increase before sports competitions, in particular if the event is perceived as real challenge as compared to not being important. Testosterone may also be involved in the home advantage effect which has similarities to animal defense of their home territory. In some sports there is a marked overrepresentation of left-handedness which has similarities to left-handed likely having an advantage in close combat which may have evolutionary explanations.

Personality is major area in the research field of sports psychology. There is a relationship between personality and performance of a player. Mental toughness , self efficacy and arousal are the pillars of the sports personality. Mental toughness is a psychological edge that helps one perform at a high level consistently. Mentally tough athletes exhibit four characteristics: a strong self-belief (confidence) in their ability to perform well, an internal motivation to be successful, the ability to focus one's thoughts and feelings without distraction, and composure under pressure. Self-efficacy is a belief that one can successfully perform a specific task. In sport, self-efficacy has been conceptualized as sport-confidence. However, efficacy beliefs are specific to a certain task (e.g., I believe I can successfully make both free throws), whereas confidence is a more general feeling (e.g., I believe I will have a good game today). Arousal refers to one's physiological and cognitive activation. While many researchers have explored the relationship between arousal and performance, one unifying theory has not yet been developed. However, research does suggest perception of arousal (i.e., as either good or bad) is related to performance. Motivation can be

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defined broadly as the will to perform a given task. People who play or perform for internal reasons, such as enjoyment and satisfaction, are said to be intrinsically motivated, while people who play for external reasons, such as money or attention from others, are extrinsically motivated.

Sports psychology emphasize the use of psychological skills training e.g., goal setting, imagery, energy management, self-talk when working with players by educating and instructing them on how to use these skills effectively during performance situations. Goal setting is the process of systematically planning ways to achieve specific accomplishments within a certain amount of time. Research suggests that goals should be specific, measurable, difficult but attainable, time-based, written down, and a combination of short-term and long-term goals. A meta-analysis of goal setting in sport suggests that when compared to setting no goals or "do your best" goals, setting the above types of goals is an effective method for improving performance. According to Dr. Eva V. Monsma, short-term goals should be used to help achieve long-term goals. Dr. Monsma also states that it is important to "set goals in positive terms by focusing on behaviors that should be present rather than those that should be absent." Each long-term goal should also have a series of short-term goals that progress in difficulty. For instance, short-term goals should progress from those that are easy to achieve to those that are more challenging. Having challenging short-term goals will remove the repetitiveness of easy goals and will give one an edge when striving for their long-term goals. Another is self talk technique. Self-talk refers to the thoughts and words athletes and performers say to themselves, usually in their minds. Self-talk phrases (or cues) are used to direct attention towards a particular thing in order to improve focus or are used alongside other techniques to facilitate their effectiveness. For example, a softball player may think "release point" when at bat to direct her attention to the point where the pitcher releases the ball, while a golfer may say "smooth stroke" before putting to stay relaxed. Research suggests either positive or negative self-talk may improve performance, suggesting the effectiveness of self-talk phrases depends on how the phrase is interpreted by the individual. Relaxation is important for sportsman. Arousal regulation is refers to entering into and maintaining an optimal level of cognitive and physiological activation in order to maximize performance. The use of meditation and specifically, mindfulness, is a growing practice in the field of arousal recognition.

Conclusion: As an interdisciplinary subject, sports psychology draws on several different scientific fields, ranging from psychology to physiology to neuroscience. Major topics of study are the relationship between exercise and mental health (e.g., stress, affect, self-esteem), interventions that promote physical activity, exploring exercise patterns in different populations (e.g., the elderly, the obese), theories of behavior change, and problems associated with exercise (e.g., injury, eating disorders, exercise addiction). Recent evidence also suggests that besides mental health and well-being, sport practice can improve general cognitive abilities. When requiring sufficient cognitive demands, physical activity seems to be an optimal way to improve cognition, possibly more efficiently than cognitive training or physical exercise alone.

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"Women Entrepreneurship and Start-up: A SWOT Analysis of Opportunities and Challenges"

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Abstract:

Pandit Jawaharlal Nehru has quoted "When women move forward, the family moves, the village moves and then ultimately the Nation moves forward. "Women are one of the most relevant untapped resources if you talk about entrepreneurship. Female entrepreneurship is achieving importance and attention in light of the era of the importance of new business formation for economic growth and development. Entrepreneurship refers to the act of setting up a new business so as to take advantages from new opportunities. Entrepreneurs are accountable for shaping the economy and they help in creation of new jobs and new wealth by inventing new process, products and services. We all understand that economic development of the today's woman is crucial for economic development of any country specially a country like India. Start-up: An emerging entrepreneurial venture with fast growing business, developing and/or subsequently offering an innovative product, process or service can be termed as a startup venture. Startups are playing a very crucial role in the development of economies at a comparatively faster pace all around the world. The technological innovation along with process creativity as well as new product development have given rise to a huge number of startups coming up in the markets in recent times. Considering the ability of this fast growing trend, the Indian Government introduced a scheme named 'Startup India' its intention is to assist and encourage the young entrepreneurs in formation of startups in the country and outside as well. Startups provide a catalyst ground for the technological development to build a strong system for nurturing innovation that can drive sustainable development and generate substantial employment opportunities for taking the country ahead. The aim of the Paper is to study women entrepreneurship in sections: First section based on performance and role of women entrepreneurs and SWOT Analysis. Second section based on the aid and support provided by government nationally and internationally up gradation to women as Entrepreneurs.

Keywords: Entrepreneurship, women, Start-up initiative, Stand-up scheme, SWOT, economic development, challenges, opportunities of women Entrepreneurship,

Introduction:

Indian women's entrepreneurship needs to be studied separately for two main reasons. The first reason is that women's entrepreneurship has been recognized during the last decade as an important untapped source of economic growth. Women entrepreneurs have such a potential to create new jobs for themselves and others. They are also expert in fining different solutions to organization, management as well as various business problems to exploit the entrepreneurial opportunities. However, they still represent a minority of all entrepreneurs. Thus there exists a market failure discriminating against women's possibility to become entrepreneurs and their possibility to become successful entrepreneurs. The 'stand-up' and 'start-up' policy of Prime Minister of India, Narendra Modi will definitely give inspiration to the Indian women for start-up entrepreneurship. The purpose of the paper to make SWOT analysis of female

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entrepreneurship in developing countries and seeks to provide a detailed account of strength, weaknesses, opportunities and threats.

Objectives of the Study:

1. To study the strength, weaknesses, opportunities and threats of women entrepreneurship in India.
2. To study how the stand-up and start-up initiative would benefit women entrepreneurship.
3. To study the measures needed to improve the state of women entrepreneurship in India.

Research Methodology:

The study focuses on extensive study of Secondary data collected from various books, National & International Journals, published reports of RBI, NABARD, Census Surveys, SSI Reports, newspapers, publications from various websites which focused on various aspects of Women Entrepreneurship.

Successful Women Entrepreneurs in India of 21st Century:

- Akhila Srinivasan, Managing Director, Shriram Investments ltd.
- Chanda Kocchar, Executive Director, ICICI Bank
- Ekta Kapoor, Creative Director, Balaji Telefilms Ltd.
- Jyoti Naik, President, Lijjat Papad.
- Kiran Mazumdar Shaw, Chairman & Managing director, Biocon Ltd.
- LalitaD.Gupte, JMD, ICICI Bank.
- Naina Lal Kidwar, Deputy CEO, HBSE.
- Preetha Reddy, Managing Director, Apollo hospitals.
- Priya Paul, Chairman, Apeejay Park Hotels.
- RajshreePathy, Chairman, Rajshree Sugars & Chemicals ltd.
- Ranjana Kumar, Chairman, NABARD.

SWOT Analysis:

A parameter to examine the growth and performance of women entrepreneurs development in India.

A. Strengths:

- Ample idle money for venture through Government support and special schemes for women entrepreneurship like stand-up and Start-up and through Five-year plan.
- Women entrepreneur are innovative, confident and creative women. They have ability of achieving self economic independence individually or in teamwork. They can create employment opportunities for others through establishing, initiating and running the enterprise by keeping pace with her personal, family and social life.
- Women give preference for their work from their own residence. It is also find that difficulty in getting appropriate jobs and desire for social recognition encourage them for self–employment.

B. Weaknesses:

- Our educational system is very primitive and creating awareness about woman's capacities and their hidden powers to handle economic activities. Most of the women are found that they have not proper capacities and risk making ability.
- Lack of won fund, lack of prior experience, Illiteracy and old value of family, lack of mobility

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- Absence of proper support, cooperation and back-up for women by their own family members and the outside world people force them to drop the idea of excelling in the enterprise field.
- Women's family obligations also bar them from becoming successful entrepreneurs in both developed and developing nations.
- Achievement motivation of the women folk found less compared to male members.
- The greatest deterrent to women entrepreneurs is that they are women.

C. Opportunities:

- Women inculcate entrepreneurial values and involve greatly in business dealings.
- Business opportunities that are approaching for women entrepreneurs are eco–friendly technology, Bio-technology, IT enabled enterprises, event management, tourist industry, Telecommunication, Plastic materials, Mineral water, Herbal & health care, Food, fruits and vegetables processing.
- Women entrepreneurs can gain new opportunities in the rural areas such as papads and pickles, Ice cream, channel products, and readymade garments.

D. Threats:

- Women entrepreneurs have to face tough competition not only from industry but also from their male counterparts. Surviving this cut-throat competition and achieving the aim of producing quality product at competitive price is not an easy task for the women entrepreneurs.
- Fear of expansion and Lack of access to technology.
- Lack of will power self–confidence, optimistic attitude and strong mental outlook amongst women creates a fear from committing mistakes while doing their work.
- Credit discrimination and Non Cooperative officials.
- Insecure and poor infrastructure and Dealing with male laborers.
- Indian women give emphasis to family ties and relationships.

Steps Taken by the Indian Government for Women Empowerment:

The Prime Minister of India, NarendraModi on the 2016 Independence Day announced the —Start-up India initiative. This initiative aims at fostering entrepreneurship and promoting innovation for the growth of Start-ups. The objective of this initiative is that India must become a nation of job creators and its should not become a nation of job seekers. PM while announcing the Act said that each of the 1.25 lakh bank branches should fund at least one woman entrepreneur. The Stand- Up'India scheme, launched on 5April2017, ensures that women entrepreneurs have a fair chance of setting up their own businesses. The scheme facilitates loans from Rs10 lakh to Rs1 crore for women. The Prime Minister of India, Narendra Modi announced the Start-up India. Initiative to promote the entrepreneurship in India to a new level. All the incentives to boost the start-up businesses highlight the effort government is putting in to promote entrepreneurs. So, with this initiative India may rise in the list of most favorable nations for promoting start-ups, but when it comes to inclusion of women as entrepreneurs or ease of doing business, it's a long road ahead. Announcing the Act, the PM also said that each of the 1.25 lakh bank branches should fund at least one SCs or Adivasi and at least one woman entrepreneur. The specific mention of supporting women entrepreneurs is the much needed initiative for businesswomen that will certainly provide them an edge over their male counterparts. This initiative aims at fostering entrepreneurship and promoting innovation for the growth of Start-ups. The objective is that India must become a nation of job creators instead of

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being a nation of job seekers. Announcing the Act, the PM also said that each of the 1.25 lakh bank branches should fund at least one woman entrepreneur.

Stand-up scheme:-The Government of India is leaving no stone unturned to encourage entrepreneurship in the country and is making resources quite accessible to all those with a zeal to start their own businesses. To promote employment and entrepreneurship among women, the scheduled castes and scheduled tribes, the Government is planning to launch the _Stand Up India _scheme and the Cabinet approved Rs 8,000 crore funds for this scheme. The scheme will benefit at least 2.5 lakh borrowers. This campaign is different from the Start up India campaign. Start- Up India is for new entrepreneurs but Stand Up India is a proposal restricted only to scheduled caste, scheduled tribe and women entrepreneurs, finance minister Arun Jaitley told reporters after the Cabinet meeting. —While the Rs 3,000 crore MUDRA Credit Guarantee Fund (CGF) will act as hedge against default of Rs 50,000 to Rs 10 lakh loan extended to small entrepreneurs, the Rs 5,000 crore. Stand Up India CGF will stand guarantee for Rs 10 lakh to Rs 1 crore loans to be provided to least 2.5 lakh SC/ST and women.Under the Stand Up India scheme banks will give loans at the least applicable rate of interest and that every bank branch, including those in the private sector will give loans between Rs 10 lakh and 1 crore to at least one SC/ST and one woman entrepreneur under the scheme. This Scheme provides for:

- Refinance window through Small Industries Development Bank of India (SIDBI) with an initial amount of Rs. 10,000 Crore.
- Creation of a credit guarantee mechanism through the National Credit Guarantee Trustee Company (NCGTC)
- Handholding support for borrowers both at the pre loan stage and during operations. This would include increasing their familiarity with factoring services, registration with online platforms and e-market places as well as sessions on best practices and problem solving. The major focus of this scheme is on handholding support for both SC/ST and Women borrowers. The overall intent of the approval is to leverage the institutional credit structure to reach out to these under-served sectors of the population by facilitating bank loans repayable up to 7 years and between Rs. 10 Lakh to Rs. 100 Lakh for green field enterprises in the non- farm sector set up by such SC, ST and Women borrowers The loan under the scheme would be appropriately secured and backed by a credit guarantee through a credit guarantee scheme for which Department of Financial Services would be the settler and National Credit Guarantee Trustee Company Ltd. (NCGTC) would be the operating agency. According to the government, these are sectors of the population that are often underprivileged or under-served. Both these sectors are upcoming, and fast. The scheme helps them out by facilitating loans for non-farm sector entrepreneurship. The important latest five year plans and the provisions for women empowerment in these plans are discussed as follows;

Steps taken by Government during Ninth Five-Year Plan:

The Ninth Five Year Plan envisaged: a) Empowerment of women and socially disadvantaged groups such as Scheduled Castes, Scheduled Tribes and Other Backward Classes and Minorities as agents of socio-economic change and development. b) Promoting and developing people's participatory institutions like Panchayati Raj institutions, cooperatives and self-help groups. c) Strengthening efforts to build self-reliance. d) The convergence of services from different sectors. e) A women's component plan at the Central and State levels.

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- **Steps taken by Government during Tenth Five-Year Plan:**

The Tenth Five Year Plan was formulated to ensure requisite access of women to information, resources and services, and advance gender equality goals.

- **Steps taken by Government during Eleventh Five-Year Plan:**

The Eleventh Five Year Plan proposes to undertake special measures for gender empowerment and equity. The Ministry of Women and Child Development would make synergistic use of gender budget and gender mainstreaming process

- **Steps taken by Government during Twelfth Five-Year Plan:**

Twelfth plan year plan entitled as Faster, Sustainable and More Inclusive growth". In previous plans, there was not much more attention on women's cause. But it is widely believed that men enjoy all the power, position and privileges women were treated as second rate. 12th five year plan of the Government of India(2012-2017) had decided for the growth rate at 8.2% but NDC on27th December 2012 approved 8%growth rate for 12 the five year plan. The Planning Commission is pushing for special dispensation for single women, particularly those who are single by choice, under various government schemes in the 12thfive year plan. In addition to reserving a certain percentage of jobs for single women under centrally sponsored schemes, the plan has proposed promoting and strengthening federations of single women at the block and district level.

Conclusion:

In spite of a decade of healthy economic growth, India fares very poorly in the issue of women entrepreneurship. Stand-up initiative is a potent tool which can help promote thewomen entrepreneurship. Ensuring equitable access for women in Digital India initiative is also important to prevent their further marginalization. Women entrepreneurship is growing in India, and although the numbers of start-ups led by women entrepreneurs are still few, the trend is fast changing. Women on vast scale are now taking the thrust into entrepreneurship. They are breaking various barriers to lead enterprises. With India making news around the world with its start-up initiative, there's a great need to encourage and support more women to step out of their comfort zones, and be part of the positive change that the country is witnessing right now. Through the stand-up initiative, a long term proposal has been made to improve the potential of women entrepreneurs to fuel economic growth and help build stronger communities globally. It is expected that this programme will be an opportunity and entrepreneurial channel for motivated women to systematically work through their ideas and ultimately start their ventures. India is a developing country and having mixed economy, male dominated society and women are assumed to be economically as well as socially dependent on male members. A SWOT Analysis of opportunities and challenges of Women Entreprenures will definitely lead towards success of economy. Various factors like positive reinforcement and negative reinforcement influencing women entrepreneurs. Successful leading business women in India are ideal role model for our country. Women have the potential and determination to setup, uphold and supervise their own enterprise in a very systematic manner, appropriate support and encouragement from the society, family, government can make these women entrepreneur a part of mainstream of national economy and they can contribute to the economy progress of India.

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Savitribai Phule Pune University

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Types of Cyber Crimes and Cyber Law

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Abstract:
WHY CYBER CRIMES? Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of online banking; shopping through which bank accounts can be hacked and financial motive of the person committing fraud can be achieved. Terrorize create social instability in the country, by targetting specific youth to engage into unlawful activities and spoil the energetic resourceful force of the nation. India ranks 11th in cyber crimes in the world, The main reason is wide availability and use of computers and internet in India. Also wide user base results in increased crime rate. Many crimes get registered with the Police authorities, but almost 50% of the cyber crimes go unreported.
Keyword: Cyber Crime, Law, Protection, Information Technology

Introduction:
Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of we shop online. We work online. We play online. We live online. As our lives increasingly depend on digital services, the need to protect our information from being maliciously disrupted or misused is really important. This free online course will help you to understand online security and start to protect your digital life, whether at home or work. You will learn how to recognise the threats that could harm you online and the steps you can take to reduce the chances that they will happen to you. With cyber security often in the news today, the course will also frame your online safety in the context of the wider world, introducing you to different types of malware, including viruses and trojans, as well as concepts such as network security, cryptography, identity theft and risk management.

Objectives:
1) To find out how Crime is an illegal activity which leads to destruction?
2) To understand how Cyber crime is a serious emerging threat to society, entire nation and world and how to take steps to be safe.

Research Methodology:
Secondary data in the form of Books, Internet and Web sites are used to collect information on the topic also interview with Ms.Sweta Verma crime reporter of Maharashtra state.

Hypothesis:
1)Introduction of strict laws will help to control crimes.
2)Proper care by the individuals will definitely reduce the cyber crimes.

Cyber Crimes:
- Computer or Cyber Crime refers to a crime that involves a computer and network.
- Unauthorized access to computer systems.
- A Computer can be used to create nuisance and disturbance in society
- Pornography, Threatening emails, Sexual Harassment, Spam, Phishing, Hacking , Worms, Viruses etc are some examples of Cyber crimes.

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- Cyber Squatting, Cyber Stalking, Phishing are some more emerging crimes in today's world.

Protection of Cyber crimes:

- As rightly said prevention is better than cure, we must also take steps to prevent this crime from taking place.
- Various measures have been taken even by the governments of various countries to encounter threats arising out of cyber crime.
- Also technical help is offered to protect computers from being hacked and misused.

Technical Help Components:

- Keeping the computer up-to-date with latest patches and software versions.
- Choosing of strong passwords & keeping them safe.
- Protecting the data in the computer by use of software security like quick heal, avast etc.
- Make proper privacy settings for social media applications
- Do not visit untrusted websites or hyperlinks that look visually attractive but are usually formed to let the virus creep in once u click on it.
- Ignoring pop ups
- Keep different passwords on different websites and for different purposes (Shopping, banking different passwords)

The main provisions that govern cyber law are contained in Information Technology Act, 2000

- It covers the following aspects:
- Cyber crimes
- Electronic and digital signatures
- Intellectual Property
- Data protection and Privacy.
- Punishments for committing cyber crime
- Government authorities to monitor cyber crimes

Top 10 Steps To Help Stop Cybercrime

You've probably heard the adage "information is power," and that is certainly true when it comes to cyber crime. Access to your personal information is what gives hackers the power to tap into you accounts and steal your money or your identity. But the right information can also empower you to protect yourself from being caught up in the thriving industry that is cybercrime.

With that in mind, here is our Top 10 list of steps you can take to avoid becoming a victim of cybercrime.

1) Education - Hackers aren't the only ones who can gain power from information. By educating yourself about the types of scams that exist on the Internet and how to avert them, you are puttingyourself one step ahead of the cybercriminals.Since phishing is prevalent, read up on the latest phishing scams and learn how to recognize a phishing attempt. Remember, phishing is when hackers attempt to lure you into revealing personalinformation by pretending to be a legitimate organization or person. These scams often play off major new stories, so keep informed on the latest news-related scams.

2) Use a firewall - Firewalls monitor traffic between your computer or network and the Internet and serve as a great first line of defense when it comes to keeping intruders out. Make sure to use the firewall that comes with your security software. And if you have a home wireless network, enable the firewall that comes with your router.

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3) Click with caution - When you're checking your email or chatting over instant messenger (IM), be careful not to click on any links in messages from people you don't know. The link could take you to a fake website that asks for your private information, such as user names and passwords, or it could download malware onto your computer. Even if the message is from someone you know, be cautious. Some viruses replicate and spread through email, so look for information that indicates that themessage is legitimate.

4) Practice safe surfing - When navigating the web, you need to take precautions to avoid phony websites that ask for your personal information and pages that contain malware. Use a search engine to help you navigate to the correct web address since it will correct misspellings. That way, you won't wind up on a fake page at a commonly misspelled address. (Creating a phony site at an address similar to the real site is called "typosquatting," and it is a fairly common scam.) You may also want to use a product like McAfee® SiteAdvisor® software to help you navigate.

Site Advisor software is a free browser tool that tells you if a site is safe or not right in your search results, so you are warned before you click.

5) Practice safe shopping - In addition to practicing safe surfing, you also need to be careful where you shop online. Be cautious when shopping at a site that you've never visited before and do a little investigation before you enter your payment information. Look for a trustmark, such as McAfee SECURE™, to tell you if a site is safe.

And when you're on a payment page, look for the lock symbol in your browser, indicating that the site uses encryption, or scrambling, to keep your information safe. Click on the icon to make sure that the security certificate pertains to the site you are on. When it comes time to pay, use a credit card instead of a debit card. If the site turns out to be fraudulent your credit card issuer may reimburse you for the charges, but with a debit card your money is gone.Finally, evaluate the site's security and privacy policies in regards to your personal data.

6) Use comprehensive security software and keep your system updated - Because hackers have a wide variety of ways to access your system and information, you need comprehensive security software that can protect you from all angles. Software like McAfee® SecurityCenter, available preloadedon Dell™ PCs, can help protect you from malware, phishing, spyware, and other common andemerging threats.Just make sure that you keep your security software up to date by selecting the automatic update function on your security control panel. And don't forget to perform regular scans.You also want to update your operating system (OS) and browser with the latest security patches. Ifyou are a Microsoft Windows user, you can enable automatic updates to keep your OS safe.

7) Secure your wireless network - Hackers can access data while it's in transit on an unsecured wireless network. You can keep the hackers out by enabling the firewall on your router and changing the router's administrator password. Cybercriminals often know the default passwords and they can use them to hack into your network. You may also want to set up your router so it only allows access to people with passwords that are encrypted. Check your owner's manual for instructions on setting up encryption.

8) Use strong passwords - Although it may be easier for you to remember short passwords that reference your birthday, middle name, or pet's name, these kinds of passwords also make it easy for hackers. Strong passwords can go a long way in helping secure your information, so choose a password that is at least 10 characters long and consists of a

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combination of letters, numbers and special characters. Also consider changing your password periodically to reduce the likelihood of it being compromised.

9) Use common sense - Despite the warnings, cybercrime is increasing, fuelled by common mistakes people make such as responding to spam and downloading attachments from people they don't know. So, use common sense whenever you're on the Internet. Never post personal information online or share sensitive information such as your social security number and credit card number. Exercise caution when clicking on any links or downloading any programs.

10) Be suspicious - Even if you consider yourself cyber savvy, you still need to keep your guard up for any new tricks and be proactive about your safety. Backup your data regularly in case anything goes wrong, and monitor your accounts and credit reports to make sure that a hacker has not stolen your information or identity.

Cyber Laws:

Sections 65 to 74 are the penal provisions

- Imprisonment up to 10 years provided

Section 65 – Source CodeMost important asset of software companies
Imprisonment up to 3 years and / or fine up to Rs 2 lakh

- Knowingly or intentionally –Concealing- Destroying- Altering
- Knowingly or intentionally causing another to do so

Section 66 -Covers the following in relation to information:

- Unauthorised access-Downloading, -copying or extracting information
- Introducing viruses and contaminants (worms, trojans)-Damaging a computer-Disruption of a computer-Denial of access-Assisting in illegal access
- Tampering or manipulating computer-Destroys, deletes or alters information-Steals, conceals or alters source code

- Imprisonment up to 3 years and / or fine up to Rs 5 lakh
- Knowledge or intention must be proven

Section 66

Sending offensive messages through communication service-3 years and fine
Dishonestly receiving stolen computer resource or communication device-3 years and / or fine of 1 lakh
Cheating by personation -3 years and fine of 1 lakh
Violation of privacy -3 years and / or 2 lakhs
Cyber Terrorism -Life imprisonment

- **Section 66A** – Sending offensive messages through communication services
- **Section 66B** – Dishonestly receiving stolen computer resource or communication device
- **Section 66C** – Identity theft
- **Section 66D** – Cheating by personation by using computer resource

Publishing or transmitting obscene material in electronic form -3 years and 5 lakh; 5 years and 10 lakh

Section 67A -Publishing or transmitting sexually explicit material in electronic form - 5 years and 10 lakh; 7 years and 10 lakh

Section 67B - Publishing or transmitting depicting children in sexually explicit material in electronic form -5 years and 10 lakh; 7 years and 10 lakh

Section 67C -preservation aSection 69B

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- power to authorise to monitor and collect traffic data or information through any computer resource for cyber security
- Section 72A -punishment for disclosure of information in breach of lawful contract
- Section 79 -exemption from liability of intermediary in certain cases

Section 85 -Offences by companies-Holds that a company and its directors can be held accountable for crimes

Types of cyber crime

Cybercrime is a type of crime done by the help of computer and internet. It is basically extension of traditional crime with the help of new technology. The nature of cybercrime is virtual because in this crime there is no need to involve manually, but effects are the same as traditional crime. Today the use of computer and internet are growing very fast. We use them for doing important works of our daily life. In fact we cannot live without computer and internet and so, the chances of being a victim of cyber crime is increasing fast. The cyber criminals target our information which we provide them accidentally while using computer and internet. There are so many types of cyber crimes which can harms a person.

1) Hacking Hacking is a type of cyber crime. In simple words Hacking is an act by which a person accesses a computer system or network without permission of the owner. The person doing the hacking is called Hackers. They have best knowledge and understanding of computer and computer program. They misuse their knowledge and commit the crime of hacking. Hackers are also called crackers. There are many types of hackers like White Hat Hackers, Black Hat Hackers, Grey Hat Hackers etc. Among all of them, White Hat Hackers are the persons who use their knowledge for good purpose and check the security of any system or software.

2) Online Identity Theft Online theft is also a major type of Cybercrime. Nowadays, people using the Internet frequently use their sensitive data like. Bank details, credit card details, etc. on the Internet and cyber criminals target these data and commit online theft. Cyber criminals also target copyrighted content on the Internet and download and distribute it. This is a one part of Online Theft on the other hand there is an advanced stage of online theft that is called Identity Theft. We all know that a normal internet user has many online account including many social networking accounts and they all have their username and password. Cybercriminals target that username and password and use the account behalf of original owner of the account. It damages the online presence and reputation of owner of account holder. It may also cause financial loss sometimes.

3) Denial-of-Service Attack In simple word Denial-of-Service referred the act by which a user of any website or service denied to use the service or website. In this type of cyber crime criminals target the web server of the websites and flow a large number of requests to that server. This causes the use of maximum bandwidth of the website, and it goes slow down or not available for some times

4) Phishing Phishing an act by which cyber criminals attempt to know the confidential data of any internet user. The Data may be the credit card number or username and password of any account. The main purpose of Phishing is to steal money or acquired other important data of any person, which causes financial loss.

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The act of Phishing done by sending e-mail or websites in which cyber criminals ask about your personal information or there is a link, and they tell click on it. After clicking on that link the person may be the victim of Phishing.

5) Spamming and Email Bombing Spam is a message also known as junk mail, send with a web link or business proposal. Clicking on this link or responding to business proposal send to a phishing website or install a malware in your computer. The sender of these emails are always unknown. You must aware to responding these type of spam mails because it tends towards some financial and data loss.
On the other hand in email bombing an abuser sending huge numbers of email to target address and due to this that email address or mail server crashed. It feels like Denial-of-service impact. It says that spamming is a variant of Email bombing.

6) Web Jacking The world Web Jacking comes from Hijacking. In this type of cybercrime the cybercriminals hacks the control of a website. They may able to change the content of that website. They use that website as like owner and the real owner of website has no more control on the website. Sometime attackers asks for ransom to the owner of the website

7) Data Diddling Data Diddling is unauthorised altering of data. When a person enter some data to his computer and output is different from input then he may victim of data diddling.It is done by a virus progarm that change the entered data.

8) Software Piracy Software Piracy is also a type of cybercrime and unfortunately most of Computer user are part of this crime. In this era of the Internet, you can easily download a movie or software via many websites or torrents. People often use a software without proper permission from the copyright holder of the software. They normally download the software and crack the code and use the software without buying that. This act is also a part of software piracy.

The following type of work constitute a cyber crime of Software Piracy.
1.Crackingthekeyofanysoftware.
2.Usingunlicensedsoftwareinyourpersonalcomputer.
3.Usingsinglelicensedsoftwaretomultiplecomputer.
4. Distributing such type of software to other persons.

Conclusions (or) How Can You Stay Safe?

- Keep your operating system updated/patched. Set it to "auto update".
- Use anti-virus and anti-spyware software and keep them updated.
- Do not visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Secure your transactions. Look for the "lock" icon on the browser's status bar and be sure "https" appears in the website's address bar before making an online purchase. The "s" stands for "secure" and indicates that the communication with the webpage is encrypted.
- Be cautious about all communications you receive including those purported to be from "trusted entities"and be careful when clicking links contained within those messages.
- Do not respond to any unsolicited (spam) incoming e-mails.
- Do not open any attachments contained in suspicious emails.
- Do not respond to an email requesting personal information or that ask you to "verify your information" or to "confirm your user-id and password."
- Beware of emails that threaten any dire consequences should you not "verify your information".

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- Do not enter personal information in a pop-up screen. Providing such information may compromise your identity and increase the odds of identity theft.
- Have separate passwords for work related and non-work related accounts.

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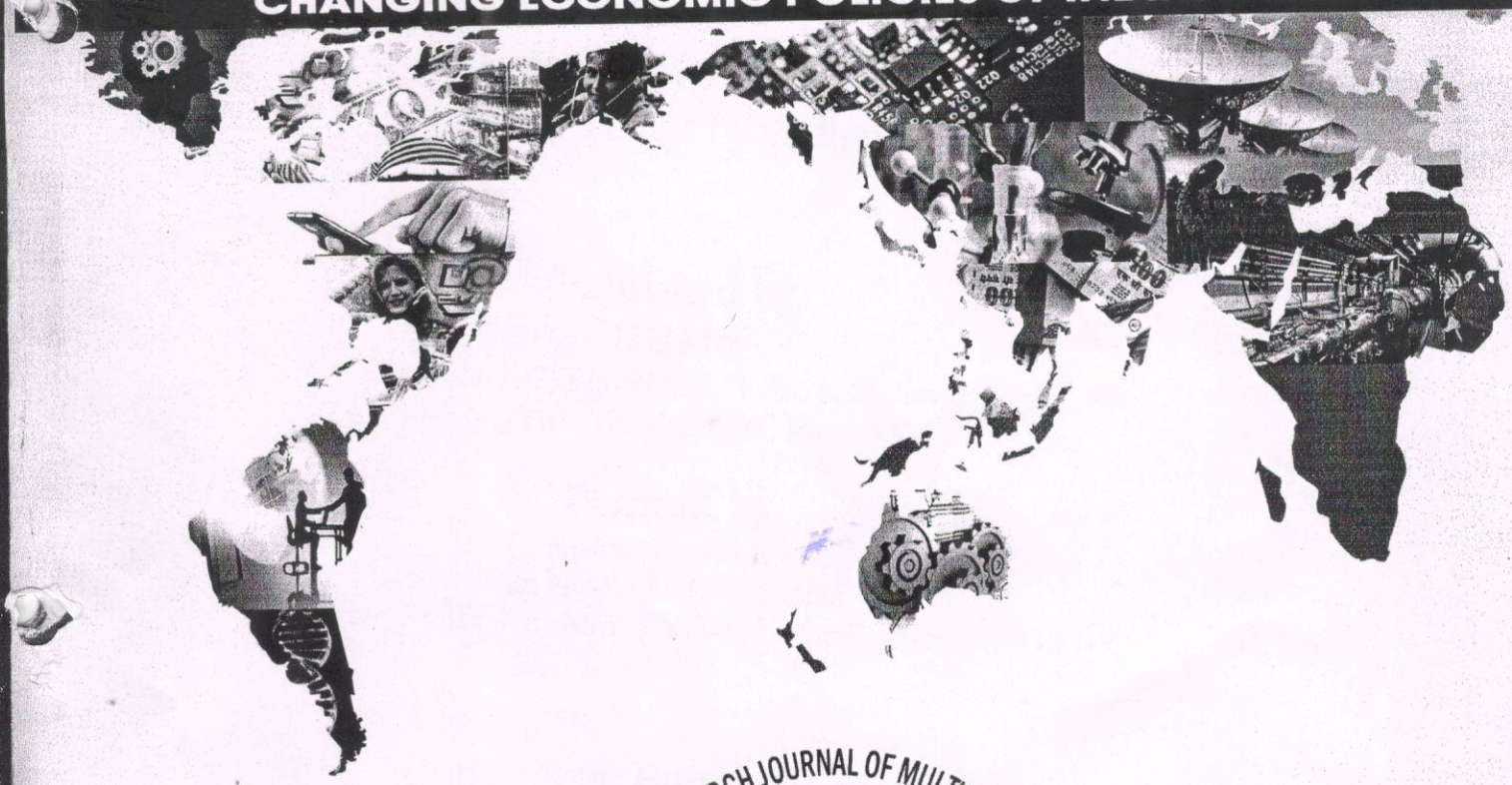

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STU
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S
IMPACT

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"GST-Analysis of audit provisions in India."

Prof. Prakash E. Humbad
Mamasaheb Mohol Mahavidalaya, Puad Road, Pune-38.

"ABSTRACT"

"GST is called as one nation, one tax.This is a major indirect tax reforms after the independe... India. India is under developing country;therefore, this type of reforms is the necessity of the ... Under GST there are many provisions like registration, payment of taxes, interest, penalty, ... tax credit, set off, appeal and audit. Under the old system of indirect taxation, some of the ... cannot be set off. There was cascading effect.it was also creating pressure on the dealers, GST ... solved all the issues. Audit is necessary part of legislation even though GST has more focus on ... assessment."

Introduction and Meaning: -

Due to Liberalisation, Privatisation and Globalization (LPG) policy, there are tremendous cha... in the operation of Business in India. After demonetization of Indian currency by The Honou... Prime Minster, Shri Narendra Modiji, has made many changes under direct and indirect taxes. ... major change in Indirect Taxes was the introduction of GST.

The single GST(goods and service taxes) replaced several former taxes and levies which inclu... central excise duty, services tax, additional customs duty, surcharges, state-level value added ... and Octroi. Other levies which were applicable on inter-state transportation of goods have also ... done away with in GST regime. GST is levied on all transactions such as sale, transfer, purcha... barter, lease, or import of goods and/or services. India adopted a dual GST model, meaning ... taxation is administered by both the Union and State Governments. Transactions made within ... single state are levied with Central GST (CGST) by the Central Government and State GST (SGST) ... by the State governments. For inter-state transactions and imported goods or services, an Integra... GST (IGST) is levied by the Central Government. GST is a consumption-based tax; therefore, ... are paid to the state where the goods or services are consumed not the state in which they ... produced. Under the previous system, a state would only have to deal with a single governmen... order to collect tax revenue.

GST Audit-

Section 2(14): "Audit" means:

the examination of records, returns and other documents maintained or furnished by the registe... person under this Act or rules made thereunder or under any other law for the time being in force ... verify, the correctness of turnover declared, taxes paid, refund claimed and input tax credit availe... and to assess his compliance with the provisions of this Act or the rules made thereunder.

Objectives: -

1) To know the provisions of GST.
2) Understand the impact of the audit provisions on GST.
3) To study the mechanism of audit.

Research Methodology: -

SEC 35- ACCOUNTS AND OTHER RECORDS

a) This Section mandates the upkeep and maintenance of records, at the place(s) of busines... electronic or other forms.

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b) Power is vested with the Commissioner for relaxation as well as for prescribing additional records for certain classes of taxable persons.
c) Furnishing of an audited statement of accounts and reconciliation statement is also contemplated for persons having turnover exceeding prescribed limit.
d) Failure to maintain records or accounts may entail payment of tax as determined by a proper officer in respect of unaccounted transactions.
e) Every owner or operator, of a place of storage, or every transporter whether such owner or operator or transporter is registered or not, shall maintain records and other relevant details as may be prescribed.

Some related Terms

- **Place of business -Section 2 (85) of The CGST Bill, 2017 defines "place of business" to** include -
  - a)a place from where the business is ordinarily carried on, and includes a warehouse, a godownor any other place where a taxable person stores his goods, provides or receives goods services or both; or
  - b)a place where a taxable person maintains his books of account; or

c)a place where a taxable person is engaged in business through an agent, by whatever name called;

Accounts and other records

- Every registered person shall keep and maintain, at his principal place of business, as mentioned in the certificate of registration, a true and correct account of—

(a) production or manufacture of goods;
(b) inward and outward supply of goods or services or both;
(c) stock of goods;
(d) input tax credit availed;
(e) output tax payable and paid; and
(f) such other particulars as may be prescribed:

Provided that where more than one place of business is specified in the certificate of registration, the accounts relating to each place of business shall be kept at such places of business:
Provided further that the registered person may keep and maintain such accounts and other particulars in electronic form in such manner as may be prescribed.

- Every owner or operator of warehouse or godownor any other place used for storage of goods and every transporter, irrespective of whether he is a registered person or not, shall maintain records of the consigner, consignee and other relevant details of the goods in such manner as may be prescribed.
- The Commissioner may notify a class of taxable persons to maintain additional accounts or documents for such purpose as may be specified therein.
- Where the Commissioner considers that any class of taxable person is not in a position to keep and maintain accounts in accordance with the provisions of this
- section, he may, for reasons to be recorded in writing, permit such class of taxable persons to maintain accounts in such manner as may be prescribed.

TYPES OF AUIDT

a) Audit by tax authorities.
b) Annual Audit by CA / CWA
c) SPECIAL AUDIT
d) CAG Audit

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a) Audit by tax authorities

Commissioner of CGST / SGST or any officer authorizedAudit of any registered person for a particular period, at particular frequency and in particular manner at the place of business of registered person or in their office;

- Notice to registered person at least 15 working days prior to audit [Form GST ADT-01];
- Audit to be completed within 3 months (can be extended further by 6 months by Commissioner);
- Registered person to provide the required information and facility;
- Result of audit to be intimated within 30 days [Form GST ADT-02] and further action will be taken.

b) Annual Audit by CA / CWA

According to Section 35(5) of the CGST Act:

Every registered person whose turnover during a financial year exceeds the prescribed limit (presently Two crore rupees) shall get his accounts audited by a Chartered Accountant ora Cost Accountantand shall submit a copy of the audited annual accountsalong with a reconciliation statement (reconciling the value of supplies declared in return with audited annual financial statements)Contents of the audit report and other particulars to be prescribedAudited Report and Audited annual Accounts to be submitted along with annual return on or before 31st December following the end of financial year.Form GSTR 9C.

c) SPECIAL AUDIT

If at any stage of scrutiny, inquiry, investigations or any other proceedings, the department is of the opinion that the value has not been correctly declared or credit availed is not with in the normal limits, department may order special audit by Chartered Accountant or Cost Accountant nominated by department.

The by Chartered Accountant or Cost Accountant shall within the period of 90 days submit a report of such audit duly signed and certified by him. Such period can be further extended by 90 days by the Assistant Commissioner on the basis of material and sufficient reason.

The registered person shall be given an opportunity of being heard in respect of any material gathered on the basis of special audit. Where the audit conducted results in detection of unpaid/short paid tax or wrong refund or wrong input tax credit availed then demand and recovery actions will be initiated.

d) CAG Audit

The Government or the authority specified by it, shall maintain proper record in relation to fund (for the welfare of the consumer) and prepare an annual statement of accounts in such form and manner as may be prescribed; in consultation with the Comptroller and Auditor-General of India. The Comptroller and Auditor-General of India shall have the power to inspect the accounts of such Government or authority by virtue of powers vested in it by other law.

Conclusion: -

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GST is a major tax reforms in India. There are more than 196 countries in world which levy GST. This tax will be beneficial to dealers as well as consumers. Audit provisions are suitable to every dealers and manufacturers.

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ii) *www.gst.gov.in*
iii) *Books on GST.*
iv) *Newspaper articles and news.*
v) *ICAI publication- Journal*

Shikshana Prasaraka Mandali's

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on 16th and 17th February, 2018.

Title of the presentation : IMPACT OF RENAISSANCE ON INDIAN ENGLISH LITRETURE

(Dr. Sopan Shende)
Convener

(Dr. Ashok Chaskar)
Vice Principal

(Dr. Dilip Sheth)
Principal

Dr. Shrinivas Ippalpalli (English Dept.)
National Seminar - S.P. College Pune 16 & 17th Feb. 2018

Impact of Renaissance on Indian English Literature

Dr.Shrinivas Ippalpalli

The fact that Indian literatures are a product of a multilingual, multicultural and sociohistorical mélange cannot be overlooked. Today Indian literature reached at the apex of creation with the contribution of regional and national writers. This researcher would like to focus on the root and brief literary history of Indian writing in English and the genre – novel in Indo-Anglian literature up to the time of Mulk Raj Anand for better understanding of his novel. Here, it is essential to mention the brief history of Indian writing in English and the contributors of it. Along with the list of the contributors in Indian writing in English, the rise of the new form of literature- novel in India is also necessary to focus. For that researcher would like to divide the history of Indian writing in English into three parts, first to understand the beginning and exploration of Indian writing in English by major contributors, second for the rise and development of new literary genre (novel) in Indo-Anglian literature and third to understand Anand as a novelist. These three parts are foundation of my research work. On the basis of the understanding of the Indo-Anglian literature and the rise and development of novel in IndoAnglian literature, the major novels of Mulk Raj Anand can be judged properly. Indo-Anglian literature contributed to the common pool of world writing in English. It is a literature which is a combination of Indian 9 literature and Indian literature written in English. Indian English Literature refers to the body of work by writers in India who write in the English and whose native or co-native language could be one of the numerous languages of India. It is also associated with the works of members of the Indian Diaspora. It is frequently referred to as IndoAnglian literature. As a category, this production comes under the broader realm of postcolonial literature- the production from previously colonized countries such as India. Indian English literature has a relatively recent history; it is only one and a half centuries old. The first book written by an Indian in English was by Sake Dean Mahomet, titled Travels of Dean Mahomet; Mahomet's travel narrative was published in 1793 in England. In its early stages it was influenced by the Western art form of the novel. Early Indian writers used English unadulterated by Indian words to convey an experience which was essentially Indian. Indian writings in English are a product of the historical encounter between the two cultures—Indian and the western—for about one hundred and ninety years. It isn't that Indian people didn't experience the impact of a foreign culture. It did during the reigns of various foreign rulers. But the difference with the British rule lies in the nature of the economic system that had come into being in Europe after the Renaissance, described by Marx as capitalist system. Before the introduction of the British rule India had the feudal economic system, in accordance with which the vast population of the country, having various religious faiths and conforming to the caste system, tried to live their life, sometimes fatalistically and sometimes stoically. Above all, it was a closed society with a peculiar cultural racial intolerance. In fact, India had been awaiting a political and cultural change, which became necessary after the weakening and disintegration of the Mogul Empire. British rule in India, first of all, resulted in breaking the barrier of that closed

society. Then the greatest cultural impact came with the establishment of four universities and with the introduction of western educational system. The English language provided the natives with a way to the western literature and to the western culture, of course. English education created a class of native bourgeoisie, the majority of which turned to their mother tongue while giving birth to a native literature, applying the western aesthetic norms. But a few among them thought it appropriate to give expressions to their feelings and experiences in English. Thus, the peculiar body of Indo-Anglian literature was created—while its contents were to be Indian, its medium of expression was English. If we take a backward glance at the beginnings of IndoAnglian literature, the stalwart figure of Raja Rammohan Roy appears first. The renaissance in modern Indian literature begins with Raja Rammohan Roy. He had earned good command over English language by working with British officials. He had tried to give new thoughts, removed old dogma and typical rituals through Bramhosamaj. The Bramhosamaj encourages establishing harmony between men's accepted faith and their practical observations. Rammohan Roy worked for the betterment of women, freedom of press, English education, social justice and plight of Indian peasantry. He had good command over the English language and wrote prose and poetry in it. For his contribution in the pool of Indian writing in English, K.R.Srinivasa Iyengar writes; Rammohan Roy although he could be named as the first of the Indian masters of English prose, was great in so fields that be belong to Indian history more than to mere Indo-Anglian literary history. In this way he had contributed his writing and thoughts in the foundation of Indo-Anglian literature and prepared pathway for his successors and contemporaries like Henry Derozio, the Cavally Brothers, Kashiproshad Ghose, Hasan Ali, P. Rajagopual, Mohanlal, 12and Michel Madhusudan Dutt etc are considered first Indo-Anglian writers of verse and prose. The mid nineteenth century is the renaissance in India as that was the time of great literary and social revolutions. At that time legendary thinkers like Maharshi Debendranath Tagore, Kesub Chunder Sen, Dayanand Saraswati, the founder of the Arya Samaj have contributed for social reform, educational reform and religious reform which has given scope for renaissance in India. The first Indian English poet, Henry Louis Vivian Derozio (1809-1831) had nurtured English verse in India. He became a teacher of English literature at the Hindu College, Calcutta. A teacher as well as a poet, Derozio had expressed nature in his poetry like Keats. The flavor of Romanticism found in his poetry as he was highly influenced by Byron, Shelley, Keats, Scott and Moore. He died at the very early age due to cholera in 1831. This was the time when Hindu society in Bengal was undergoing considerable turmoil. In 1828, Raja Ram Mohan Roy established the Brahmo Samaj, which kept Hindu ideals but denied idolatry. This resulted in a backlash within orthodox Hindu society. It is in the perspective of these changes that Derozio was appointed at Hindu college, where he helped release the ideas for social change already in the air. His brilliant lectures presented closely-reasoned arguments based on his wide reading. He encouraged students to read Thomas Paine's Rights of Man and other free-thinking texts. Although Derozio himself was an atheist and had renounced Christianity, he encouraged questioning the orthodox Hindu customs and conventions on the basis of Judeo-Christian rationalism. He infused in his students the spirit of free expression, the yearning for knowledge

and a passion to live up to their identity, while questioning irrational religious and cultural practices. Derozio's intense zeal for teaching and his interactions with students created a sensation at Hindu College. His students came to be known as Derozians. He organised debates where ideas and social norms were freely debated. In 1828, he motivated them to form a literary and debating club called the Academic Association. In 1830, this club brought out a magazine named Parthenon. Apart from articles criticizing Hindu practices, the students wrote on women's emancipation and criticized many aspects of British rule. He also encouraged students into journalism, to spread these ideas into a society eager for change. He took great pleasure in his interactions with students, writing about them: 'Expanding like the petals of young flowers I watch the gentle opening of your minds…' Kashiprosad Ghose (1809-1837) is also counted as one of the founder pillars of indo-Anglian literature. His contribution in Indian English literature is as equal as Henry Derozio. His The Shair and Other Poems (1830), finds a place in literary history of India. Even he is considered as the first Indian to publish a regular volume of English verse. Ghose edited an English weekly The Hindu Intelligence. His poetry is counted as moralizing as good texture of originality and conventional descriptions. Michael Madhusudan Dutta (1824-1873), began writing while he was at Hindu College. He won several scholarships in college exams as well as a gold medal for an essay on women's education. While a student at Hindu College, his poems in Bengali and English were published in Jnananvesan, Bengal Spectator, Literary Gleamer, Calcutta Library Gazette, Literary Blossom and Comet. Lord Byron was Madhusudan's inspiration. Michael's exceptionally colourful personality and his unconventional, dramatic and in many ways tragic life have added to the magnetism and glamour of his name. Generous in friendship, romantic and passionate by temperament, he was fond of the good life. By dint of his genius, he removed the stagnation in Bengali literature both in style and content. He was the first to use blank verse in 1860 in the play Padmavati based on a Greek myth. His later poems silenced the critics and detractors, and permanently established the vogue of blank verse literature. Madhusudan's epic poem: Meghnad-Badh Kavya is considered as his all-time masterpiece till today. Written in blank verse, this epic was based on the Ramayana but inspired by Milton's Paradise Lost. Madhusudan transformed the villainous Ravana into a Hero. This grand heroictragic epic was written in nine cantos which is quite unique in the history of Bengali Poetry. Meghnad-Badh Kavya was Bengali literature's first original epic and gave Madhusudan the status of an Epic Poet. Much of his time abroad, especially in Versailles, was spent in abject poverty, as the money from his late father's estate on which he was relying did not come regularly. His Indian friends who had inspired him to cross the ocean had by now managed to forget the beggar Madhusudan altogether. He fell hopelessly into debts and appealed for help to the great personality, the scholar, social reformer, and activist Ishwarchandra Vidyasagar (this kind soul was known to all as Daya Sagar – the ocean of kindness, for his immense generosity). His extravagant life-style, fickleness in money matters, and reckless drinking to drown problems conspired to wreck his health and happiness, and likewise the health and happiness of his second partner Henrietta, who had also succumbed to alcoholism during her days of poverty in Versailles. He was a man of real, though somewhat erratic, genius, and a

courageous innovator of forms and types which altered the whole course of Bengali literature and added new dimensions to it. To his adventurous spirit, Bengali Literature owes its first blank verse and the sonnet, its first modern comedy and tragedy, and its first epic. Dutt was particularly inspired by both the life and work of the English Romantic poet Lord Byron. The life of Dutt closely parallels to the life of Lord Byron in many respects. Like Byron, Dutt was a spirited bohemian and like Byron, Dutt was a Romantic, albeit being born on the other side of the world, and as a recipient subject of the British imperialist enterprise. Madhusudan was a gifted linguist and polyglot. Besides Indian languages like Bengali, Sanskrit and Tamil, he was well versed in classical languages like Greek and Latin. He also had a fluent understanding of modern European languages like Italian and French and could read and write the last two with perfect grace and ease. Bengal was epicenter for renaissance as it has given literary scholars who gave fame to mother India at globe. Among them, Toru Dutt is the first poetess in Indo-Anglian literature. She had English education and had a rich and respectable ancestry. Her family was rich and highly educated. Her father Govind Chunder Dutt was a good linguist and a civilized man with literary eye. The Dutt family moved to Cambridge in 1871 where she had attended lectures. In 1875, she had translated French writing in to English with the title A Sheaf Gleamed in French Fields. She had learned Sanskrit and translated Ramayana, Mahabharata and Sakuntala into English verse. She had attained command over Sanskrit language and transformed her interest from French to Sanskrit and translated so many Indian mythological works into English. Another contributor of literature from Bengal, as is the land of arts, is Romesh Chunder Dutt (1848-1909). He was Toru Dutt's cousin and forwarded her writing at height. He had passed Indian civil service Examination in 1869 and served at various capacities in India. He had also devoted much time for literary creation in Bengali and English. Romesh Dutt had written novels in Bengali and translated two of these novels in to English named – The Lack of palms (1902) and The Slave Girl of Agra (1909). He had narrated historical surveys in a large range like – A History of Civilization in Ancient India, later Hindu Civilization, India in the Victorian Age, The Economic History of British India and A brief History of Ancient and Modern Bengal. Apart from this, hisgreatest achievement was the Bengali translation of Rig Veda. His translation in to Englishverse from Ramayana, Mahabharata, Rig Veda, The Upanishads, Buddhist literatures, Kalidasa's Kumarasambhava and Bharavi's Kiratarjuniya – is most creditable contribution. Iyengar writes the turn from Toru Dutt to Romesh Chunder Dutt as; To turn from Aru and Taru Dutt to Romsh Chunder Dutt is like passing from the bud and the flower to the ripened fruit; from Erato and Melpomene to Clio and Calliope; from Ushas, rosy- fingered and short-lived, to the toiling Sun on the ascendant; from infinite promise to impressive achievement. Another sparkling star of Indian literature is Manmohan Ghose (1869- 1924).

Conclusion

He was an elder brother of Sri Aurobindo. He had English education at Manchester and Oxford. His first poem collection – Primavera (1890) was appreciated by literary scholars and classmate at Oxford. Like Derizio, Manmohan Ghose became professor of English at the

Presidency College, Calcutta. In 1898, he published collection of poems – Love Songs and Elegies and also wrote five act playPerseus the Deliverer. His wonderful sense of the beauty of English words and 19rhythm made him notable literary craftsman in eyes of English scholars of England. His poetry was considered much intellectual thoughts and rhythm in his poetry is outstanding feature.

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Dr. Shrinivas Ippalpalli (English Dept.)
State Level Seminar. – A.T. College Bhor 24th Feb. 2018

Pragmatic Perspective in Teaching Language and Literature

Dr.Shrinivas Ippalpalli

Speech act theory is one of the useful and effective tools in interpreting the literary discourse especially fictional discourse. The fact of the matter is that a novelist while writing his or her novel tends to use language suitable to the characters moving in the socio-cultural milieu. Therefore, studying the utterances of the characters using the principles of pragmatics in general and the speech act theory in particular is a novel way of discovering a new meaning and eventually arriving at an authentic interpretation. The present research is aimed at studying the selected modern Indian English novels taking into consideration the typology of speech acts as advocated by J. R. Searle. Modern Indian English novels are replete with conversations, which need to be studied from the point of view of certain principles. The Indian Novel in English offers the reader insight into the social, economic and cultural aspects including the interpersonal relationship between the interlocutors.

Modern writers like Arundhati Roy, Rohinton Mistry, Chetan Bhagat, Kiran Desai and Aravind Adiga have carved their niche on the literary map of Modern Indian writing in English. These are the novelists of the third generation of the writers writing in Indian English giving a new dimension to the existing body of literature in Indian writing in English. The language used by these writers is unique and reflects the elements of modernity and the process of globalization.

The speech act analysis of the selected five Indian English novels brings a new dimension to the study of pragmatics and literature. This study helps in

analyzing the novels from a linguistic perspective. The major implication of this study is to recognize the importance of speech act theory to facilitate innovative thinking skills and to develop interpretative mind of the reader. The speech act analysis does help in the pragmatic interpretation of fictional discourse in general and the Indian English novels in particular. The speech act theory is a very powerful instrument to study the fictional discourse. It is useful for students and teachers in interpreting and contextualizing the novels. The modern novels are full of utterances and conversations. If we treat utterances as speech acts and apply the speech act theory for analysis, we can easily interpret and understand a novel in a better way. Every author wants to convey his/her intentions through the characters and their utterances. Therefore, if we are able to analyze the utterances, we can get the hidden motives or the authorial intentions cleared. The speech act theory facilitates the exploration into the overall context of the novel.

Literature teaching can be made more exciting, if teachers equipped with a pragmatic knowledge of the fictional world, take the students through the novels and help them explore hidden ideas with the help of pragmatic principles. Teachers can teach students to overcome the difficulties of interpretation showing them how implicatures are arrived at. They can enable the students to explore the intended communicative goals which are achieved through the utterances.

An in-depth analysis of the speech acts from the five novels will help sharpen the perception and understanding of the novels. Hence, the teaching of fiction will be more interesting and it will reveal new dimensions of meaning. Teachers can teach their students to interpret the utterances in a fictional discourse. The study of theories and principles of pragmatics provides an authentic way to arrive at the appreciation of the fictional discourse. Pragmatic approach arouses a keen interest in the teachers and students as well.

Conclusion

The present study is devoted to the analysis of the significant speech acts selected from the five Indian English novels. The focus is on investigating the significant role of the utterances by categorizing them into five major speech acts as per Searle's typology. The major part of this study is mainly devoted to the speech act analysis of the five selected Indian English novels. However, other principles of pragmatics such as adjacency pairs, turn taking, presupposition, politeness principle and cooperative principle which can be employed for the thorough understanding of the novels of the Indian English novelists.

By using speech act analysis, an attempt was made to demonstrate the huge potentials in discovering the hidden beauty of fiction as a work of art in general and finer aspects of utterances in particular. The same analysis could be applied to other literary genres such as the drama, poetry, and short story.

॥ प्रज्वलितो ज्ञानमयः प्रदीपः ॥

Rajgad Dnyanpeeth's

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Head, Dept.of English

Dr. Prasanna G. Deshmukh
Principal

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NATIONAL CYBER SECURITY POLICY: IT'S PRECISE REVIEW

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Abstract

National Cyber Security Policy has been implemented in 2013, here in this paper the researcher has taken the review of the policy how the policy is helpful to the citizens of India and the how the policy will help for the business and e-commerce. Until and unless the users are secure the people of the country will come forward for the use of the cyber space for the day to day activity as well as the business point of view. Where Cyberspace is a complex environment consisting of interactions between people, software and services, supported by worldwide distribution of information and communication technology (ICT) devices and networks. Having the numerous benefits brought about by technological advancements, the cyberspace today is a common pool used by citizens, businesses, critical information infrastructure, military and governments in a manner that makes it difficult to draw clear boundaries among these different groups. The cyberspace is expected to be more complex in the foreseeable future, with many fold increase in networks and devices connected to it.

Key words / Abbreviations: *ICT – Information and Communication Technology, IT – Information Technology, PPP – Public Private Partnership, CISCO -Chief Information Security Officer, CERT-Computer Emergency Response Team, NCIIPC - National Critical Information Infrastructure Protection Centre, ICAN - Internet Co-operation for Assigned Names*

1. Introduction

Information Technology (IT) is one of the critical sectors that rides on and resides in cyberspace. It has emerged as one of the most significant growth catalysts for the Indian economy. In addition to fuelling India's economy, this sector is also positively influencing the lives of its people through direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity among others. The sector has played a significant role in transforming India's image to that of a global player in providing world-class technology solutions and IT business services.In the light of the growth of IT sector in the country, ambitious plans for rapid social transformation & inclusive growth and India's prominent role in the IT global market, providing right kind of focus for creating *secure computing environment and adequate trust & confidence in electronic transactions*, software, services, devices and networks, has become one of the compelling priorities for the country. Such a focus enables creation of a suitable cyber security eco-system in the country, in tune with globally networked environment.Cyberspace is vulnerable to a wide variety of incidents, whether intentional or accidental, manmade or natural, can take place. Cyber

attacks that target the infrastructure or underlying economic well-being of a nation state can effectively reduce available state resources and undermine confidence in their supporting structures. A cyber related incident of national significance may take any form: an organized cyber attack, an uncontrolled exploit such as computer virus or worms or any malicious software code, a national disaster with significant cyber consequences or other related incidents capable of causing extensive damage to the information infrastructure or key assets. Some of the examples of cyber threats to individuals, businesses and government are identity theft, phishing, social engineering, cyber terrorism, compound threats targeting mobile devices and smart phone, compromised digital certificates, advanced persistent threats, denial of service, supply chain attacks, data leakage, etc. There are various ongoing activities and programs of the Government to address the cyber security challenges which have significantly contributed to the creation of a platform that is now capable of supporting and sustaining the efforts in securing the cyber space. Due to the dynamic nature of cyberspace, there is now a need for these actions to be unified.The cyber security policy is an evolving task and it caters to the whole spectrum of ICT users and providers including home users and small, medium and large enterprises and Government & non-Government entities. It enables the individual sectors and organizations in designing appropriate cyber security policies to suit their needs. The policy provides an overview of what it takes to effectively protect information, information systems & networks and also gives an insight into the Government's approach and strategy for protection of cyber space in the country. It also outlines some pointers to enable collaborative working of all key players in public & private to safeguard country's information and information systems.

2. Aims

The main aim of Cyber Security Policy is to protect information and information infrastructure in cyberspace, build capabilities to prevent and respond to cyber threats, reduce vulnerabilities and minimize damage from cyber incidents through a combination of institutional structures, people, processes, technology and cooperation. To enhance the protection and resilience of Nation's critical information infrastructure by operating a 24x7 National Critical Information Infrastructure Protection Centre (NCIIPC) and mandating security practices related to the design, acquisition, development, use and operation of information resources.To create a secure cyber ecosystem in the country, generate adequate trust & confidence in IT systems and transactions in cyberspace and thereby enhance adoption of IT in all sectors of the economy. To strengthen the Regulatory framework for ensuring a Secure Cyberspace ecosystem. To enhance and create National level 24 x 7 mechanisms for obtaining strategic information regarding threats to ICT infrastructure, creating scenarios for response, resolution and crisis management through effective predictive, preventive, protective, response and recovery actions. To create an assurance framework for design of security policies and for promotion and enabling actions for compliance to global security standards and best practices by way of conformity assessment (product, process, technology & people). To enable effective prevention, investigation and prosecution of cyber crime and enhancement of law enforcement capabilities through

appropriate legislative intervention. To create a culture of cyber security and privacy enabling responsible user behavior & actions through an effective communication and promotion strategy. To develop effective public private partnerships and collaborative engagements through technical and operational cooperation and contribution for enhancing the security of cyberspace. To create a workforce of 500,000 professionals skilled in cyber security in the next 5 years through capacity building, skill development and training.

3. Knowingaboutindia's Cyber Security Policy

Following the rising number of cyber threats, the Indian government has gotten serious about securing the cyber space of the country. Earlier in 2013, the government had released the National Cyber Security Policy (NSCP) of India. Soon after that it released guidelines by the National Critical Information Infrastructure Protection Centre of the National Technical Research Organization (NTRO), the country's elite technical intelligence agency.

The Cyber Security Policy provides a strong vision to secure the critical infrastructure of the country. The policy was essential to prevent and reduce cyber attacks on public as well as private infrastructure. The policy also intends to circumvent any resultant economic instability arising due to cyber attacks. While the authorities agree that the real challenge lies in making this policy operational

Things one should know about India's National Cyber Security Policy 2013:

- Set up a 24×7 National Critical Information Infrastructure Protection Centre (NCIIPC) for protecting critical infrastructure of the country.
- Create a taskforce of 5,00,000 cyber security professionals in next five years.
- Provide fiscal schemes and benefits to businesses for adoption of standard security practices.
- Designate CERT- Computer Emergency Response Team as the national nodal agency to co-ordinate cyber security related matters and have the local (state) CERT bodies to co-ordinate at the respective levels.
- All organizations to designate a CISO-Chief Information Security Office and allot a security budget.
- Use of Open Standards for Cyber Security.
- Develop a dynamic legal framework to address cyber security challenges (Note: The National Cyber Security Policy 2013 does not have any mention of the IT Act 2000)
- Encourage wider use of Public Key Infrastructure (PKI) for government services.
- Engage IT professionals / organizations to assist e-Governance initiatives, establish Centers of Excellence, cyber security concept labs for awareness and skill development through PPP - a common theme across all initiatives mentioned in this policy.
- Apart from the common theme of PPP across the cyber security initiatives, the policy frequently mentions of developing an infrastructure for evaluating and certifying trustworthy ICT security products.

4. Cyber Security an Important Element of Foreignpolicy: Need of Hour

With Internet governance likely to see an increased role for governments in coming years and with cyber security becoming central to the prosperity of nations, cyber diplomacy has emerged as a key focus area of foreign policy around the globe, eminent speakers at an international cyber conference Cyber 360 degrees said here on Tuesday.

The centrality of a cyber security pact in talks between US President Barack Obamaand Chinese Xi Jinping this week and Indian Prime Minister Narendra Modi's own dedication of a sizable chunk of his time in the US for interaction with Internet companies were cited as examples of the emergence of cyber diplomacy at the forefront of foreign policy issues at the conference.

"The internet governance model that has been in existence over the past few decades is showing signs of change. Because the Internet developed in the US, it is natural that US companies have monopoly over the technical architecture. Governments have until now had little role in the running of the internet. But with the Internet Co-operation for Assigned Names (ICAN) now undergoing transformation, there may be some broad basing of internet governance model," India's deputy national security advisor Arvind Gupta said at the conference organized by the Synergia Foundation.

"During the last decade the internet has grown tremendously. Today over 3 billion people have access to internet. In the next 10 years the growth is likely to come from developing countries. The developing world will be a looking at a stake in the governance of the internet," he said.

The interest shown by US companies in the Digital India initiative of the Indian government in the course of Prime Minister Narendra Modi's visit to the US is an indicator of the importance of the Internet in the future scheme of things, the deputy NSA said. The emergence of cyber security as a key area of concern for countries means that it could be used for domination strategies, he said.

"We are seeing trends where trade may be used as an instrument of pressure on cyber diplomacy. The tendency to use export import regimes to restrict the flow of cyber security technologies and products is a concern. This is particularly a threat for emerging countries," Gupta said.

"Cyber security has become an important element of foreign policy due to its relevance to national security, public safety and economic development. Developing international agreements on how states should behave in cyberspace and how to achieve a stable and open Internet will become increasingly important for India as well," the deputy NSA pointed out.

"The challenge before the government is to ensure that the Internet infrastructure being put in place is stable and secure. For that the government will also have to be sensitive to not just the national security concern but also the needs and sensitivities of the business," Gupta said.

He said India has initiated dialogues on cyber security with the US, UK, Germany, the EU, France, South Korea, Russia, Japan and Australia where views have been exchanged on national cyber security policies, sharing of critical information, capacity building research and development and other issues. "Cyber diplomacy is a growing

area. It requires an intricate knowledge of technology, law, politics etc. The Indian government is focusing on this," he said.

Former Swedish Prime Minister Carl Bildt pointed out that the importance of cyber security in foreign policy had been highlighted by the fact that cyber attacks were a central subject in talks during formal meetings between the US and Chinese presidents recently.

Former Indian National Security Advisor Shivashankar Menon said that cyber space had not disrupted the existing world order but had played a significant role in magnifying existing trends.

"It has become a fresh domain of contention between states. It is true of land, seas, skies and outer space all of which we have successfully militarized. Exactly the same thing is happening in cyber space. You see it when cyber attacks become one of the main subjects of a Xi-Obama summit and then you realize that cyber has come into its own," Menon said.

This shows that the National Cyber Security Policy has to be taken in very serious way, if we want to prosper as a economic power in the world. Because now a day's many transactions, business, commerce is preferred by majority as through the internet and if our Security policies are not up to the mark then it will affect badly on the performance of the nations even though we are having the capacity to do.

5. Developing Effective PPP - Public Private Partnership

To facilitate collaboration and cooperation among stakeholder entities including private sector, in the area of cyber security in general and protection of critical information infrastructure in particular for actions related to cyber threats, vulnerabilities, breaches, potential protective measures, and adoption of best practices. To create models for collaborations and engagement with all relevant stakeholders. To create a think tank for cyber security policy inputs, discussion and deliberations.

6. Missing Points

Some key points from the draft version missing in the final policy:

- Initiative to establish a countrywide secure intranet for connecting strategic installations with CERT for emergency response and coordination.
- The draft policy had objectively set out actions for ensuring security by Service Providers, Corporate and SOHO.
- Of the 12 stakeholders identified in the draft, only four are mentioned in the policy.

7. Conclusion

The above paper express that India has to take Cyber Security Policy seriously and the whatever the reports given by the experts that are mentioned above like NSA Arvind Gupta and Former NSA Shivshankar Menon as well as dialog with USA, UK, Japan and European Nations will have to apply wisely to strengthen the power of the Cyber Security. So that fear in the minds of the user will disappear and India will emerge the power in the World of e-commerce. Missing points which are mentioned above, needs to be considered once again.

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EMERGING TRENDS IN HACKERS AND THREATS: IT'S REVIEW

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Abstract

Nowadays hacking is the most common practice in the computer expert in order to try and destroy network infrastructure. In this paper, I have mentioned three different types of hacking i.e.- White hat,Black hat,Gray hat.

This research paper discusses the issue of cyber crime in detail, including the types, methods and effects of cyber crimes on a network. As, all this adversely affects the efficiency of information security of any kind of security that exists and is used in information systems. Since hackers and other offenders in the virtual world are trying to get the most reliable secret information at minimal cost through viruses and other forms of malicious soft-wares, then the problem of information security - the desire to confuse the attacker: Service information security provides him with incorrect information; the protection of computer information is trying to maximally isolate the database from outside tampering.

In other words, the Internet is a large computer network, or a chain of computers that are connected together. This connectivity allows individuals to connect to countless other computers to gather and transmit information, messages, and data.

Threats - A potential cause of an incident, that may result in harm of systems and organization

***Keywords**: Security, Network Security, Computer, Privacy, Cyber Crimes, UI.*

Introduction

The increasingly growth of internet has given an entrance passage to many things : e-commerce , email , social networking , online shopping & information distribution. As the technology advances it has its dark side; hackers. Govt. organization , private citizen & many companies of the world wants to be the part of this revolution. Being afraid of hackers as they could break into the web-server & create nuisance. To counter attack them ethical hacker's are used in the Govt. organization, companies etc. This paper describes the skills, attitude & how they helps the customer with the increasingly growth rate of internet network security has been a measure concern of Govt.& private organization. As different organization wants to take advantage of the internet but fail to do so, because of the possibility of being hacked. To minimize the risk of being hacked by the hackers the organizations realized the best possible ways to introduced the independent computer security professionals to make their way out. In computer security the ethical hackers employ's some tools & techniques that would neither damaged the system nor still information from it. Instead they would evaluate ways to

secure then system & report back the owner with the threat they had found & how to cure them.

Hackers

Computer hackers are unauthorized users who break into computer systems in order to steal, change or destroy information, often by installing dangerous malware without your knowledge or consent.

Find computer hackers

Anyone who uses a computer connected to the Internet is responsible to the threats that computer hackers pose. Computer hackers can also try to access your computer and confidential information directly if you are not protected with a firewall.

Computer hackers

Hacker will quietly transmit your personal and financial information without your knowledge.

They may:steal your money from the Bank account using your usernames and passwords

- Open credit card and bank accounts in your name
- Use your credit card for online purchase.
- Request new account Personal Identification Numbers (PINs) or additional credit cards
- Add themselves or an alias that they control as an authorized user so it's easier to use your credit
- Use and abuse your Social Security number
- Sale your information to other parties who will use it for illegal purposes

Common hacking techniques

1) **Keylogger**

Keylogger is a simple software that records the key sequence and strokes of your keyboard into a log file on your machine. These log files might even contain your personal email IDs and passwords. Also known as keyboard capturing, it can be either software or hardware. While software-based keyloggers target the programs installed on a computer and hardware devices like keyboards, electromagnetic devices,Smartphone sensors, etc.

Keylogger is one of the main reasons why online banking sites give you an option to use their virtual keyboards. So, user have to take extra precaution while handling the devices in public setup.

2) **Denial of Service**

A Denial of Service attack is a hacking technique to take down a site or server by flooding that site or server with a lot of traffic. The server is unable to process all the requests in the real time and finally crashes down. This popular technique, the attacker floods the targeted machine with lots of requests to overcome the resources, which, in turn, restrict the actual requests from being fulfilled. Many bonnets or zombie computers get flooded your system with request packets.

3) **Waterhole attacks**

hackers target the easily accessed physical location to attack the victim. That point could be a coffee shop, a cafeteria, etc.Once hackers are aware of your timings,

using this type of hacking, they might create a fake Wi-Fi access point which modifies your most visited website to redirect them to you to get your personal information. As this attack collects information on a user from a specific place.So, to detect the attacker is even harder.

4) **Fake WAP**

Even just for fun, a hacker can use software to fake a wireless access point. This WAP connects to the official public place. Once you get connected the fake WAP, a hacker can access your data, just like in the above case.

3) **Phishing**

Phishing is a hacking technique using which a hacker replicates the most-accessed sites and traps the victim by sending that spoofed link. Once the victim tries to login or enters some data, the hacker gets that private information of the target victim using the trojan running on the fake site. Phishing via Gmail account was the attack route taken by hackers who targeted the numerous Hollywood female celebrities.

4) **Virus, Trojan etc.**

Virus or trojans are malicious software programs which get installed into the victim's system and keep sending the victims data to the hacker. They can also lock your files, serve fraud advertisement, divert traffic, sniff your data, or spread on all the computer connected to your network.

5) **ClickJacking Attacks**

ClickJacking is also known by a different name, UI Redress. In this attack, the hacker hides the actual UI where the victim is supposed to click. This behavior is very common in app download, movie streaming, and torrent websites. While they mostly employ this technique to earn advertising dollars, others can use it to steal your personal information.

6) **Cookie theft**

The cookies of a browser keep our personal data such as browsing history, username, and passwords for different sites that we access. Once the hacker gets the access to your cookie, he can even authenticate himself as you on a browser. A popular method to carry out this attack is to encourage a user's IP packets to pass through attacker's machine.

This attack is easy to carry out if the user is not using SSL (https) to complete the session. On the websites where you enter your password and banking details, it's of highest importance for them to make their connections encrypted.

7) **Bait and switch**

Using bait and switch hacking technique, an attacker can buy advertising spaces on the websites. Later, when a user clicks on the advertisement, he might get directed to a page that's infected with malware. This way, they can further install malware or adware on your computer. The advertisement and download links shown in this technique are very attractive and users are expected to end up clicking on the same.

Types of Hackers

1. **White Hat** – Also known as ethical hackers(Computer expertise), White Hat hackers are the good guys in the hacker world. They'll help you to remove a virus.

2. **Black Hat** – Also known as crackers, these are the men and women you hear about in the news. They find banks or other companies with weak security and steal money or credit card information. The surprising truth about their methods of attack is that they often use common hacking practices they learned early on.
3. **Gray Hat** – Nothing is ever just black or white; the same is true in the world of hacking. Gray Hat hackers don't steal money or information. They don't help people for good (but, they could if they wanted to). These hackers comprise most of the hacking world.

Protect computer from hackers

Below are the preventive steps to protect your computer from hackers:

- Continually check the accuracy of personal accounts and deal with any discrepancies right away
- Limit the personal information you post on a personal Web pages
- Keep personal and financial information out of online conversations
- Use a 2-way firewall
- Update your operating system regularly
- Increase your browser security settings
- Avoid questionable Web sites
- Only download software from sites you trust. Carefully evaluate free software and file-sharing applications before downloading them.
- Practice safe email protocol:
- Don't open messages from unknown senders
- Immediately delete messages you suspect to be spam
- Make sure that you have the best security software products installed on your PC:
- Use antivirus protection

Threats - A potential cause of an incident, that may result in harm of systems and organization

Threat classification

Microsoft has proposed a threat classification called STRIDE

- Spoofing of user identity
- Tampering
- Repudiation
- Information disclosure (privacy breach or Data leak)
- Denial of Service (D.o.S.)
- Elevation of privilege

Some of the threats are listed below

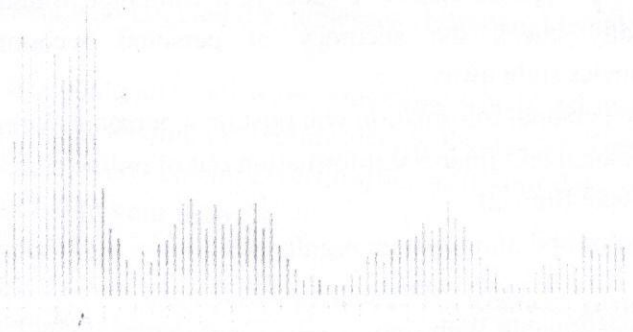
1) WannaCry
2) Petya

The WannaCry and Petya malware are in the worldwide businesses, governments, and non-profit institutions in mid-2017, using Windows leaked to the public by hacking group SHADOW BROKERS.While software vendors (such as Web browser providers) attempting to harden their products,to eliminate entire classes of vulnerabilities, and reduce windows opportunity for threat actors.

1) **The WannaCry ransomware attack**

On may Friday the 13th, PCs around the world, including those belonging to hospitals and government agencies, were hit by the WannaCry ransomware, causing chaos. until now we have seen more than 250,000 detections in 116 countries. What this means is that more than 250,000 users had **encountered** the ransomware but were protected as **blocked** the ransomware from infecting PCs. Through our Avast(It only produces false positives and doesn't see any trojan horses.)

By Friday afternoon it seems more than 50,000 detections of the ransomwarewithin the Avast user base. Shortly after Friday, around midnight, the number of detections grew to more than 100,000.



The top 10 targeted countries, according to data, are (in order): Russia, Ukraine, Taiwan, India, Brazil, Thailand, Romania, Philippines, Armenia, and Pakistan. More than half of the attacks on our entire user base were blocked in Russia.

Removing Wanna Cry

Removing WannaCry from a PC is not difficult, antivirus software should be able to remove the ransomware by quarantining the malicious files, but this does not solve the problem – the files will remain encrypted.

2) **Petya** is a family of encrypting ransomware which is first discovered in 2016. The malware targets Microsoft Windows-based systems, infecting the master boot record to encrypts a hard drive's file system table and prevents Windows from booting.

It subsequently demands that the user make a payment in Bitcoin in order to regain access to the system.

Conclusion

Although the term "hacker" is in widespread use, the sense in which it is employed is generally incorrect. Popular media and entertainment providers have long used it to describe anyone who tampers with a system, particularly in connection to criminal activity. This journalistic misuse of the name upset many "traditional" hackers, who responded to the vilification of their good name by offering a new term for these individuals: "crackers." Crackers are vandals and thieves whose sole purpose is unauthorized "cracking" into secure systems for personal gain.5 This darker side of hacking has three main motivations with varying degrees of harm. The most benign cracks are attempts to gain unauthorized access in order to satisfy a personal motive such as curiosity or pride. More malicious cracking seeks to gain unauthorized access in order to tamper with or destroy information. The goal of the most serious and professional crackers is unauthorized access to systems or computer services in order to steal data for criminal purposes. Systems commonly under attack are universities, government agencies, such as the Department of Defence and NASA, and large corporations such as electric utilities and airlines. Many crackers are professional criminals involved in corporate or government espionage and have links to organized crime. A relative newcomer to the "hacker" field, script kiddies are another break-off group mistakenly called hackers by the media. A lower form of crackers, script kiddies are not particularly knowledgeable about computer and networking details. Instead, they download readymade tools to seek out weaknesses on systems accessible via the Internet. They do not target specific information or a specific company but rather scan for opportunities to disrupt and vandalize systems. Most "hackers" and "hacking" events reported on by the popular press are actually of this type.

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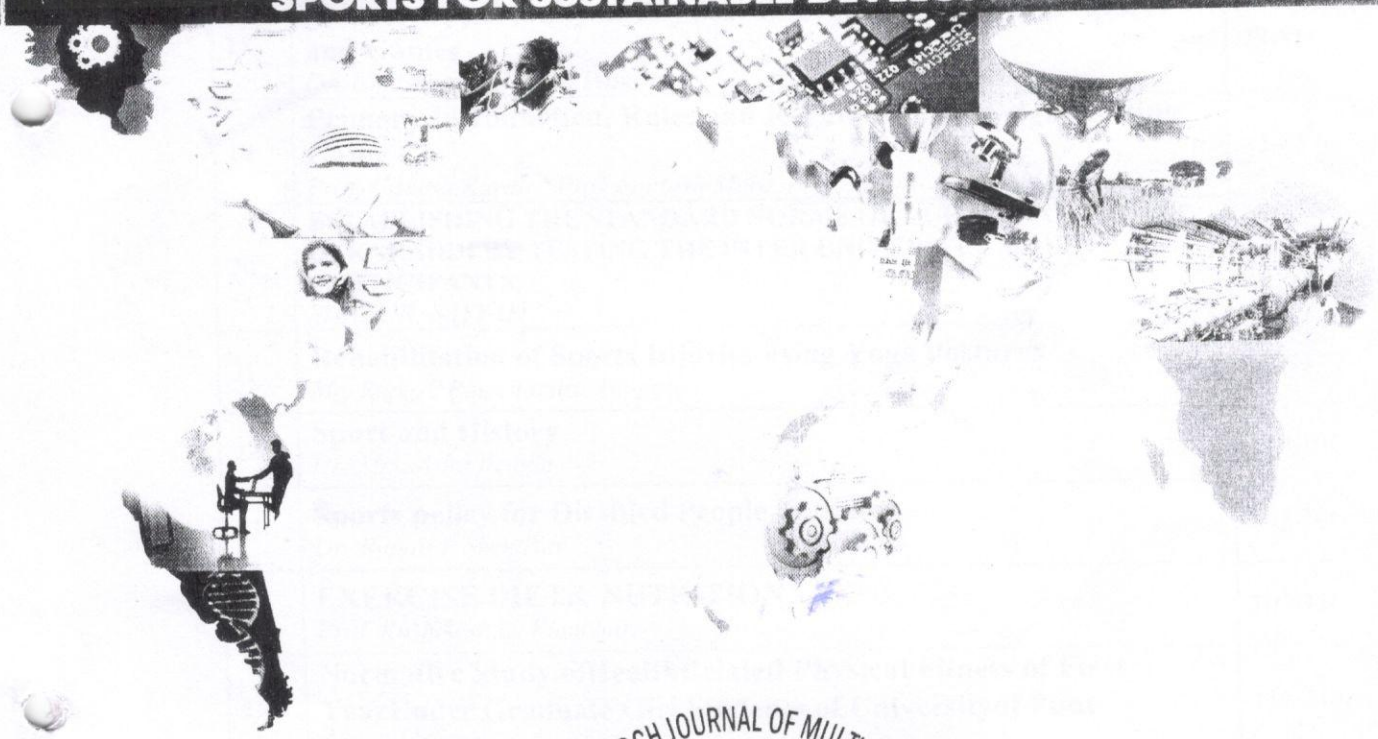

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Primary Introduction, Rules and Regulations of Weight Lifting Game

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Introduction:

Weightlifting, also called Olympic-style weightlifting, or Olympic weightlifting, is an athletic discipline in the modern Olympic programme in which the athlete attempts a maximum-weight single lift of a barbell loaded with weight plates.

The two competition lifts in order are the snatch and the clean and jerk. Each weightlifter receives three attempts in each, and the combined total of the highest two successful lifts determines the overall result within a bodyweight category. Bodyweight categories are different for male and female competitors. A lifter who fails to complete at least one successful snatch and one successful clean and jerk also fails to total, and therefore receives an "incomplete" entry for the competition. The clean and press was once a competition lift, but was discontinued due to difficulties in judging proper form.

In comparison with other strength sports, which test limit strength (with or without lifting aids), weightlifting tests aspects of human ballistic limits (explosive strength); the lifts are therefore executed faster—and with more mobility and a greater range of motion during their execution—than other strength movements. Properly executed, the snatch and the clean and jerk are both dynamic and explosive while appearing graceful, especially when viewed from a recording at a slowed speed.

While there are relatively few competitive Olympic weightlifters, the lifts performed in the sport of weightlifting, and in particular their component lifts (e.g. squats, deadlifts, cleans), are commonly used by elite athletes in other sports to train for both explosive and functional strength.

The Weights:

The Bar itself is a standard. Women and under use a 15Kg bar which is a slightly smaller diameter than the standard 20Kg bar used by all men.

The Barbell is loaded with **Disks (Plates)** of various weights. A combination of the international standard of 25 (Red), 20 (Blue), 15 (Yellow), 10 (Green), 5 (White), 2.5 (Red), 2 (Blue), 1 (Green), 0.5 (White) Kilogram disks to set the barbell at a certain weight, are used.

The barbell will be loaded with the minimum number of disks required to total the required weight.

In addition, **collars** must be used to tighten on the ends of the barbell to keep the weight disks attached. The standard collars are 2.5 Kg each.

Rules & Regulations

Each lifter is given three attempts at each of the Snatch and the Clean and Jerk.

First, all lifters in a session will complete all three attempts at the Snatch. Then, after a 10 minutes break, all lifters will take three attempts at the Clean and Jerk.

The Total of the Best Snatch and the Best Clean and Jerk determine medal or trophy placement.

Each lifter competes with other lifters in their own weight class but in most sessions, a few weight classes are mixed. In Open events, both Weight Classes and Age Classes are often mixed.

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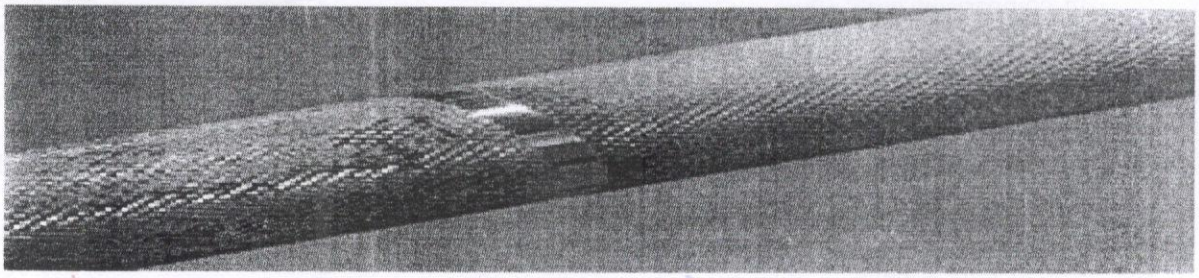
Youth lifters are under 17 years old, Junior Lifters are under 20 years old, Seniors are Open and Masters are over 35.

The weight on the barbell only goes up! All lifters who are attempting a certain weight complete their attempts before the other lifters attempt higher weights.

Three Judges watch for incorrect features of the lift to separate a "Good" lift from a "Bad Lift". Here are the basic items judges look for:

1) No part of the lifter (except the bottom of the feet) shall touch the platform.
2) The Lifter cannot "press out" the barbell. Press out is when the elbows are bent and the lifter uses strength of the arms to lock out the elbows.
3) The lift must be all in one continuous movement - no stopping and restarting.
4) The elbows must not touch thighs or knees during the Clean. This is dangerous and can cause serious injury.
5) The Lifter must hold the bar steady and be motionless between the Clean and the Jerk.
6) The Lifter must hold the bar steady and motionless in all parts of the body overhead with feet inline with the plane of the trunk until the judges give the down signal
7) The Lifter must guide the bar down at least below shoulder level when the lift is complete. Dropping from overhead is dangerous and an incorrect movement.
8) The Lifter must remain on the platform during the execution of the lift.

Barbell



Knurling on an Olympic barbell

Olympic weightlifting uses a steel bar (also known as a barbell) with larger-diameter rotating sleeves on either end, holding rubber-coated weight plates of different weights. This sleeve rotation is important for the Olympic lifts, particularly the snatch and clean movements, because it drastically reduces the rotational inertia of the bar. Without sleeve rotation, the Olympic lifter faces more challenging lifts and a greater risk of injury.

A men's Olympic barbell weighs 20 kg (44 lbs) with a shaft diameter of 28 mm and a length of 2200 mm, whereas a women's Olympic barbell weighs 15 kg (33 lbs) and has a shaft diameter of 25 mm with a length of 2010 mm. The distance between the sleeves, however, is the same for the men's and the women's bars at 1310 mm. The grip texture of the bar is called the knurling, and is distributed differently between the men's and women's bars: the men's has knurling in the centre but the women's does not. The Olympic barbells used in competition are certified by the IWF.

Bumper plates

The weight plates, typically referred to as "bumper plates" because of their rubber coated design, weigh between 10 kg and 25 kg in 5 kg increments. Smaller metal plates from 0.5 kg to 5 kg called

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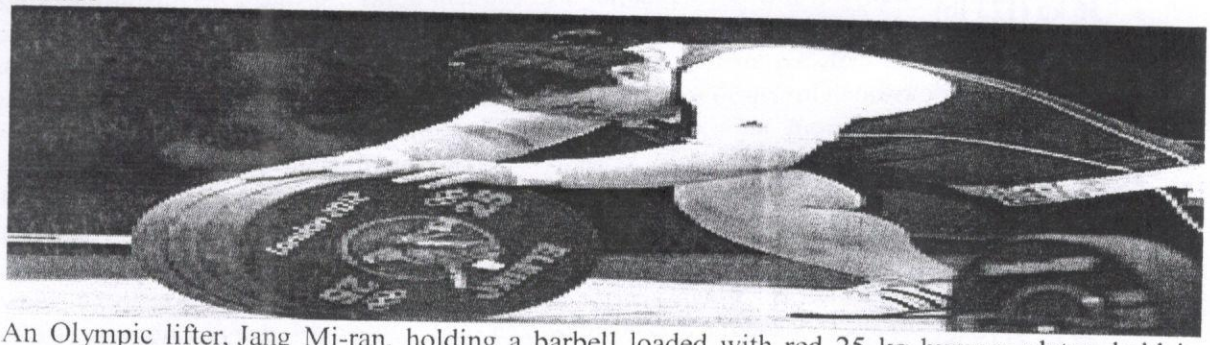
change or fractional plates are used to for smaller weight totals. The bumper plates are coated with rubber to allow the weights to be dropped from various heights—either after a successful lift or during an unsuccessful one. Olympic bumper plates conform to international standards for colouring. That is, 10 kg is green, 15 kg is yellow, 20 kg is blue, and 25 kg is red.

Competition iron plates

In addition to the rubber bumpers, smaller competition iron plates can be used to add weight in small increments to the bar. The colour designations for these iron plates are as follows: 1 kg is green, 1.5 kg is yellow, 2 kg is blue, 2.5 kg is red, 5 kg and 0.5 kg are white. It is useful to note the colour assignment of these iron plates is consistent with the heavier bumper plates (i.e. 1 kg and 10 kg are green, 1.5 kg and 15 kg are yellow, etc.).

Collars



An Olympic lifter, Jang Mi-ran, holding a barbell loaded with red 25 kg bumper plates, held in place with a collar. Note the lifter's taped wrists and thumbs, her weightlifting shoes, and her weightlifting belt.

Weight plates are secured to the bar using collars on each sleeve that weigh exactly 2.5 kg each.

Singlet

Lifters typically wear a one-piece, close-fitting leotard often called a singlet. The wearing of a T-shirt underneath the singlet is optional.

Belt

A weightlifting belt of 120 mm maximum width may also be worn to provide lower back support.

Chalk

Chalk is regularly used by Olympic lifters, generally prior to each attempt at a lift. Lifters rub their hands with the chalk to promote dryness and prevent the bar moving in their hands. In addition to the hands, chalk can be applied to the neck, usually above the collarbone, which is a key point of contact for the bar during a clean and jerk.

Tape

Olympic lifters frequently use tape to cover the areas of their bodies exposed to friction while completing Olympic lifts. Tape is most commonly found on the Olympic lifter's thumb. A taped thumb not only lessens the risk of calluses, it reduces the pain associated with the hook grip.

Olympic lifters also tape their wrists, preventing exaggerated and uncomfortable joint movement during lifts. For particularly heavy overhead lifts, a taped wrist enables the lifter to regulate wrist extension and delimit the translation of the radius and ulna distal heads. However, while taped wrists can prevent wrist and forearm injuries in the short-term, excessive use can lead to weakened connective tissue in the area, increasing the risk of pain and injury.

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Shoes

Perhaps the type of shoes worn by Olympic weightlifters is their most distinctive piece of equipment. Weightlifting shoes are typically designed with a raised heel of 0.5" to 1.5" and one or two metatarsal straps that tighten across the instep of the shoe. The raised heel helps the lifter maintain an upright torso while catching the bar and also allows for a deeper squat under the bar. The soles of the shoes are also quite rigid, helping to resist compression while under heavy loads. The shoes are designed for maximum stability while remaining flexible in the "toebox". This allows the lifter to come up on the toes and to catch the weight on the ball of the back foot during the "jerk" movement of the lift.

Weight classes

Athletes compete in a division determined by their body mass. There have been eight male divisions and eight female divisions since 2017.

Men's weight classes:

- 56 kg (123 lb)
- 62 kg (137 lb)
- 69 kg (152 lb)
- 77 kg (170 lb)
- 85 kg (187 lb)
- 94 kg (207 lb)
- 105 kg (231 lb)
- 105 kg and over (231 lb+)

Women's weight classes:

- 48 kg (106 lb)
- 53 kg (117 lb)
- 58 kg (128 lb)
- 63 kg (139 lb)
- 69 kg (152 lb)
- 75 kg (165 lb)
- 90 kg (198 lb)
- 90 kg and over (198 lb+)

Basic skill

The **Snatch** is a single movement where the lifter holds the bar in a wide grip, lifts the weight off the ground overhead in one movement, then stands upright holding the bar overhead.

The **Clean and Jerk** is a two-part movement. First, the lifter holds the barbell in a shoulder width grip, then pulls the weight up to the shoulders and then stands up with the barbell balanced on the shoulders.

Once settled, the lifter will snap the bar overhead and stand upright again with the barbell in control overhead.

Once the lifter is in control, the judges will give the "Down" signal and the lifter will lower the bar.

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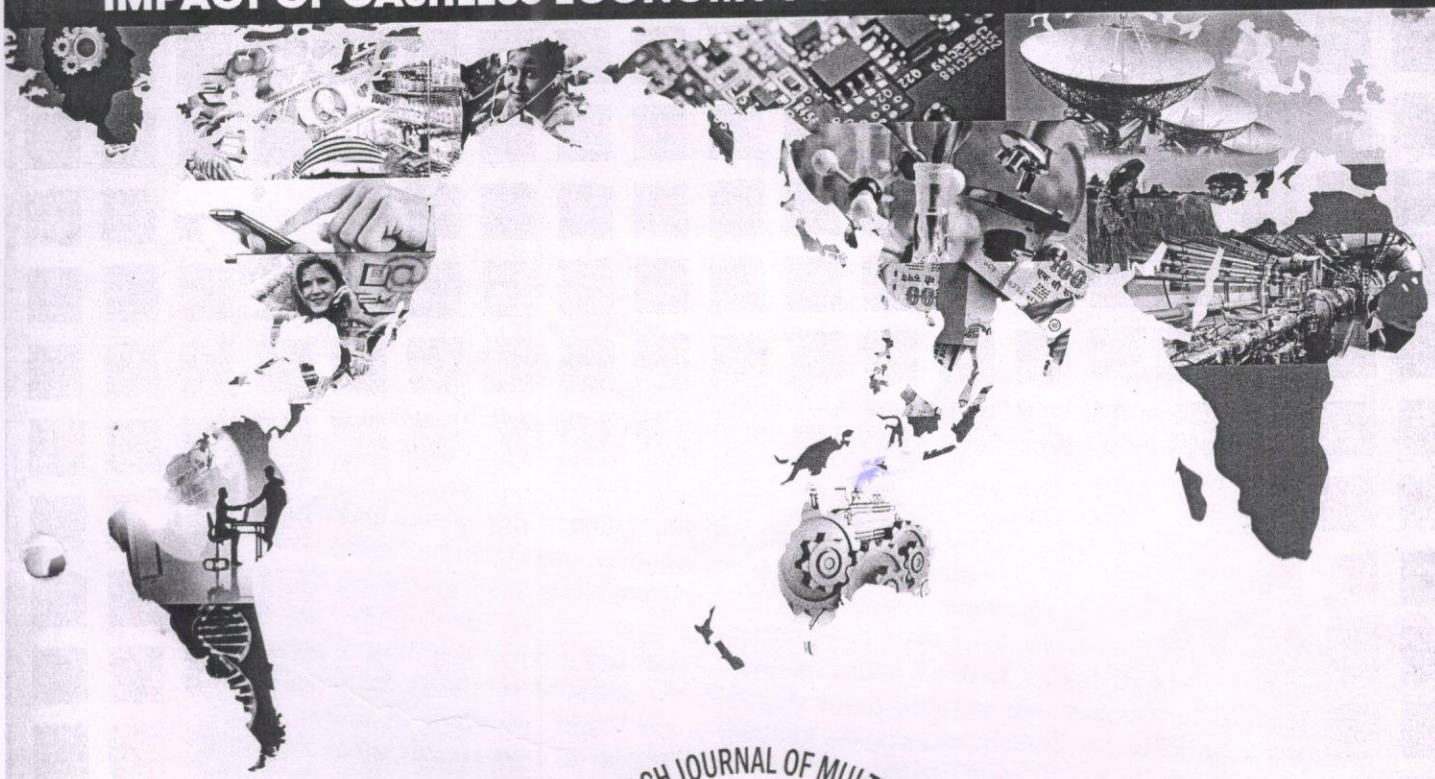
SPECIAL ISSUE ON
IMPACT OF CASHLESS ECONOMY : CHALLENGES AND OPPORTUNITIES



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SPECIAL ISSUE ON IMPACT OF CASHLESS ECONOMY –CHALLENGES AND OPPORTUNITIES

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CASHLESS ECONOMY: CHALLENGES AND OPPORTUNITIES

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Abstract

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. The paper under study tries to throw light on the rising trend of digital transactions in India being carried out in various cashless modes over the last few years but simultaneously being ourselves making alert of the negative impact of going cashless thereby showing downside of digital India. As the people of India are showing amazing response towards move of digitalization, it is the big indicator of prosperous future for India to be cashless India. So the need of an hour is to spot the weaknesses involved in cashless transactions and work out on them to achieve the vision of Prime Minister Modi's Digital India.

Keywords: Card-Swipe, Cashless, E-Banking, Mobile Banking, and Pos.

Introduction

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. The paper under study tries to throw light on the rising trend of digital transactions in India being carried out in various cashless modes over the last few years but simultaneously being ourselves making alert of the negative impact of going cashless thereby showing downside of digital India. As the people of India are showing amazing response towards move of digitalization, it is the big indicator of prosperous future for India to be cashless India. So the need of an hour is to spot the weaknesses involved in cashless transactions and work out on them to achieve the vision of Prime Minister Modi's Digital India

Objectives of study

1. To find out benefits in going cashless.
2. To chalk out the major challenges in making India cashless.
3. To access growth of India on the path of being cashless in terms of digital transactions such as POS, Credit & Debit cards and payment banks etc.

"We want to have one mission and target: Take the nation forward – Digitally and economically" Shri Narendra Modi Prime Minister, Mr. Narendra Modi launched the Programme "Digital India" with a vision to transform India into a digitally empowered nation and creating a cashless, paperless economy. As per the current status of India, only 7% to 8% of all the payments are taking place electronically. On Nov 8, 2016, a historical date, he talked about making India a cashless economy and on Nov 27 during an election rally in Uttar Pradesh, he again motivated the people of India to become familiar with cashless transactions.

On the same day, during his radio Programme "Mann ki Baat", he said: "Learn how this digital economy works. Learn the different ways you can use your bank accounts and internet banking. Learn how to effectively use the apps of various banks on your phones. Learn how to run your business without cash. Learn about card payments and other electronic modes of payment. Look at the malls and see how they function. A cashless economy is secure, it is clean. You have a leadership role to play in taking India towards an increasingly digital economy".

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Meaning Of Cashless Economy And Where India Stands?

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. At present, India is far behind to other economies with regard to cashless transactions. The ratio of cash to gross domestic product in India is one of the highest in the world-12.42% in 2014 as compared with 9.47% in China or 4% in Brazil. Another report by Boston Consulting Group (BCG) and Google India mentioned that last year around 75% of transactions in India was cash based while it was 20-25% in developed nations such as US, Japan, France, Germany etc.Another statistics have revealed that India has 76.47 billion currency notes in circulation in 2012-13 as compared with 34.5 billion in the U.S. Moreover, various other studies have shown that people prefer to make payments in cash in malls even when they carry credit cards with them.But, the step taken on Nov 8, 2016 of demonetization has pushed digital and e- transaction to the forefront in India due to depletion in cash. Now, e-banking, e-wallets and other transaction apps are becoming more prevalent.

Benefits Of Going Cashless To The Economy

Going cashless has helped in creating a positive impact on society as the paper based methodology in financial transactions has been reduced thereby economy in operations, time and cost. Various benefits of going cashless can be listed out as under:It will help in curbing the generation of black money. The cashless economy has attacked the parallel economy. People who hoard money under their bed, people who launder money bypassing banking channels, terrorist who need money to finance their terror will find difficulty in cashless economy.

It will help in reducing instances of tax avoidance. All the transactions can be monitored and hence traced back to an individual. Income tax officials can easily trace out the transactions and it will become difficult for individuals to evade taxes. Ultimately, it will help in increasing revenue of the government from taxes and more productive activities can be carried out in the economy.

It will lead to reduction in real estate prices because of curbs on black money as most of it is invested in real estate which ultimately inflates the prices of real estate markets.RBI spent Rs.27 billion in financial year 2015 on currency issuance and management. This could be avoided if India becomes a cashless economy.

Cashless economy will boost consumption as people would not be attracted towards keeping money in banks. More consumption will lead to more production, more employment opportunities & hence, income of people will increase.

Practical Implementation for Moving On Path of Going Cashless (In Context Of India) :

For making India cashless, these are the various modes available in form of digital transactions which are being Considerably implemented and which clearly indicate that cashless transactions are being actively used by people in India. These can be highlighted as under:

1. Payment Banks: Payment bank is a new model of banks introduced by RBI. Payment can issue services like ATM Cards, mobile banking, net banking, and debit cards etc. These payment banks offer amazing competition to traditional banks in terms of services. Two such prominent licensees are Airtel (founded in 1995, in 2016reaching at revenue of $14.5 billion) and PayTM (founded in 2010 and valued at $1 billion presently)
2. Electronic Fund Transfer Systems: Two popular methods RTGS and NEFT are increasingly used by people at a large scale for making funds transfer from one bank to another leading to less time and economy in operations.4.3 Mobile Wallets: Option to open a zero KYC or a full

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KYC wallet along with your mobile number and the application to be downloaded to your smart phone.

3. Internet Banking: For this type of digital service to take benefit of, the individual must hold a bank account and opt for the online service same.
4. Banking Cards: Banking cards are available by the bank by providing the KYC (know you customer) Information to the bank. Applying for a card and getting a pin for the same. Credit and Debit cards are plastic cards that are used as method of payment.
5. Banks Pre-Paid Cards: For this service, a bank account is there with wallet or a pre-paid card and a smart phone to generate the MPIIN.
6. Point of Sale: A handheld device with the biometric reader along with a merchant bank account and internet connectivity. POS machines facilitate acceptance of payment from customers by swiping of their debit/credit/prepaid cards on POS terminals. Number of POS terminals in India has increased from 5 Lakh in year 2010 to 14.62 Lakh in year 2016. Growth of POS Terminals in India (Bank wise) (Table 1)Bank Number of POS terminals(in lakh)State Bank of India 3.29 ,HDFC 2.88, Axis Bank 2.7,ICICI 2.02
7. Mobile Banking: A bank account is required along with a mobile phone application of the bank and internet connectivity to take benefit of this digital service. Mobile banking concept is gaining its momentum over the years.As shown in graph below, value of transactions using mobile banking increased is maximum than in other digital platforms such as POS, PPI etc.

Negative Impact Of Going Cashless

As we know every good has its bad side also, surely aura of cashless transactions is spreading all over India converting India into Digital India, simultaneously the more and more use of internet is giving rise to various negative effects also. Following can be highlighted as the negative effects of going cashless with reference to India.

Increase in Cyber Crimes: Due to the increasing rate of online frauds, the risk of hacking will also increase as more people will be on the digital mode. More and more use of internet is giving boost to cyber crimes at an increasing pace as can be seen below: Rate of Cyber Crimes in India (Under IT Act)(Table 2)Year Registered Cases Persons Arrested

- 2011 1791 1184
- 2012 2876 1522
- 2013 4356 2098
- 2014 7201 4246
- 2015 8045 5102

Increased chances of trapping: Performing digital transactions using public networks can be more prone to traps on mobile devices and thereby giving opportunity to hackers to access account related sensitive information. Frauds through digital transactions: A report by ASSOCHAM-EY on study titled "Strategic Nation measures to combat cyber crimes" highlights 46% Complaints of credit/debit cards frauds, 18 % on account of hacking of email ids and 21% complaints on account of cheating through mobiles. (Source: www.newsnation.in) In October 2016, 3.2 million card details were stolen in malware related security areas. These cards belonged to customers of SBI, HDFC, ICICI, Axis Bank and were used at ATMs. Stolen debit cards were used in china. No legal decision has been taken and the case is still under investigation.

Challenges in Making India A Cashless Economy

There are a number of obstacles in making India a cashless economy. Some of them are as under:-
A large part of the population, approx. 50% of Indians is not covered under any banking system. According to 2015, report by PriceWaterhouse Coopers, India's unbanked population was at 233

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million. Though bank accounts have been opened through Jan Dhan Yojana, most of them are lying unoperational. Unless, people start operating bank accounts, cashless economy is not possible.

The digital mode is a big hurdle for the tech-unfriendly people. Since, India has a low penetration of 34.8% as per Internet live stats and only 26.3% of all mobile phone users have a smart phone, therefore, it is difficult to go digital.

The low literacy rates in rural India & lack of infrastructure like internet access and power make things extremely difficult for people to adopt cashless economy.

In India, there are approx. 350 million internet users. The internet penetration rate is just 27% which is very low in comparison to countries like Nigeria, Kenya & Indonesia etc. It has to be at least 67% which is global median.

Only 17% of Indians use smart phones which is very less and only 15% of Indians have internet on their smart phones.

The internet loading speed is very low. The average page load time is 5.5 seconds in India in comparison to 2.6 seconds in China.

POS machines (Point of sales) are must for any cashless transactions. A study was conducted by Macquarie Research and it was posted on website of National Payments Corporation of India, in which it has been highlighted that India still far behind in terms of Number of POS machines which is 2 per 1000 debit cards as compared to other countries like in Brazil 14.8, China 12.5, Russia is 6.1, U.S 13.1 and in Australia is 33.2 per 1000 debit cards.(Source: www.indianexpress.com)

Since, India is dominated by small retailers; therefore they don't have enough resources to invest in electronic payment infrastructure.

Most card and cash users have the perception that they will be charged more if they use cards. Moreover, nonusers of credit cards are not aware of the benefits of credit cards.

Steps Taken By RBI And Government To Discourage Use Of Cash

Government is also promoting mobile wallets. Mobile wallet allows users to instantly send money, pay bill, and recharge mobiles, book movie tickets, and send physical and e-gifts both online and offline. Recently, the RBI had issued certain guidelines that allow the users to increase their limit to Rs 1, 00,000 based on certain KYC verification. Various incentives offered by government to promote digitalization in India to make India "Digital India" by focusing on cashless modes are: On digital transactions up to rupees 2000, Service Tax of 15% waived off Digital purchase of fuel through credit cards, mobile wallets or e-wallets, discount of 0.75% Free accident insurance worth rupess 10 lakh on account of online ticket buyers On purchase of new LIC policies online via its site, 8% discount is offered. Government has also launched UPI (PDF) (Unified Payment Interface), payment system that can be used for

Government has introduced various technologies like BHIM (Bharat Interface for Money) app to transact between each other as well as with other merchants. BHIM App currently has 17 million downloads in less than 3 months since its launch. And government is considerably promoting their digital cashless technologies other than BHIM such as UPI & Aadhar Enabled Payment Systems. As per National Payments Corporation of India, payment transactions through Aadhar enabled Payment Systems have raised 12 times over 6 months from April 2016 to October 2016 which is highlighting that traditional bank themselves are moving towards e-wallet services on mobiles at a faster pace.

In addition to govt or RBI, Companies are also participating in combating of cyber crimes because of increasing trend of cashless or digital transactions.Microsoft opened full scale cyber security

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Center called Cyber security Engagement center (CSEC) in India.This centre, located in Delhi, functions as a satellite to company's Redmond Digital Crime Unit (DCU).This centre monitors how viruses are spreading, from where cyber attacks are originating and helping customers to tap pool of security specialists.

Measures To Be Taken For Stepping Towards Cashless India

Basic cyber hygiene must be taken care of such as non-sharing of passwords with others, non-saving of passwords on public networks and Better access to control techniques with strong authentication measures should be implemented by mobile e-wallet companies. Open Bank accounts and ensure they are operationalized.

Abolishment of government fees on credit card transactions; reduction of interchange fee on card transactions; increase in taxes on ATM withdrawals.

Tax rebates for consumers and for merchants who adopt electronic payments.

Need is to scale up the capabilities of POS machines for faster rollouts in country.

Making Electronic payment infrastructure completely safe and secure so that incidents of Cyber crimes could be minimized and people develop faith in electronic payment system.

The Reserve Bank of India too will have to come to terms with a few issues, from figuring out what digital payments across borders means for its capital controls to how the new modes of payment affect key monetary variables such as the velocity of money.

RBI will also have to shed some of its conservatism, part of which is because it has often seen itself as the protector of banking interests rather than overall financial development.

Conclusion

The future of the Cashless India looks pretty promising as the response of the country people towards this move of the government and the support towards it is a clear indication that the government's move is likely to succeed. The transparency in the economy will increase through the e-commerce transactions and the digital payment gateways which will increase the GDP of the economy. This will increase the creditability of the country and make a rise in investments. This step of cashless is truly going to create ripples of big success and it will help to attain vision of Prime Minister Modi's vision of "Digital India".

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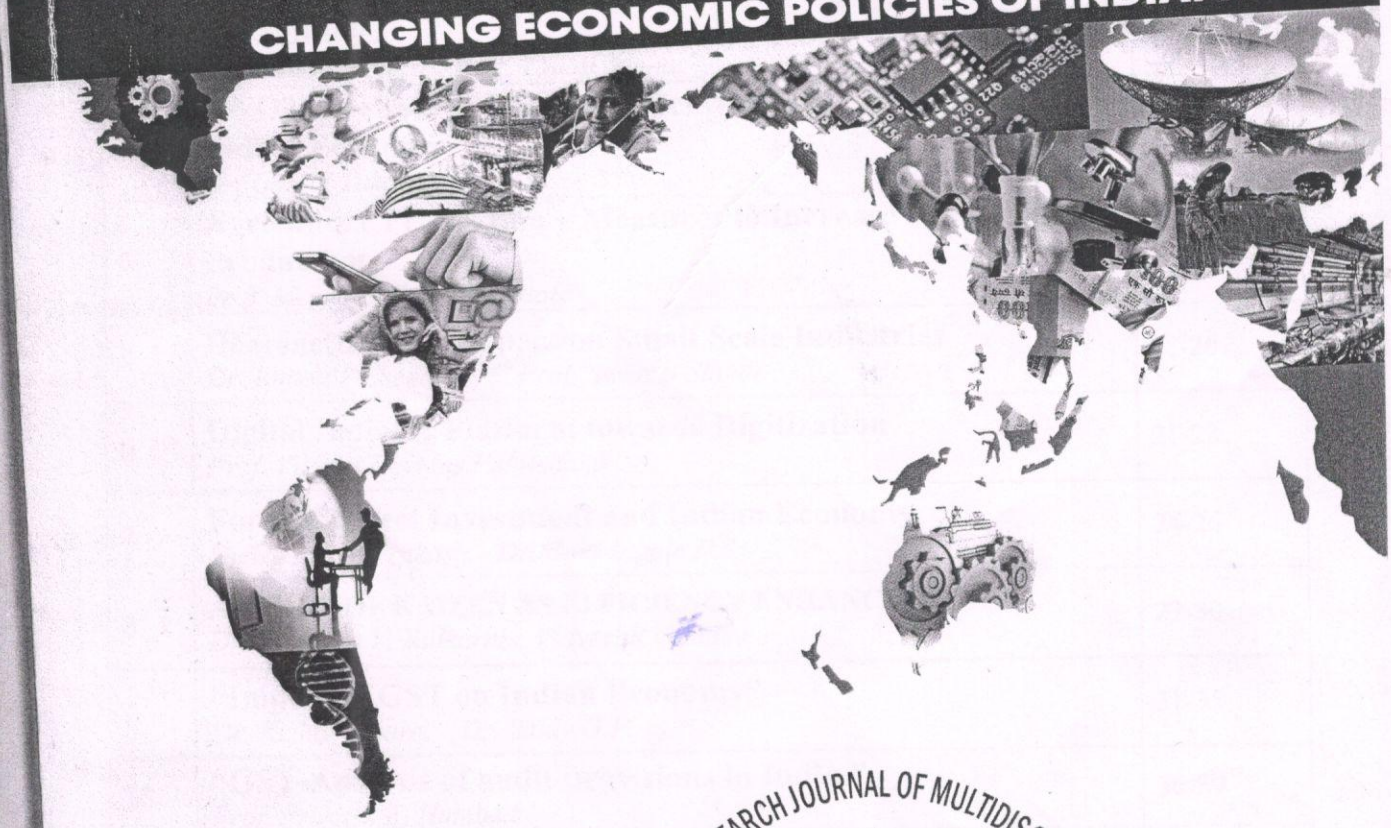
J.M. Joshi

SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMP



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Banks can offer so many channels to access their banking and other services such as ATM, Local branches, Telephone/Mobile banking, Video banking etc. to increase the banking business.

Product Differentiation

Apart from traditional banking services, Indian Banks must adopt some product innovation so that they can compete in gamut of competition

Expansion

Expansion of branch size in order to increase market share is another opportunity to combat competitors. Therefore Indian nationalised and commercial banks must spread their wings towards global markets as some of them have already done it.

Conclusion

Indian banks are trust worthy brands in Indian market, therefore these banks must utilise their brand equity as it is a valuable asset for them. The paper discusses the various challenges and opportunities like transparency, growth in banking sector, global banking, managing technology etc.

Banks are striving to combat the competition. The competition from global banks and technological innovation has compelled the banks to rethink their policies and strategies. Finally the banking sector will need to master a new business model by building management and customer services. Banks should contribute intensive efforts to render better services to their customer. Nationalized and commercial banks should overcome the challenges and to get advantage of opportunities in changing banking scenario.

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Therefore, they need support and it is one of the reasons for merger. ICICI Bank Ltd has used mergers as their expansion strategy in rural market. They are successful in making their presence in rural India. It strengthens their network across geographical boundary improves customer base and market share.

The Commercial banking structure in India

21914 Binija George, Recent trends in banking sector ---- Challenges and opportunities

Managing Technology

Developing or acquiring the right technology, deploying it optimally and then leveraging it to the maximum extent is essential to achieve and maintain high service and efficiency standards while remaining cost effective and delivering sustainable return to shareholders. Early adopters of technology acquire significant competitive advantages. Managing technology is therefore, a key challenge for the Indian Banking Sector.

Market Discipline and Transparency

According to Fernando (2011) transparency and disclosure norms as part of internationally accepted corporate governance practices are assuming greater importance in the emerging environment. Banks are expected to be more responsive and accountable to the investors. Banks have to disclose in their Balance sheets a plethora of information on the maturity profiles of assets and liabilities, movements in NPAs, capital, shareholdings of the government, value of investment in India and abroad, the total investment made in the equity share, bonds, debentures, aggregate advances against shares and so on.

Other Challenges

- Development of skill of bank personnel
- Customer awareness and satisfaction
- Changing needs of customers
- Lack of common technology standards for mobile banking
- Manpower planning etc.

Opportunities

Where there are challenges, there must be opportunities. Following are the opportunities for the banking sector.

Rural area customers

Contributing to 70% of the total population in India is a largely untapped market for banking sector. In all urban areas, banking services entered but only few big villages have the banks entered. So that the banks must reach in remaining all villages because majority of Indian still living in rural areas.

Good customer services

Good customer services are the best brand ambassador for any bank for growing its business. Every engagement with customer is an opportunity to develop a customer faith in the bank. While increasing competition, customer services has become the backbone for judging the performance of banks.

Internet Banking

It is clear that online finance will pick up and there will be increasing convergence in terms of product offerings, banking services, share trading, insurance, loans based on the data warehousing and data mining technologies. Anytime anywhere banking will become common and will have to upscale. Such upscaleing could include banks launching separate internet banking services apart from traditional banking services.

Offering various channels

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The present banking scenario provides a lot of opportunities as well as facing lot of challenges also. India is being
fundamentally strong supported by concrete economic policies,decisions and implementations by the Indian Government.Today in India, the service sector is contributing half of the Indian GDP and the banking is most popular service sector in India. The significant role of banking industry is essential to speed up the social economic development. To improve major areas of banking sector, Government of India, RBI and Ministry of finance have made several notable efforts. Many of leading banks operating in market have made use of the changed rules and regulations such as CRR, interest rate, special offers to the customers such as to open account in Zero balance. In addition to this, now a days banks are entered in non-banking products such as insurance in which area there are tremendous opportunities.

Challenges faced by the banking sector

Customer satisfaction

Today, in banking sector customers are more value oriented in their services because they have alternative choices in it. So that each and every bank have to take care about fulfilling customers satisfaction.

To provide several personnel services

Today, it is demanded that banks are to provide several services for which they have to expand their service, social banking with financial possibilities, computerisation and minnovative mechanization, better customer services, internal supervision and control, adequate profitability, strong organisation culture etc. Therefore banks must be able to provide complete personal service to the customers who comes with expectations.

Competition

The nationalized banks and commercial banks have the competition from foreign and new private sector banks. Competition in banking sector brings various challenges before the banks such as product positioning, innovative ideas and channels and new market trends. Banks are restricting their administrative folio by converting manpower into machine power.ie, banks are decreasing manual powers and getting maximum work done through machine power. Skilled and specialised manpower is to be utilised and result oriented targeted staff will be appointed.

Global Banking

It is practically and fundamentally impossible for any nation to exclude itself from world economy. Therefore, for sustainable development, one has to adopt integration process in the form of liberalization and globalization as India spread the red carpet for foreign firms in 1991. The impact of globalization becomes challenges for the domestic enterprises as they are bound to compete with global players. The foreign banks operating in India, becomes a major challenge for nationalised and private sector banks. These banks are large in size, technically advanced and having presence in global market, which gives more and better options and services to Indian traders.

Growth of Banking

Zhao, Casu and Ferrari (2008) used a balanced panel data set covering the period of 1992-2004 and employing a Data Envelopment Analysis (DEA) based Total Factor Productivity (TFP) index. The empirical study indicated that after an initial adjustment phase, the Indian Banking Industry experienced sustained productivity growth, which was driven mainly by technological progress. Foreign banks appear to have acted as technological innovators when competition increased, which added to the competitive pressure in the banking market. It was found in the study of Goyal and Joshi (2011) that small and local banks face difficulty in bearing the impact of global economy.

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SPECIAL ISSUE ON SPORTS FOR SUSTAINABLE DEVELOPMENT IN INDIA

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Primary Introduction, Rules and Regulations of Weight Lifting Game

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Introduction:

Weightlifting, also called Olympic-style weightlifting, or Olympic weightlifting, is an athletic discipline in the modern Olympic programme in which the athlete attempts a maximum-weight single lift of a barbell loaded with weight plates.

The two competition lifts in order are the snatch and the clean and jerk. Each weightlifter receives three attempts in each, and the combined total of the highest two successful lifts determines the overall result within a bodyweight category. Bodyweight categories are different for male and female competitors. A lifter who fails to complete at least one successful snatch and one successful clean and jerk also fails to total, and therefore receives an "incomplete" entry for the competition. The clean and press was once a competition lift, but was discontinued due to difficulties in judging proper form.

In comparison with other strength sports, which test limit strength (with or without lifting aids), weightlifting tests aspects of human ballistic limits (explosive strength); the lifts are therefore executed faster—and with more mobility and a greater range of motion during their execution—than other strength movements. Properly executed, the snatch and the clean and jerk are both dynamic and explosive while appearing graceful, especially when viewed from a recording at a slowed speed.

While there are relatively few competitive Olympic weightlifters, the lifts performed in the sport of weightlifting, and in particular their component lifts (e.g. squats, deadlifts, cleans), are commonly used by elite athletes in other sports to train for both explosive and functional strength.

The Weights:

The Bar itself is a standard. Women and under use a 15Kg bar which is a slightly smaller diameter than the standard 20Kg bar used by all men.

The Barbell is loaded with **Disks (Plates)** of various weights. A combination of the international standard of 25 (Red), 20 (Blue), 15 (Yellow), 10 (Green), 5 (White), 2.5 (Red), 2 (Blue), 1 (Green), 0.5 (White) Kilogram disks to set the barbell at a certain weight, are used.

The barbell will be loaded with the minimum number of disks required to total the required weight.

In addition, **collars** must be used to tighten on the ends of the barbell to keep the weight disks attached. The standard collars are 2.5 Kg each.

Rules & Regulations

Each lifter is given three attempts at each of the Snatch and the Clean and Jerk.

First, all lifters in a session will complete all three attempts at the Snatch. Then, after a 10 minutes break, all lifters will take three attempts at the Clean and Jerk.

The Total of the Best Snatch and the Best Clean and Jerk determine medal or trophy placement.

Each lifter competes with other lifters in their own weight class but in most sessions, a few weight classes are mixed. In Open events, both Weight Classes and Age Classes are often mixed.

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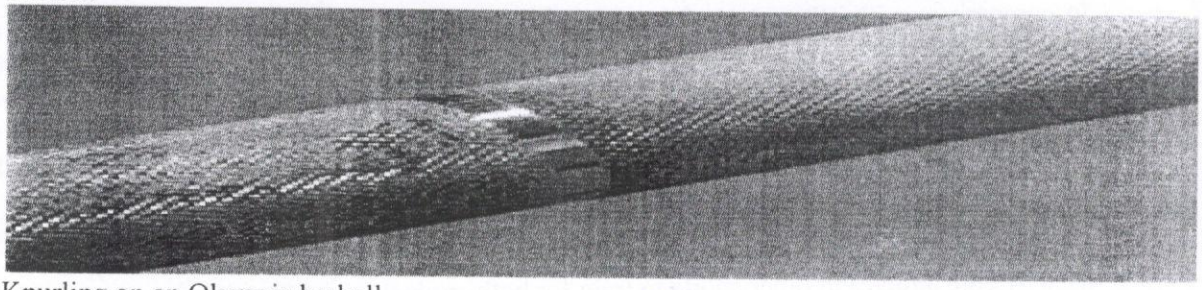
Youth lifters are under 17 years old, Junior Lifters are under 20 years old, Seniors are Open and Masters are over 35.

The weight on the barbell only goes up! All lifters who are attempting a certain weight complete their attempts before the other lifters attempt higher weights.

Three Judges watch for incorrect features of the lift to separate a "Good" lift from a "Bad Lift". Here are the basic items judges look for:

1) No part of the lifter (except the bottom of the feet) shall touch the platform.
2) The Lifter cannot "press out" the barbell. Press out is when the elbows are bent and the lifter uses strength of the arms to lock out the elbows.
3) The lift must be all in one continuous movement - no stopping and restarting.
4) The elbows must not touch thighs or knees during the Clean. This is dangerous and can cause serious injury.
5) The Lifter must hold the bar steady and be motionless between the Clean and the Jerk.
6) The Lifter must hold the bar steady and motionless in all parts of the body overhead with feet inline with the plane of the trunk until the judges give the down signal
7) The Lifter must guide the bar down at least below shoulder level when the lift is complete. Dropping from overhead is dangerous and an incorrect movement.
8) The Lifter must remain on the platform during the execution of the lift.

Barbell



Knurling on an Olympic barbell

Olympic weightlifting uses a steel bar (also known as a barbell) with larger-diameter rotating sleeves on either end, holding rubber-coated weight plates of different weights. This sleeve rotation is important for the Olympic lifts, particularly the snatch and clean movements, because it drastically reduces the rotational inertia of the bar. Without sleeve rotation, the Olympic lifter faces more challenging lifts and a greater risk of injury.

A men's Olympic barbell weighs 20 kg (44 lbs) with a shaft diameter of 28 mm and a length of 2200 mm, whereas a women's Olympic barbell weighs 15 kg (33 lbs) and has a shaft diameter of 25 mm with a length of 2010 mm. The distance between the sleeves, however, is the same for the men's and the women's bars at 1310 mm. The grip texture of the bar is called the knurling, and is distributed differently between the men's and women's bars: the men's has knurling in the centre but the women's does not. The Olympic barbells used in competition are certified by the IWF.

Bumper plates

The weight plates, typically referred to as "bumper plates" because of their rubber coated design, weigh between 10 kg and 25 kg in 5 kg increments. Smaller metal plates from 0.5 kg to 5 kg called

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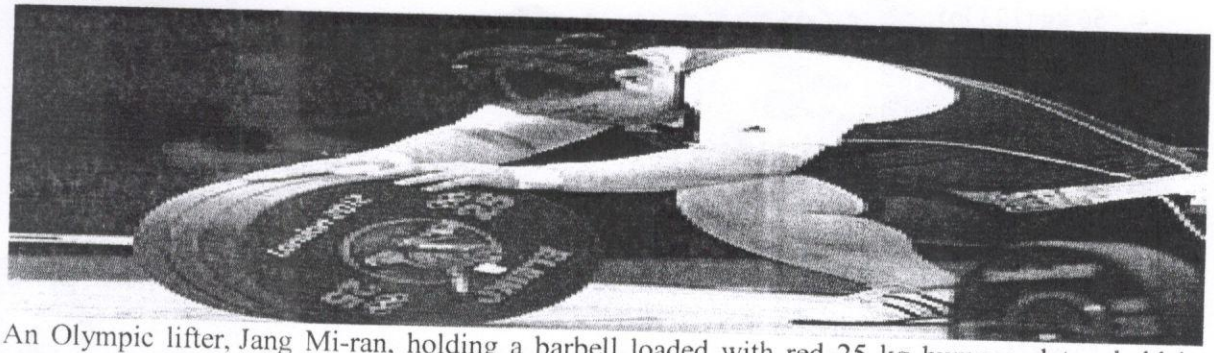
change or fractional plates are used to for smaller weight totals. The bumper plates are coated with rubber to allow the weights to be dropped from various heights—either after a successful lift or during an unsuccessful one. Olympic bumper plates conform to international standards for colouring. That is, 10 kg is green, 15 kg is yellow, 20 kg is blue, and 25 kg is red.

Competition iron plates

In addition to the rubber bumpers, smaller competition iron plates can be used to add weight in small increments to the bar. The colour designations for these iron plates are as follows: 1 kg is green, 1.5 kg is yellow, 2 kg is blue, 2.5 kg is red, 5 kg and 0.5 kg are white. It is useful to note the colour assignment of these iron plates is consistent with the heavier bumper plates (i.e. 1 kg and 10 kg are green, 1.5 kg and 15 kg are yellow, etc.).

Collars



An Olympic lifter, Jang Mi-ran, holding a barbell loaded with red 25 kg bumper plates, held in place with a collar. Note the lifter's taped wrists and thumbs, her weightlifting shoes, and her weightlifting belt.

Weight plates are secured to the bar using collars on each sleeve that weigh exactly 2.5 kg each.

Singlet

Lifters typically wear a one-piece, close-fitting leotard often called a singlet. The wearing of a T-shirt underneath the singlet is optional.

Belt

A weightlifting belt of 120 mm maximum width may also be worn to provide lower back support.

Chalk

Chalk is regularly used by Olympic lifters, generally prior to each attempt at a lift. Lifters rub their hands with the chalk to promote dryness and prevent the bar moving in their hands. In addition to the hands, chalk can be applied to the neck, usually above the collarbone, which is a key point of contact for the bar during a clean and jerk.

Tape

Olympic lifters frequently use tape to cover the areas of their bodies exposed to friction while completing Olympic lifts. Tape is most commonly found on the Olympic lifter's thumb. A taped thumb not only lessens the risk of calluses, it reduces the pain associated with the hook grip.

Olympic lifters also tape their wrists, preventing exaggerated and uncomfortable joint movement during lifts. For particularly heavy overhead lifts, a taped wrist enables the lifter to regulate wrist extension and delimit the translation of the radius and ulna distal heads. However, while taped wrists can prevent wrist and forearm injuries in the short-term, excessive use can lead to weakened connective tissue in the area, increasing the risk of pain and injury.

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Shoes

Perhaps the type of shoes worn by Olympic weightlifters is their most distinctive piece of equipment. Weightlifting shoes are typically designed with a raised heel of 0.5" to 1.5" and one or two metatarsal straps that tighten across the instep of the shoe. The raised heel helps the lifter maintain an upright torso while catching the bar and also allows for a deeper squat under the bar. The soles of the shoes are also quite rigid, helping to resist compression while under heavy loads. The shoes are designed for maximum stability while remaining flexible in the "toebox". This allows the lifter to come up on the toes and to catch the weight on the ball of the back foot during the "jerk" movement of the lift.

Weight classes

Athletes compete in a division determined by their body mass. There have been eight male divisions and eight female divisions since 2017.

Men's weight classes:

- 56 kg (123 lb)
- 62 kg (137 lb)
- 69 kg (152 lb)
- 77 kg (170 lb)
- 85 kg (187 lb)
- 94 kg (207 lb)
- 105 kg (231 lb)
- 105 kg and over (231 lb+)

Women's weight classes:

- 48 kg (106 lb)
- 53 kg (117 lb)
- 58 kg (128 lb)
- 63 kg (139 lb)
- 69 kg (152 lb)
- 75 kg (165 lb)
- 90 kg (198 lb)
- 90 kg and over (198 lb+)

Basic skill

The **Snatch** is a single movement where the lifter holds the bar in a wide grip, lifts the weight off the ground overhead in one movement, then stands upright holding the bar overhead.

The **Clean and Jerk** is a two-part movement. First, the lifter holds the barbell in a shoulder width grip, then pulls the weight up to the shoulders and then stands up with the barbell balanced on the shoulders.

Once settled, the lifter will snap the bar overhead and stand upright again with the barbell in control overhead.

Once the lifter is in control, the judges will give the "Down" signal and the lifter will lower the bar.

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SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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A Review on Maintaining Web Applications and Brute Force Attack

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Abstract :-
Now a days ,almost all generations are using technology. Every and other person is active on social media like Facebook, twitter, as well mail accounts. Each and every organizations,institutes,companies are having their own web portals. Every site is handling lots of data. This data is in terms of product ,employee information, financial data etc.. Most of the time the data attributes are confidential. Through the use of emerging data technologies like cloud computing,Big data etc. these data gets properly stored and accessed. People are using Internet are exchanging information and communicating with each other for business and Personal purpose.Everyone needs safe and secure way of communication.This paper is discussing different aspects of network security-threats,attacks and Vulnerabilities. Theweaknesses in web application security are also discussed. The network security aspects such as authentication, Confidentiality, Integrity are also discussed.Different attack methodology like Hidden Field Manipulation attack,Parameter Tampering attack,Buffer Overflow attack (Denial of Service), SQL Injection etc. are also discussed. The paper is focusing on Brute force attack,reverse Brute force attack.The different tools like Aircrack-ng,John the Ripper, Rainbow crack,Cain and Abel, Hashcat,Ncrack are explained. Hacker's/attacker's purpose and malware activities are identified. Precautionary measures are mentioned against Brute force attack in this paper.Like the Wordpress brute force attack has occurred and the team monitored the attack and traced its consequences are also discussed in this paper. Also Microsoft office365 brute force attack is given in this paper.
Keywords : Attack,Security,ThreatVulnerabilities,Authentication

Introduction

Web application is a software that runs on web browser which allows user interaction for various purpose. Network security is designed to protect the usability and integrity of the network and data. It includes both hardware and software technologies. It targets a variety of threats and stops them from entering or spreading on your network. The most common and simple way of protecting a network resource is by assigning it a unique name and a corresponding password.

Security Elements

Security relies on the following elements:

1. Authentication process uniquely identifies clients of the applications and services. The clients might be end users,other services,process or computers.Authenticated clients are referred as principles.
2. Authorizationprocess governs the resources and operations that the authenticated client is permitted to access. Resources include files, databases, tables, rows, and so on, together with system-level resources such as registry keys and configuration data. Operations may include financial operations such as purchasing a product, transferring money from one account to another.
3. Effective auditing and logging is the key to non-repudiation.

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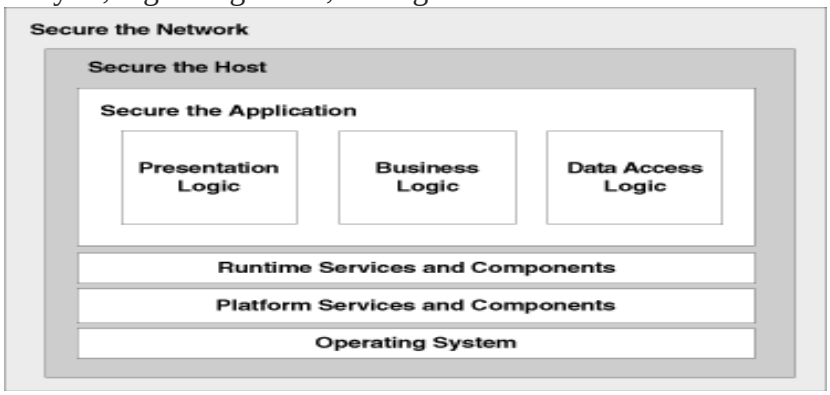
4. Confidentiality, is the process of making sure that data remains private and confidential, and that it cannot be viewed by unauthorized users or eavesdroppers who monitor the flow of traffic across a network. Encryption is used to enforce confidentiality.
5. Integrity is the guarantee that data is protected from accidental or malicious modification. Integrity for data in transit isachieved by using hashing techniques and message authentication codes.
6. Availabilitymeans that systems remain available for legitimate users. The goal for many attackers with denial of service attacks is to crash an application or to make sure that it is sufficiently overwhelmed so that other users cannot access the application.

Threats, Vulnerabilities, and Attacks

A threat is any potential occurrence, malicious or otherwise, that could harm an asset.
A vulnerability is a weakness that makes a threat possible. This may be because of poor design, configuration mistakes, or inappropriate and insecure coding techniques. Weak input validation is an example of an application layer vulnerability, which can result in input attacks.
An attack is an action that exploits a vulnerability or enacts a threat. Examples of attacks include sending malicious input to an application or flooding a network in an attempt to deny service.

Monitoring Web application for security

To design and build a secure Web application you must know the threats.Developers, must develop secure, robust, and hack-resilient solutions by applying security checkpoints and techniques at early stages of development as well as throughout the software development lifecycle for the web application. Security mechanisms that should be used include, threat modeling, risk analysis, static analysis, digital signature, among others.



The Weaknesses in web application security

Invalidated Input : When the program accepts input from an uncontrolled source, there is a chance for a attacker to pass data. If you don't validate the input, it might cause program crashes by allowing an attacker to execute his own code. This can happen like:Buffer overflows,Format string vulnerabilities,URL commands,Code insertion,Social engineering.

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Broken Access Control –While developing web application different roles are provided to different persons which can access different contents and functions of the site.For secure session proper authorization and secure authentication has to be done with controlled access.

Broken Authentication and Session Management

In case of **Cross Site Scripting** (XSS) attacker injects his own code into legitimate website sometimes to break access control, authentication etc.

Through **Injection attacks** attackers inject some code in the program that accompanies unstructured data to get confidential information.

Improper Error Handling,Insecure Storage,Insecure Configuration Management are also some weaknesses in web application.

Attack methodology

Hidden Field Manipulation attack- Sometimes websites may use hidden form fields, which do not get displayed on the page, to post some confidential data in back end database.Hackers can easily hack and manipulate these field values and exploit it. .

Parameter Tampering attack- Information passed with request is not validated before it is used in the application. The request parameters in URL string can be manipulated to get certain information

Buffer Overflow attack (Denial of Service)- An attacker can overwrite the buffer values in the call stack to execute malicious code for the specific purpose and can take advantage of buffer overflow.

Cross-Site Scripting (Hacking / Identity Theft)- In this case attacker can insert and execute malicious code into client side script to deliver malicious script to visitors browser.

Backdoor and Debug Options (Technology Trespassing)- Applications which accesses remote computers are targeted to breakdown the victims network.

Directory Browsing (Hacking into servers and accessing data)- An attacker can access other parts of the file system by stepping out of the root directory. The attacker can view restricted files to gain information to breakdown the system.The attacker executesmalicious commands as if the userof the website.

HTTP Response Splitting-It is the ability to write one HTTP request so that the target generates two responses one to be completely under control of attacker. The attacker can inject malicious script for intended purpose.

Stealth Commanding- Through a set of techniques attackers exploit parsing problems in server-side scripts tries to change the code executed by the server. It is basically used in execution of operating system commands, for complete takeover of the server.

3rd Party Misconfiguration-This is most commonly used attack for web application by introducing third party plugins or services to perform malicious task by the website.

Known Vulnerabilities & SQL Injection- Here, the attacker forms a query and inputs it as part of the authentication and the database .Web server marks this as a valid query executed and opens gates into the web based system as the attempted user.

The Brute force attack

Brute force is a trial and error method used by application programs to decode encrypted data such as passwords or Data Encryption Standard keys, through exhaustive effort (using brute force) rather than employing intellectual strategies. Hackers writes scripts to carry out those numerous attempts instead

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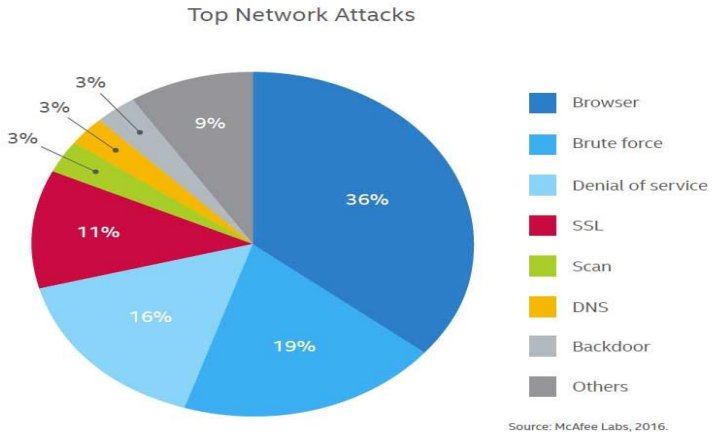
of carrying out it manually,but the success of attack depends on various factors like length and combination of characters,numbers and special characters in forming password. Sites usually suggest for strong passwordwith long length and diversity of characters in password.This make brute force attack difficult but not impossible.It will take longer time to reach password by brute forcing. So sites generally use brute force password cracking to check weak password for security. One more way to prevent this attack ,user can be restricted for number of unsuccessful login attempts.This is why web-based services start showing captchas if you hit the wrong passwords three times or they will block your IP address.

Top network attacks for 2016



Reverse Brute force attack

It is reverse approach for cracking password. Suppose attacker know the password and have no idea about the username. The attacker will try the same password against all possible guesses for username for the purpose. This technique can be used against any site that do not get blocked after defined number of unsuccessful attempts.

Tools used for brute force

Aircrack-ng –As the name suggest this is wireless password cracking tool to attack on WIFI802.11. It performs dictionary attacks against wireless network. The productive password dictionary is more likely to become victim .This tool is available for Windows, Linux, IOS and Android platform.

John the Ripper- This tool can perform brute force attack against encrypted password as it automatically identify hashing used in password.It perform attack by guessing all possible combinations of text and numbers for password.It can also perform dictionary attack.Basically it was designed for cracking Unix password but now it supports fifteen different platforms.

Rainbow Crack- This tool generates rainbow table or uses pre-computed rainbow tables published by various organizations to crack the password. The table reduces the time in performing attack.This tool is available for latest versions of Windows and Linux.

Cain and Abel –This tool performs brute force attack and cryptanalysis attack,can decode scrambled password,recover wireless network keys,analyze routing protocol,crack encrypted passwords using dictionary,reveal password boxes ,Man in the Middle attack .But some virus scanner like Avast and Microsoft Security Essentials find it malware and block it in system.

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L0phtCrack- This tool is basically used to crack windows password of less than 14 character lengths containing only alphabets and numbers and is accompanied by rainbow tables.It cracks the password by usingLM hashing through rainbow tables.

Crack- This oldest password cracking tool is used for the UNIX system to check weak passwords by performing dictionary attacks.

Hashcat- The various attacks like Brute-Force attack, Dictionary attack, Fingerprint attack, Hybrid attack, Mask attack, Table-Lookup attack and Toggle-Case attack etc are supported by this tool. It uses hashing algorithm like LM Hashes, MD4, MD5, SHA-family, Unix Crypt formats for CPU based password cracking. It supports Windows,Linux and MAC OS platform.

SAMInside- It can perform Mask attack, Dictionary attack, Hybrid attack and Attack with Rainbow tables using over 400 hashing algorithms.It is used for cracking Windows OS password.

DaveGrohl- It performs brute force attack for Mac OS X and supports both dictionary attacks and incremental attacks. It enables to perform attacks from multiple computers to attack on the same password hash.

Ncrack-It performs different attacks including bruteforce attacks by supporting various protocols such as RDP, SSH, http(s), SMB, pop3(s), VNC, FTP, and telnet. It can be used with various platforms including Linux, BSD, Windows and Mac OS X.

THC Hydra-It can crack passwords of network authentications by performing brute-force attacks and performs dictionary attacks against various protocols including telnet, ftp, http, https, smb etc. It is available for various platforms including Linux, Windows/Cygwin, Solaris 11, FreeBSD 8.1, OpenBSD, OSX and QNX/Blackberry

Treasure for Hackers–

Aattackerscanuse files and the web host server to cause a wide variety of damage through malicious behavior once they gain access.

Deform: In this case site can display unwanted and malicious content, by deletingthe original content and the website can be broken down.;

Malware distribution: The site visitors get infectedthrough distribution of malware, ransomware and viruses.

Spamvertising*:* It deals with introducing spam content or links to spam websites

Redirecting to malicious site*:* Through accessing the legitimate site may cause visitors to be redirected to malicious websites, or to pages that contain affiliate links and make money for the hackers.

Stealing system resources: Attackers may carry out tasks such as email campaigns and content delivery by using the web server's resources.

Fun: some attackers may perform brute force attacks which are simple and easy just for entertainment and fun.

The following table indicates Times required for Brute force attack on various key lengths using Deep Crack technology

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Bits	Number of Keys	Brute Force Attack Time
56	7.2×10^{16}	20 hours
80	1.2×10^{24}	54,800 years
128	3.4×10^{38}	1.5×10^{19} years
256	1.15×10^{77}	5.2×10^{57} years

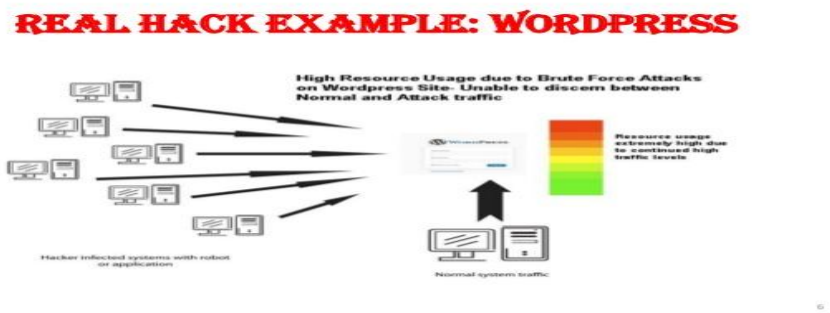
Deep Crack technology was developed in 1998 by the EFF (Electronic Frontier Foundation). They built a machine called the Deep Crack capable of trying a million DES keys per microsecond against a readable ASCII string hours to try all possible keys.

Protecting against Brute force attack-

1. To block Brute force attacks,accounts can be locked after unsuccessful attempt of login. Accounts can be locked for specific period of time or till manuallyunlocked by administrator.But sometimes some websites are unable toenforce this policy due to constant unlocking of accounts.
2. One can block Brute force attack just by injecting random pauses while checking password authentication. Adding a few seconds pause can slow down a Brute force attack without affecting the legitimate users as they login.
3. Advanced users can be allowed to login from certain IP address only to protect their accounts.
4. Unique login URLs can be assigned, so that not all users can access site from the same URL.
5. CAPTCHA can be used to prevent automated attacks.
6. Accounts can be placed in lockdown mode with limited capabilities.

Example

Real life example of Brute Force attack is, large network of compromised servers are trying to break wordpress website through wp-login.php brute force attack since April 2013.Wordpress is a open source software tool foe Content Management System using PHP and SQL. It can be used for creating websites or blogs. The attack is broad in that it uses a large number of attacking IPs, and is also deep in that each IP is generating a huge number of attacks. This is the most aggressive campaign we have seen to date, peaking at over 14 million attacks per hour.



Wordpress can be protected against Brute forcing. The suggestions are as follows

Use strong password with at least 8 character long with proper combination of upper-lower case characters, punctuations numbers or non alphanumeric characters.

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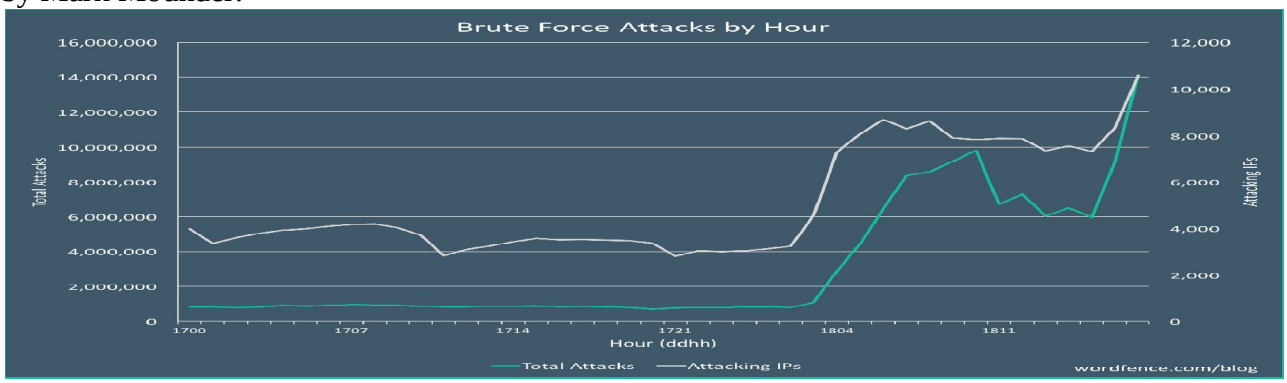
Changing default username for admin.
Locking admin access with hatches.
Disabling CPU intensive login limit plugins.
Scanning website for hacks.
Backup wordpress.
Disable wordpress autosave.
CloudFlare DNS level protection.
Observation by WordPress team for the attack posted in Wordpress Security on December 18 2017 by Mark Mounder.



The attack has so far peaked at 14.1 million attacks per hour.
The total number of IPs involved at this time is over 10,000.
up to 190,000 WordPress sites targeted per hour.
This is the most aggressive campaign seen by hourly attack volume.

Brute Force Attack on Microsoft Office365 cloud

Cloud services are on path to become the standard for enterprise IT solutions, and Office 365, which offers cloud access to Microsoft Word, Excel and other productivity apps, has taken a dominant role with 58.4% of all sensitive corporate data in the cloud is stored in Office 365.The Microsoft office 365 attack was cloud to cloud attack . The hackers used public hosting services infrastructure to attack on Saas service.This attack was directed against a few targets across multiple companies instead of many users as possible. There were 100,000 failed-login attempts originating from 67 IPs and 12 networks over a period of nearly 7 months.It used slow and low strategy to avoid the detection by the provider.First the hackers acquired corporate usernames and passwords from multiple companies that may be tied to multiple cloud services and then tried different email variations derived from the employee name to try to gain access to sensitive information.It can be inferred that they used the same password for each user for every username variation because each email was only used once to attempt the unauthorized login.Another assumption was that the accounts lacked basic security provisions, such as multi-factor authentication (MFA). Organizations using Office 365 have been forced to rely on traditional and inadequate username-password authentication to try to protect themselves from sophisticated attackers. Current versions of Office 365 mail clients support basic two-factor authentication while older Microsoft clients and third-party email applications do not. Because of this antiquated approach to authentication, attackers know that Office 365 is ripe to be exploited, and we

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anticipate attacks against Office 365 to proliferate for the foreseeable future."It can be difficult for organizations to fully protect themselves from sophisticated attacks targeting the cloud without having a robust cloud security infrastructure.Organizations need to gain awareness of their cloud usage in order to mitigate the risk of a security incident in a meaningful way.

Conclusion

Security of web application is getting more attention. The security treats and internet should be analyzed to determine security technology. Confidentiality, Authentication,Integrity, Authorization, Non-repudiation must be considered while developing secure application.Web Application must be protected against Threats, Vulnerabilities and attacks.Secure host secure application and secure network are the key for secure web application. Hackers or attackers identifies weaknesses in web application and applies various attacking methodology.Brute force attack is popular amongst attackers to crack password or user authentication to a web application to perform malfunction for specific purpose.Almost all hash cracking algorithms use the brute-force to hit and try. This attack is best when you have offline access to data. In that case, it makes it easy to crack, and takes less time.Brute-force password cracking is also very important in computer security as it can be used to check the weak passwords used in the system, network or application.There is a long list of password cracking tools which use brute-force or dictionary attack. Here are listedsome of them, the best and most popular tools.Protecting against Brute force attacks can be achieved upto some extent.Wordpress brute force attack example can be a new topic research.

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A Review on Eco-Friendly Technology Green Computing: Latest Practice in a Global Era

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Abstract -*InModern era of globalization computers plays vital role in every field. They are a part of our life, so use of computers are increased day by day to fulfill our need. A large amount of electricity required for manufacturing of computer peripheral unit, such as CPU, Memory Unit, Monitor and functional unit etc. By this a large amount of carbon content is harmful to environment.These carbon contents directly or indirectly dangerous to human being and to the earth. There are many technique used by intelligent people to overcome this problem, one of that technique is "Green computing".Green Computing is the emerging technology which takes responsibility of eco-friendly use of computer and their resources.In recent years, companies in the computer industry, manufacturer or vendors have come to realize that going green is the best solution, manufacturing the energy efficient computing resources, green use,in these terms of public relations and reduced costs.In today's world the e-waste the major issue, green technology is the application of one or more of environmental science, green chemistry, environmental monitoring and electronic devices to monitor, model and conserve the natural environment and resources, and to keep under control the negative impacts of human involvement. The main focus of this paper is to save the energy, reduce the carbon foot prints, increase the paperless work, encouraging the recyclability of digital devices, reducing the use of dangerous material, reuse the old computer devices and make environment green by providing some new ideas or techniques.*

Keywords–Green Computing, Energy Star, Environment, Recycle, Carbon dioxide (CO2), E-Waste, Eco- Friendly, Recycling etc.

1 INTRODUCTION

Green computing refers to environmentally sustainable computing.ItMeans eco-friendly use of computers and their devices. It minimizes the use of electricity as well as energy and reduces the environmental waste when we are using a computer. It is also defined as the study of designing, engineering, manufacturing and proper disposing of computing devices i.e. Electronic Waste(e-waste) in a way that reduces their environmental impact.Green computing is also known as green information technology (green IT).

"Greening" your computing equipment is a low risk way for your business to not only help the environment but also reduces the costs.It's also one of the largest growing trends in business today. Making a proper decision to go green in the workplace such as offices not only improves the net profit of your business but also reduces your carbon footprint. Reducing energy usage, which also reduces carbon-dioxide emission andyour energy bill, is the most effective thing you can do.Green computing is very much related to other similar movements like reducing the use of environmentally hazardous materials like CFCs, promoting the use of recyclable materials, minimizing use of non-biodegradable components, and encouraging use of sustainable or biodegradable resources.Each and every part of devices we use has some impact on the environment. The power used to run a device is generated by burning fossil fuel which has a high amount of carbon footprint. It is non-renewable source of energy which are limited in quantity and are exhausting very rapidly. The emissions from the burning fossil

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fuels contain carbon dioxide, carbon monoxide and other greenhouse gases and are serious concerns. They not only pollute the atmosphere but also have serious health issues. They are the reason behind greenhouse effect and global warming.Every 1000MW power station running on black coal produces CO2 emission of about 7 milliontons per year. After lightning computers have the highest energy consumption in office environment.Power managements of computers, monitors and other devices can significantly reduce energy consumption, saving thousands of dollars per year on electricity cost. Green Computing is the solution on the above problem. It is the need of green computing.A main thing of research is maximizing energy efficiency during the product's lifetime,testing and applying alternative nonhazardous materials in the products manufacturing process.

2 HISTORY OF GREENCOMPUTING

In 1992, the U.S. Environmental Protection Agency(EPA) launched Energy Star, a voluntary labeling program which is designed to promote and recognize energy efficiency in monitors, climate control equipment's and other technologies. This resulted in the widespread adoption of sleep mode among consumer electronics. The term "green computing" was probably stamped shortly after the Energy Star program began.The Energy Star program was revised in October 2006 to include efficiency requirements for computer peripherals, along with a tiered ranking system for approved products.Climate Savers Computing Initiative (CSCI) is an effort to reduce the electric power consumption of PCs in active and inactive states.It was started on 6th December 2007. Basically, the whole green aspect came about quite a few years back when the news that the environment was not a renewable resource really hit home and people started realizing that they had to do their part to protect the environment. Basically, the efficient use of computers and computing is what green computing is all about.

3 PROBLEMS BEING FACED WITHOUT GREEN COMPUTING

According to researchers of Green Computing following are few noticeable Challenges that Green computing is facing today:

3.1 Health Hazards - Using toxic materials that can harm our health can cause cancer and technology addiction can lead to other health problems like obesity and carpal tunnel syndrome

3.2 Carbon Emissions-Carbon dioxide and carbon monoxide are greenhouse gasses that are produced by people. The other gases which affect the greenhouse are methane (CH4), nitrous oxide (NO2) and fluorocarbons (CCl4). These greenhouse gasses trap in the atmosphere and reflect heat and radiation back to the planet's surface, which leads to Global warming.These gases are able to increase the temperature of the earth, which causes to lead the drought and floods and rising the sea level.These also affect the life on earth.

3.3 Disposal of Electronic Wastes -The major issue is the disposal of the e-waste in the environment. They are likely to be free of hazardous materials such as brominates flame-retardants, PVCs and heavy metals such as lead, cadmium and mercury, which are commonly used in computer manufacturing. Replacements like the front-runner, a tin/copper/silver alloy, also require higher melting temperatures, which can affect chip life.

3.4 PowerEmission -Use of computers and resources, it requires large amount of power or electricity, by continuous using of computers and resources, a lot of energy gets wasted. Large amount of heat emitted from the computers and servers. It affect on environment and human health.

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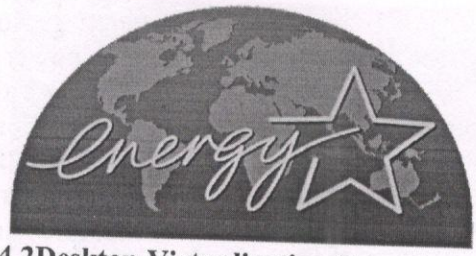
3.5 Consuming Resources - Non-renewable resources such as coal are used to generate the electricity for technology. Contaminate the food chain can greatly affect the environment's natural cycles.

4 GREEN COMPUTING APPROACHES AND SOLUTIONS/ IMPLEMENTATIONS

4.1 Governments go green: Many governments worldwide have initiated energy-management programs, such as Energy Star, an international standard for energy efficient electronic equipment that was created by the United States Environmental Protection Agency in 1992.Energy Star reduces the amount of energy consumed by a product by automatically switching it into sleep mode when not in use or reducing the amount of power used by a product when in standby mode.ENERGY STAR tools and resources help businesses determine cost-effective approaches to managing energy use in their buildings and plants—enabling the private sector to save energy, increase profits, and strengthen their competitiveness.



4.2Desktop Virtualization: It involves running two or more logical computers on just on one set of physical hardware.This not only saves the cost of multiple computers but also reduces the carbon foot-prints due to manufacture and usage of multiple computer devices.In virtualization, one physical server hosts multiple virtual servers. Virtualization also reduces data centers floor space, makes better use of computing power and reduce the data center's energy demand.

4.3Carbon free computing:One of the VIA Technologies' ideas is to reduce the "carbon footprint" of users — the amount of greenhouse gases produced, measured in units of carbon dioxide (CO2). In 1997 Kyoto in USA tried to reduce the emission of CO2 from electronic devices and other devices. These devices are manufactured in such way that they take less energy. VIA aims to offer the world's first PC products certified carbon free, taking responsibility for the amounts of CO2 they emit.To reduce the percentage of CO2 in atmosphere to grow a plant to against each product after manufactured. It has been estimated that 4 to 6% are of planted tree can absorb 20 to 25 % area CO2. Different companies are now

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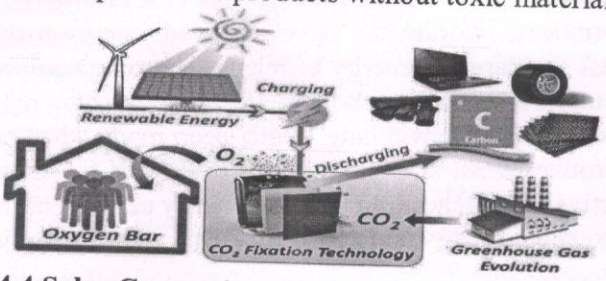
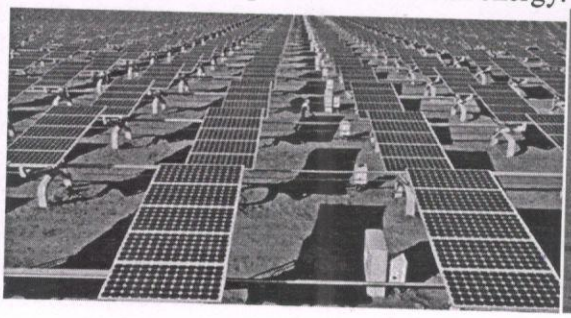
working on this issue very keenly. Dell is working on worldwide product-recycling program. In this program Dell company allows to customers to pay an extra $2 to $4, for grow a plant against each product AMD, a global microprocessor manufacturer, is also working toward to reduce energy consumption in its products without toxic material and carbon free product.

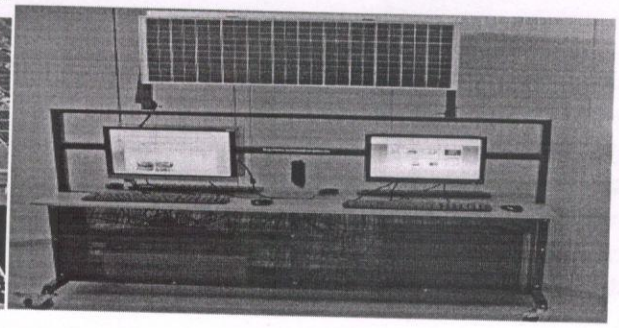


4.4 Solar Computing:Computers with the help of solar technology is called solar computing. Nowadays solar power gaining is the more and more attention throughout the world. Solar energy is power derived from the sun through the use of solar panels. Good example of powering PC's with the sun is Taiwanese manufacturer VIA Technologies Inc. VIA Solar Computing initiative is a part of VIA Green Computing projects. VIA Solar Computing use advanced, cost-effective solar panel technology in cooperation with Motech Industries – one of the largest and leading solar product manufacturers and innovators. Solar cells combined with VIA processor platforms and system technologies developed complete solar-powered computing solutions that are less polluting, more affordable, more reliable and more flexible for a wide variety of new markets, applications and environments. VIA Solar Computing is focusing on photovoltaic (PV) solar power to take advantage of the numerous benefits for both emerging market and urban computing installations:

- Solar power is clean non-polluting energy.
- Once capital costs are covered (like purchasing and installation) solar cells require very little maintenance, hence in further perspective of time they provide energy at virtually no cost (Lakshmi, LalitaSarwani, NaliniTuveera, 2012, p. 1284).
- Solar panels are silent in operation.
- Solar panels do not require refueling; they are self-sufficient.

Due to the undeniable benefits of renewable energy in the form of solar energy private companies continue to invest in research and development of this kind of power providing. This solution is not the cheapest however leasing is common way to go solar today (IrshadShiddiqui, 2013, p.53). At the same time, governments are starting to recognize the benefits of solar power, with much now offering tax and rebate incentives to promote this clean energy.





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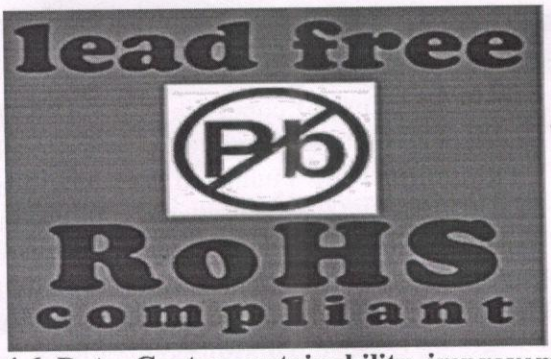
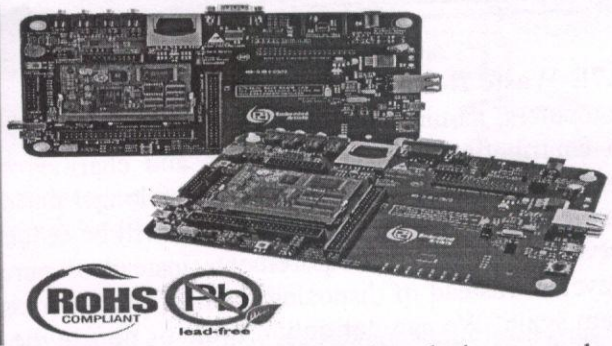
4.5Lead-Free and RoHS computing: In February 2003, the European Union adopted the Restriction of Hazardous Substances Directive (RoHS). The process of making laws restricts the use of six hazardous materials that are Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalentchromium(Cr (V1)), Polybrominated Biphenyls (PBBs), and Polybrominated Diphenyl Ethers (PBDEs)etcin the manufacture of various types of electronic and electrical equipment.The instruction is closely linked with the Waste Electrical and Electronic Equipment Directive (WEEE), which sets collection, recycling, and recovery targets for electrical goods and is part of a capability of law making that aims to reduce the huge amounts of toxic e-waste. In 2001, they focused on lead-free manufacturing, introducing the Enhanced Ball Grid Array (EBGA) package for power efficient VIA processors and the Heat Sink Ball Grid Array (HSBGA) package for their chipsets.VIA's lead-free manufacturing technologies do not require a lead bead, and the solder balls now consist of a tin, silver, and copper composite.





4.6 Data Center sustainability improvements: The rising energy costs, desire to make existing investments more and more profitable are making today's cloud providers to implement best practices to make datacenters operation green. To build eco-friendly data center, several best practices in key areas has been proposed for improving sustainability:

- Proper location which allows clean energy consumption through renewable sources (solar energy generation, wind power generation, fuel cells, cogeneration).
- Cooling system (new systems based on liquid cooling, nano-fluid cooling systems, and in server, in-rack and in-row cooling by companies such as Spray Cool; free cooling, spot cooling, using cable grommets to reduce cool air leakages).
- Building design (heat insulation, optimizing floor layout, recycling water)
- Information and Communication Technology (ICT) platform (middleware-facility linkage, dedicated racks & servers, virtualization technologies).
- Deployment of newest power efficient servers and processors (Kumar Garg, Buyya, 2012).
- Energy linking (power sharing between company centers, locating data center near power station).

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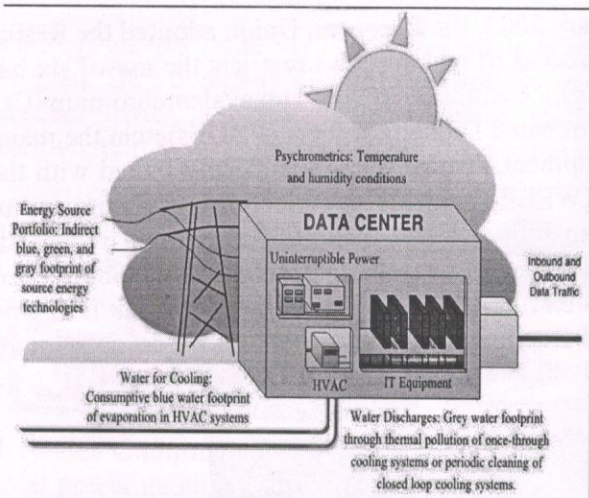
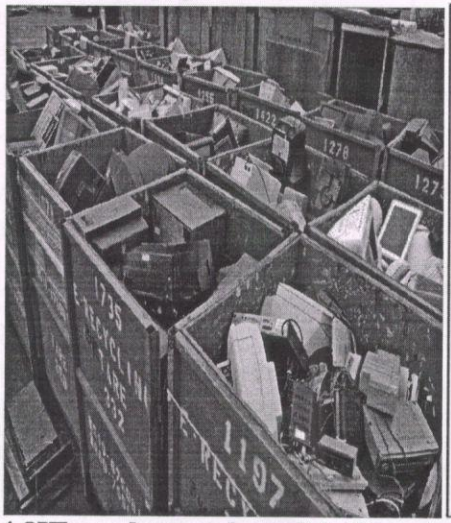
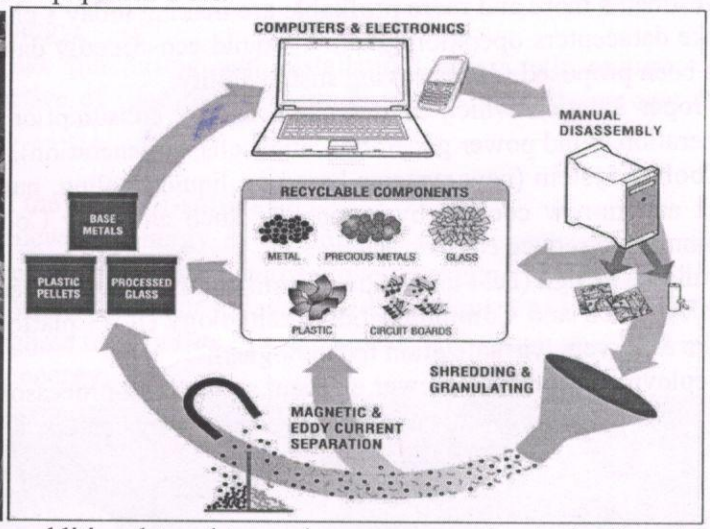


4.7E-Waste Recycling: E-Waste recycling is the reuse or recycling of computing devices such as old computers, monitors, printers, mouse, keyboard, networking devices etc. Instead throwing it should try to contributing to the non-profits and charities or submit it to the municipal or private recycling associations.By using the hardware for longer period of time, the total environment footprint caused by computer manufacturing and disposal will be reduced greatly. We can also renovate old computers and servers to meet new requirements instead of purchasing new devices. Printer cartridge can also be recycled. Instead of disposing them off and increasing the e-waste burden, we can refill them and use them again. We can not only recycle or donate the computing e-waste but also mobile phone, business and office equipment's, entertainment equipment's etc.





4.8IT product and eco-labeling: An additional trend toward green computing is the "eco-label" which has been supported by several organizations around the world. These eco-labels are given by organizations to IT products based on several factors aiming to save the environment. An eco-label

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identifies products or services proven environmentally preferable overall, within a specific product or service category. The factors include the ability of recycling the system, noise energy consumption etc.

4.9Reducing Energy Consumption: We can reduce the energy by following the above operations

- Turn off your computer when you're done for the day.
- Use Power Saver Mode.
- Don't print unless necessary.
- Use an Ink Jet printer and turn it on only when printing - Printer energy consumption varies widely. You'll have to use your voltmeter to see how much electricity yours draws when printing and when turned on but idle.
  From least to greatest energy consumed printer technologies order like this:
  Dot Matrix --> Ink Jet --> Laser
  Since dot matrixes are largely obsolete due to lesser print quality, this makes the ink jet is the best energy-conscious choice for most home users. An active laser printer uses several times more electricity than your computer!
- Use LED's instead of CRT monitors as they are more power efficient.Bulky old CRT monitors use several times the power of space-saving, power-sipping flat panel or LED displays. CRT's often consume between 60 and 110 watts, while most flat panels are down in the 15 to 60 watt range.
- Use a laptop instead of a desktop.**Laptops are more efficient.** Laptop computers consume up to 80 percent less electricity than desktop computers and get by on between one-fifth and one-third as much energy.
- **Set your Power Management options**:Measurements with your new voltmeter quickly expose a power consumption hierarchy. These are your computer's power usage levels, from greatest power consumption to least:
  Heavy Use -> Light Use -> Idle -> Standby -> Hibernate or Turned Off

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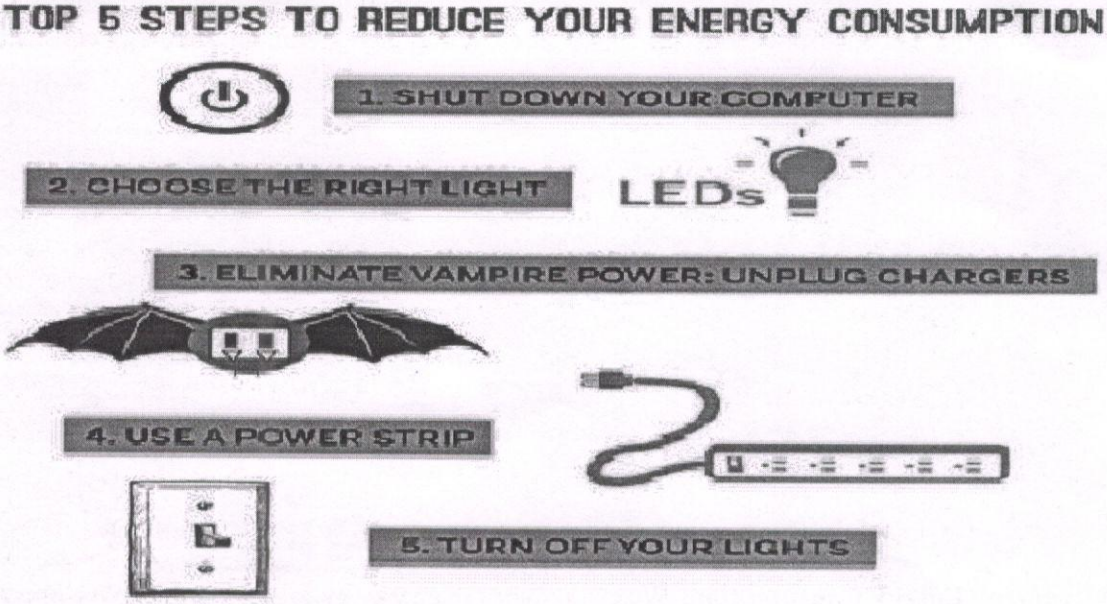

4.10 Green Manufacturing: Green manufacturing is the reducing of waste during the manufacturing of computers and other subsystems to reduce the environmental impact of these activities.Green manufacturing is the renewal of production processes and the establishment of environmentally-friendly operations within the manufacturing field.One being the manufacturing of "green" products and secondly the "greening" ofmanufacturing-reducing pollution and waste by minimizing natural resource use, recycling and reusing what was considered waste, and reducing emissions.

Here are just a few of the toxic chemicals found in your average computer

- Brominated flame retardants (BFRs) in plastic casings.
- Cadmium and selenium in circuit boards.
- Cathode ray tubes (CRT) in old monitors.
- Lead in solder.
- Mercury in LCD screens backlights.

Due to new research and growing public alertness about the effects of these hazardous materials, many companies are beginning to research and are finding new ways to build greener PCs that do not make use of these dangerous chemicals.

A list of the different materials that manufacturers are using to build computer parts:

- **Bamboo** – is becoming progressively popular for making coverings for computers and peripherals. It has the advantages of being a sustainable and quickly renewable resource and it is lightweight and stylish.
- **Recyclable plastics** – many computers are made up of from non-recyclable plastics but there is an alternative. One way is to use recyclable polycarbonate resin.

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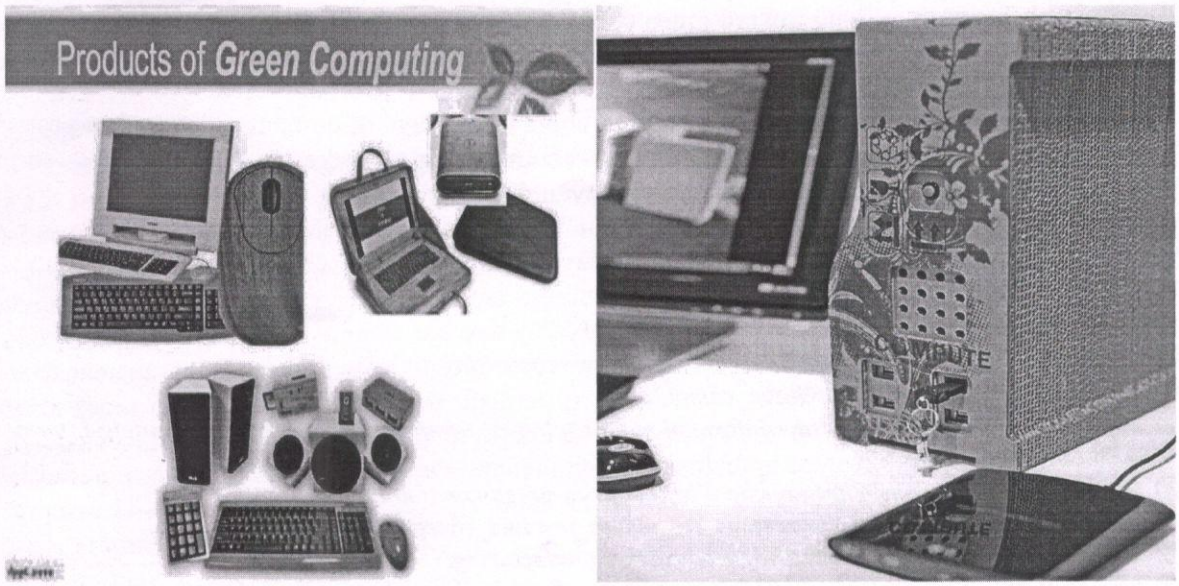
- **Eco-friendly flame retardant** – Flame retardants are often some of the most toxic chemicals in traditional PCs, there are flame retardant silicone compounds available that are flame retardant and completely non-toxic.
- **Eliminating lead soldering**– getting rid of the lead makes a big difference, it can protect individuals responsible for breaking down computer pieces during the recycling processes and prevent toxins leaching into the ground and water supplies at landfills and storage points.



The companies that are started green manufacturing.

- **Apple**- Apple is has begun to make many of its green computers with recyclable materials such as aluminum, polycarbonate and glass. Apple has made efforts to remove toxic substances, such as brominated fire retardants (BFRs), polyvinyl chloride (PVC), arsenic, lead and mercury from its products.
- **Hewlett Packard** - HP is determined to use more recycled materials in its products and product packaging. HP has also instituted buy back and recycling programs for all brands of computers, monitors, printers, scanners and other computer technology. HP has its own huge recycling facility in Roseville, California which processes about 4 million pounds of electronics per month.
- **IBM** - IBM has been moving towards more environmentally friendly practices since back when "green" still meant "yellow + blue." In the decade between 1990 and 2000, it reduced its overall power ingesting by 5.1 billion kilowatt hours, and that includes power used for manufacturing.
- **Phillips Electronics** - Not only does Philips strive to drastically increase its energy efficiency in its production process, but it also invests billions of euros into green research, so that every company on earth can someday be as eco-friendly as it is trying to be. That research has resulted in a tiny LED, award-winning LEDs, the world's "smartest" LED, the most efficient white LED, and much more

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CONCLUSION

To come to our knowledge, the man-made greenhouse gas emissions increasing is a major contributing factor to global warming, enterprises, governments, and also our society. In the meantime, people trying to test the environmental issues and adopting naturally to live in harmony and peacefully with this earth. Therefore, greening our IT products, applications, services and practices are both economic and environmental essential, as well as our social responsibility. As a result, a growing number of IT vendors and users are moving toward green computing and thereby assisting in building a green society and economy.

Through the effort of developing sustainable energy, we can create a better quality of life for the coming generation. We can put our effort to learn more about knowledge of computer disposal to protecting the environment. By green computing technology, we are trying to make the whole process surrounding computers friendlier to the environment, economy and society.

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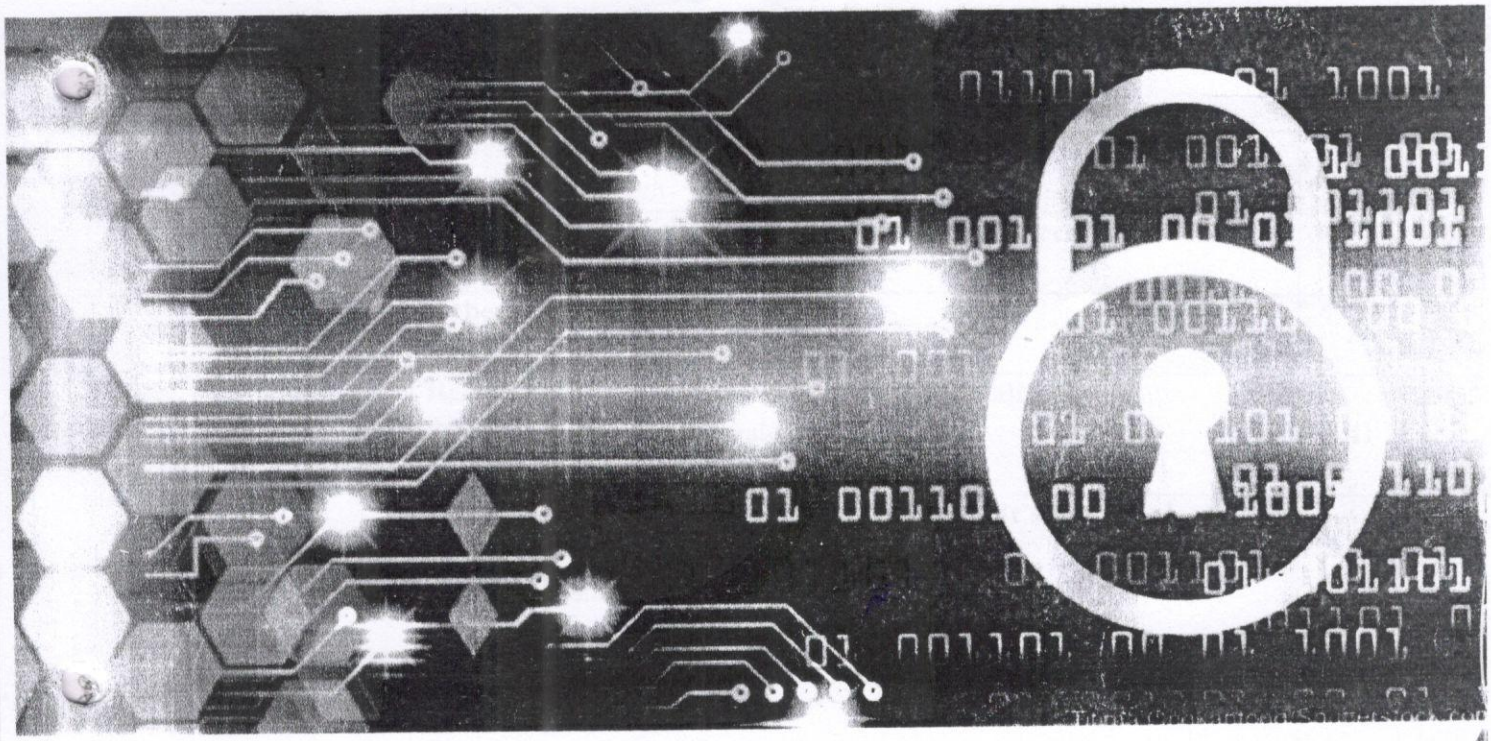

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A REVIEW OF CRYPTOGRAPHY: STEGANOGRAPHY

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Abstract
Cryptography is a special encryption technique to hide information in such a way that will not be retrieved by any Third Party or Hackers. In this paper we focused on the cryptography techniques and how we can provide security through these techniques. A technique steganography is a useful technique through which we can provide a security by hiding confidential data behind the carrier file such as image, audio, video etc. For example – any sensitive data can be hidden inside a digital image and receiver gets image along with confidential message then he apply key for decryption and he gets original message. The detection of steganographically encoded packages, messages or confidential data is called steganalysis. It is useful in
Keywords–*Encryption, Steganography, Cipher, Cryptanalysis, Data Hiding, Certification Authority*

Introduction

Cryptography plays an important role on ensuring the security and reliability of modern computer systems. Any web based computer system is susceptible to attacks from system hackers who could attempt to overwhelm a computer system to gain information for illegal use. They could also attempt to crash a system for the aim of sabotaging Company's business operations. There are a number of system attacks that have been established to destroy or damage the computer systems. Areas of interest for this special journal issue include, but are not limited to, the following topics: Authentication, Cryptographic algorithms and their applications, Cryptanalysis, Email security, Electronic commerce, Data integrity, Fast cryptographic algorithms and their applications, Identity-based cryptography, IP security, Key management, Multicast security, Computer network security, Privacy protection, Security in Peer-to-Peer networks, Security in sensor networks, and Smartcards. Steganography provides better security than cryptography because cryptography hides the contents of the message but not the existence of the message

Cryptography Basics

Computers are used by millions of people for many purposes. Such as banking, shopping, military, student records etc. Privacy is a critical issue in many of these applications, how are we need to make sure that an unauthorized parties cannot read or modify messages.

Cryptography is the transformation of readable and understandable data into a form which cannot be understood in order to secure data. Cryptography refers exactly to the

methodology of concealing the content of messages, the word cryptography comes from the Greek word "Kryptos", that means hidden, and "graphikos" which means writing. The information that we need to hide, is called plaintext , It's the original text. It could be in a form of characters, numerical data, executable programs, pictures, or any other kind of information, The plaintext for example is the sending of a message in the sender before encryption, or it is the text at the receiver after decryption. The data that will be transmitted is called cipher text, it's a term refers to the string of "meaningless" data, or unclear text that nobody must understand, except the recipients. it is the data that will be transmitted Exactly through network, Many algorithms are used to transform plaintext into cipher text.

Cipher is the algorithm that is used to convert plaintext to cipher text, This method is called encryption, in other words, it's a mechanism of converting readable and understandable data into "meaningless" data.

The Key is an input to the encryption algorithm, and this value must be independent of the plaintext, This input is used to transform the plaintext into cipher text, so different keys will yield different cipher text, In the decipher side, the inverse of the key will be used inside the algorithm instead of the key.

Computer security it's a generic term for a collection of tools designed to protect any data from hackers, theft, corruption, or natural disaster while allowing these data to be available to the users at the same time. The example of these tools is the antivirus program.

Network security refers to any activity designed to protect the usability, integrity, reliability, and safety of data during their transmission on a network, Network security deals with hardware and software. The activity can be one of the following anti-virus and anti-spyware, firewall, Intrusion prevention systems, and Virtual Private Networks.

Internet Security is measures and procedures used to protect data during their transmission over a collection of interconnected networks, while information security is about how to prevent attacks, and to detect attacks on information-based systems.

Cryptography Goals

By using cryptography many goals can be achieved, These goals can be either all achieved at the same time in one application, or only one of them.

These goals are:

1. **Confidentiality:** it is the most important goal, that ensures that nobody can understand the received message except the one who has the decipher key.
2. **Authentication:** it is the process of proving the identity, that assures the communicating entity is the one that it claimed to be. This means that the user or the system can prove their own identities to other parties who don't have personal knowledge of their identities.
3. **Data Integrity:** its ensures that the received message has not been changed in any way from its original form. The data may get modified by an unauthorized entity intentionally or accidently. Integrity service confirms that whether data is intact or not since it was last created, transmitted, or stored by an authorized user. This can be achieved by using hashing at both sides the sender and the recipient in order to create a unique message digest and compare it with the one that received.

4. **Non-Repudiation:** it is mechanism used to prove that the sender really sent this message, and the message was received by the specified party, so the recipient cannot claim that the message was not sent. For example, once an order is placed electronically, a purchaser cannot deny the purchase order, if non-repudiation service was enabled in this transaction.
5. **Access Control:** it is the process of preventing an unauthorized use of resources. This goal controls who can have access to the resources, If one can access, under which restrictions and conditions the access can be occurred, and what is the permission level of a given access.

Data Encryption

A data encryption is a random string of bits created explicitly for scrambling and unscrambling data. Data encryption is designed with algorithms intended to ensure that every key is unpredictable and unique. Cryptography uses two types of keys: symmetric and asymmetric. Symmetric keys have been around the longest; they utilize a single key for both the encryption and decryption of the cipher text. This type of key is called a secret key. Secret-key ciphers generally fall into one of two categories: stream ciphers or block ciphers. A block cipher applies a private key and algorithm to a block of data simultaneously, whereas a stream cipher applies the key and algorithm one bit at a time. Most cryptographic processes use symmetric encryption to encrypt data transmissions but use asymmetric encryption to encrypt and exchange the secret key. Symmetric encryption, also known as private key encryption, uses the same private key for both encryption and decryption. The risk in this system is that if either party loses the key or the key is intercepted, the system is broken and messages cannot be exchanged securely.

Data Decryption

One of the foremost reasons for implementing an encryption-decryption system is privacy. As information travels over the World Wide Web, it becomes subject to access from unauthorized individuals or organizations. Decryption is the process of taking encoded or encrypted text or other data and converting it back into text that you or the computer can read and understand. This term could be used to describe a method of un-encrypting the data manually or with un-encrypting the data using the proper codes or keys. Encryption is the process of translating plain text data (*plaintext*) into something that appears to be random and meaningless (*ciphertext*). Decryption is the process of converting cipher text back to plaintext.

Symmetric Key Cryptography

In symmetric key cryptography is also known as private-key cryptography, a secret key may be held by one person or exchanged between the sender and the receiver of a message. If private key cryptography is used to send secret messages between two parties, both the sender and receiver must have a copy of the secret key.

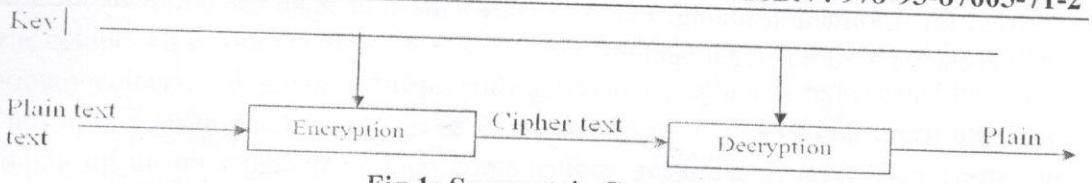

Fig 1: Symmetric Cryptosystem

Asymmetric Key Cryptography

In the two-key system is also known as the public key system, one key encrypts the information and another, mathematically related key decrypts it. The computer sending an encrypted message uses a chosen private key that is never shared and so is known only to the sender. If a sending computer first encrypts the message with the intended receiver's public key and again with the sender's secret, private key, then the receiving computer may decrypt the message, first using its secret key and then the sender's public key. Using this public-key cryptographic method, the sender and receiver are able to authenticate one another as well as protect the secrecy of the message.

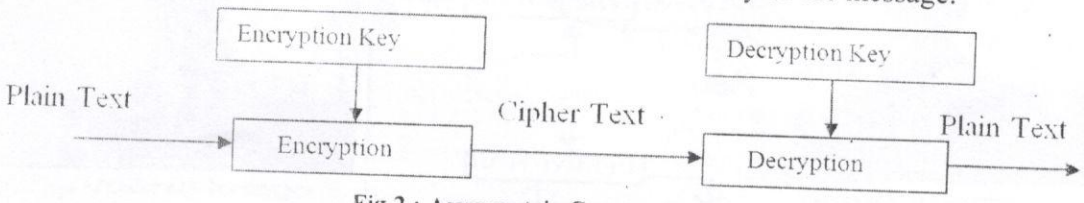

Fig 2 : Asymmetric Cryptography

Digital Certificates

A digital certificate is security identification medium used in juxtaposition with Asymmetric cryptography. Digital certificates can be provided by the certification authority (CA). The true owner of the public key is determined and the owner is verified to determine if the owner of the public key is who he/she claims to be. The certificate can hold the digital signature of the CA which the CA signs using their private key. The CA" s public key is also included to verify that the certificate is valid. Through the use of a digital certificate the user of an online system can be sure of whom they may be dealing with on the internet. The process of verifying the certificate is done by the user's browser software.

Steganography

The word *steganography* combines the Greek words *steganos* meaning "covered, concealed, or protected," and *graphein* meaning "writing". *Steganography* is the hiding of a secret message or information within an ordinary message and the extraction of it at its destination. Steganography takes cryptography a step farther by hiding an encrypted message so that no third party suspects it exists. Ideally, anyone scanning your data will fail to know it contains encrypted data. It is the practice of concealing a file, message, image, or video within another File, message, image, or video.

Deferent kinds of Steganography

Almost all digital file formats can be used for steganography, but the formats that are more suitable are those with a high degree of redundancy. Redundancy can be defined as the bits of an object that provide accuracy far greater than necessary for the object's use and display. The redundant bits of an object are those bits that can be altered

without the alteration being detected easily. Image and audio files especially comply with this requirement, while research has also uncovered other file formats that can be used for information hiding. Figure 3 shows the four main categories of file formats that can be used for steganography.

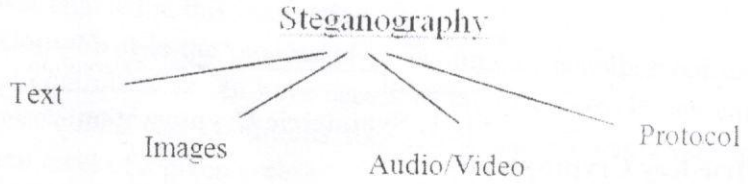

Fig 3: Categories of Steganography

Image Steganography

As stated earlier, images are the most popular cover objects used for steganography. In the domain of digital images many different image file formats exist, most of them for specific applications. For these different image file formats, different steganographic algorithms exist.

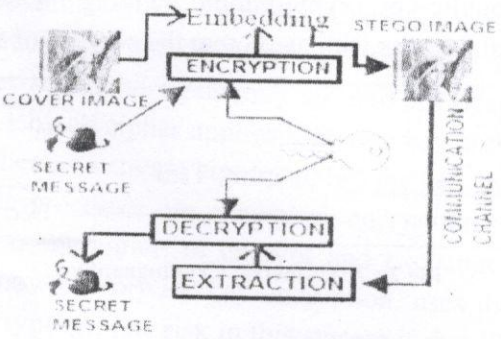

Fig 4: Steganography

The block diagram given in figure.4 explains the process of Steganography in which we generally embed some secret message into an innocuous looking simple image (called as the cover image) and create a Stego image. The Stego image visually seems to be indifferent from the original cover but hides the secret message inside it and is transmitted to the desired recipients over the communication channels without creating any suspicion in the minds of the intermediately sniffers or/and receivers. When the authorised recipient receives the image, they follow the extraction procedure to retrieve the secret message.

Image definition

To a computer, an image is a collection of numbers that constitute different light intensities in different areas of the image . This numeric representation forms a grid and the individual points are referred to as pixels. Most images on the Internet consists of a rectangular map of the image's pixels (represented as bits) where each pixel is located and its colour . These pixels are displayed horizontally row by row. The number of bits in a colour scheme, called the bit depth, refers to the number of bits used for each pixel. The smallest bit depth in current colour schemes is 8, meaning that there are 8 bits used to describe the colour of each pixel . Monochrome and greyscale images use 8 bits for each pixel and are able to display 256 different colours or shades of grey. Digital colour images are typically stored in 24-bit files and use the RGB colour model, also known as

true colour. All colour variations for the pixels of a 24-bit image are derived from three primary colours: red, green and blue, and each primary colour is represented by 8 bits. Thus in one given pixel, there can be 256 different quantities of red, green and blue, adding up to more than 16-million combinations, resulting in more than 16-million colours. Image steganography techniques can be divided into two groups: those in the **Image Domain** and those in the **Transform Domain.** Image Domain uses Least Significant Bit (LSB) For BMP Images and Transform Domain Uses the JPEG file format is the most popular image file format on the Internet, because of the small size of the images.

Figure 5 shows Confidential Message Embedded in stego Image

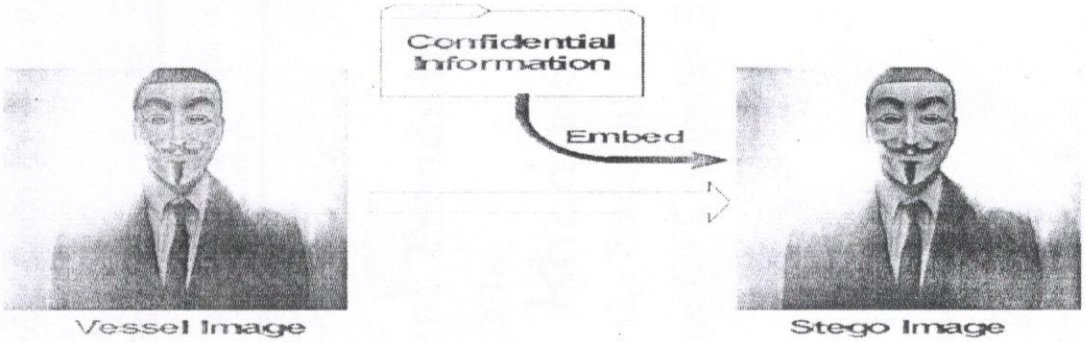

Fig 5: Stego Image

Conclusion:

Although steganography is not a new concept, its recent application with technology instigates many new ideas. First, substantial research is necessary to create algorithms that are strong enough to withstand the many unique forms of steganalysis. Although in the past, the government disagreed with individuals and businesses on the issue of public use of strong encryption products, each group must recognize the benefits that this technology brings to society. Further research in this field will not only help to decrease the effects of the drawbacks of public use, but it will also create possibilities for even more individual identity protection and a more secure nation.

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GST – CONCEPT ISSUES, OPPORTUNITIES AND CHALLENGES

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Positive Impact of GST on the Development Areas

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Abstract

Despite the various impediments to the proposed transition, until the time GST is implemented, it would be worthwhile to assess its positive impacts on the various development areas namely agriculture, manufacturing industry, MSME, housing, poverty reduction, employment etc. The paper addressed the cascading effect under the erstwhile system by giving set-off for tax paid on inputs as well as tax paid on previous purchases and resulted in a major simplification of the rate structure and broadening of the tax base. The replacement of the Central excise duty of the government of India by Central Value Added Tax (CENVAT) and sales tax system of the State governments by the VAT marked a major mile stone in the reform process of indirect taxes in India. Although there are many hurdles to be crossed before the implementation of GST the Central government reiterated its commitment towards the adoption GST for the survival of the India's economy in the face of increasing international competition consequent to globalization and liberalization.

Introduction

The transparent and complete chain of set-offs, GST will help-widening the coverage of tax base and improve tax compliance. Despite the various impediments to the proposed transition, until the time GST is implemented, it would be worthwhile to assess its positive impacts on the various development areas in India. GST is a broad based, single, comprehensive tax levied on goods and services at each point of sale of goods or provision of service, in which, the seller or service provider may claim the input credit of tax which he has paid while purchasing the goods or availing the service; the final consumer will thus bear only the GST charged by the last dealer in the supply chain. Thus it marks a major improvement over the previous system of VAT. This may lead to higher revenue which further results in lowering of tax burden. Although there are many hurdles to be crossed before the implementation of GST like consensus over rates, constitutional amendment, compensation mechanism for States losing out on revenue, varying models, dispute resolution etc. the Central government has reiterated its commitment towards the adoption of a 'flawless' GST for the survival of the India's economy in the face of increasing international competition consequent to globalization and liberalisation. With the introduction of GST at the State level, the additional burden of CENVAT and services tax would be comprehensively removed and major Central and State taxes will get subsumed into GST which will reduce the multiplicity of taxes.

GST and Poverty Reduction

At present, primary food articles like rice and wheat are liable to tax by many States either by way of purchase tax or sales tax at a lower rate. Since expenditure on food constitutes a large proportion of the total consumption expenditure of the poor, the GST is designed as a poverty reduction initiative. In any case, as at present, these services will continue to be exempted from tax and therefore no

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GST and Government Revenue

Increased GDP, indirect positive impact on direct tax collections, gain for the government on account of reduction in the price level of a large number of goods and services consumed by the government as a result GST etc. a flawless GST would trigger an increase in the government revenue. Since all goods and services would be under the purview of GST, it is expected that the number of exemptions would reduce very much. Again, the tendency of tax evasion by producers and distributors will be low as to the single (or dual) and low rate of tax proposed under GST.

GST and Price Level

Though there is an allegation that GST is a regressive tax as it minimizes the number of tax rates to even a single (dual) rate, the subsuming of major Central and State taxes in GST, continuous chain of set-off of input goods and services and phasing out of CST the commitment of taxes on goods would come down under GST. Hence, a 'flawless' GST would be viewed as pro-poor and not regressive. It is anticipated that, other things remaining the same, this would encourage manufacturers and distributors to reduce the prices of their produce and ultimately benefit the consumers.

GST and Exim Trade

The gains in exports are expected to vary between 3.2 and 6.3 per cent and imports are expected to gain somewhere between 2.4 and 4.7 per cent (Thirteenth Finance Commission, 2009). As a result, while exports can be expected to register an increase, imports are likely to decrease. Consequently, both export-oriented industries and import-substituting industries would become internationally more competitive. At present export of taxes to other countries is sought to be eliminated through the mechanisms of duty draw back on the basis of estimated incidence of embedded taxes. By considering its weakness the GST requires that exports from the taxing jurisdiction would be tax free and imports into the jurisdiction would be taxed at the same rate as products produced and consumed within the jurisdiction.

GST and GDP

Additional gains in GDP would be earned during ever year over and above the growth in GDP which would have been achieved otherwise. The implementation of a 'flawless' GST across goods and services is expected to induce India's Gross Domestic Product (here after referred to as 'GDP') somewhere within a range of 0.9 to 1.7 per cent.

Conclusion

It is noted that, buoyed by the success of GST, more than 140 countries have introduced GST in some form to other and is fast becoming the preferred form of indirect tax in the Asia Pacific region. To conclude, though the positive impacts referred above are dependent on a neutral and rational design of the GST, balancing the conflicting interests of various stakeholders, full political commitment for a fundamental tax reform with a constitutional amendment, the switchover to a 'flawless' GST would be a big leap in the indirect taxation system and also give a new impetus to India's economic change.

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The Role of Government Schemes in Sport Development

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1) Introduction :

The Department of Sports was set up in 1980 under the Ministry of Human Resources Development as part of the 1982 Asian Games preparations. Youth Affairs was later added in 1985. The Department of Youth Affairs and Sports was upgraded to the status of an independent Ministry in 2000 and in 2008, Sports and Youth Affairs were bifurcated into two separate departments viz., Department of Sports and the Department of Youth Affairs.

2) National Sport Policy Initiatives:

Physical education, games and sports have been receiving attention over successive Plans. However, it was only after India hosted the IX Asian Games in 1982 that "Sports" as a subject of policy started receiving attention. National Sports Policy, 1984 was the first move towards developing an organized and systematic framework for the development and promotion of sports in the country, and the precursor of the present National Sports Policy, 2001.

National Sport Policy 2001

The twin planks of the National Sports Policy 2001 are "Broad-basing of Sports" or Sports for All and achieving excellence in sports at the national and international levels.

Features of the Policy:

1. Broad-basing of sports
2. Achieving excellence
3. Up-gradation and development of infrastructure
4. Support to National Sports Federations and other appropriate bodies
5. Strengthening of scientific support to sports
6. Strengthening of coaching support to sports
7. Incentives to promote sports
8. Enhanced participation of women, scheduled tribes and rural youth
9. Promote sports-mindedness among the public at large

3) Functions and Objectives :

The programmes and schemes of the Department of Sports can be categorized under four broad heads as given below:

1. **Sports for All**

(i) **„Khelo India** - National Programme for Development of Sports" has been prepared by merging the erstwhile „Rajiv Gandhi Khel Abhiyan", „Urban Sports Infrastructure Scheme" and „National Sports Talent Search System Programme" as a Central Sector Scheme for implementation from the Financial year 2016-17 onwards. Khelo India Scheme has three components viz., competitions, talent and sports infrastructure. Objectives of the scheme are mass participation of youth in annual sports competitions through a structured competition, Identification of talent, guidance and nurturing of the talent through existing sports academies and new set up either by the central

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Government or State Government or in PPP mode and creation of Sports Infrastructure at mofussil, Tehsil, District, State levels, etc.

(ii) Promotion of sports among persons with disabilities

(iii) Creation, promotion and preservation of playing fields as safe play spaces.

2. **Promotion of Excellence in Sports:**
   - i) Scheme of Assistance to National Sports Federations to hold domestic competitions and participation in international competitions
   - ii) National Sports Development Fund
   - iii) Scheme of Human Resource Development in Sports
   - iv) National Anti-Doping Programme for dope -free sports

3 **Incentives to sportspersons:**
   - (i) Scheme of National Awards (Rajiv Gandhi Khel Ratna Award which is a plan scheme; and Arjuna Award, Dhyan Chand Award and Dronacharya Award which are Non-Plan Schemes).
   - ii) Scheme of Cash Awards to medal winners in international sports
   - iii) Maulana Abul Kalam Azad (MAKA) Trophy for University Sports
   - iv) Scheme of pension to meritorious sportspersons.
   - v) National Welfare Fund for sportspersons.

4. Scheme Review :

A) Sports for All -

i) **'Khelo India - National Programme for Development of Sports':**

Khelo India - National Programme for Development of Sports" has been prepared by merging the erstwhile „Rajiv Gandhi Khel Abhiyan", „Urban Sports Infrastructure Scheme and „National Sports Talent Search System Programme" as a Central Sector Scheme for implementation from the Financial year 2016-17 onwards. Khelo India Scheme has three components viz., competitions, talent and sports infrastructure. Objectives of the scheme are mass participation of youth in annual sports competitions through a structured competition, Identification of talent, guidance and nurturing of the talent through existing sports academies and new set up either by the central Government or State Government or in PPP mode and creation of Sports Infrastructure at mofussil, Tehsil, District, State levels, etc.

The talented sportspersons from amongst the participants of the competition for the different age groups at, District, State and National level will be identified through the defined competition structure. On conclusion of the competitions, the Organizing Committee of the respective level of Competitions will prepare a discipline-wise list of talented candidates separately for boys and girls keeping in view gender sensitivity and representation of Scheduled Castes, Scheduled Tribes, Minorities, and weaker sections of society. The selected candidates will be eligible for either grant of suitable scholarships or for admissions in Sports Authority of India (SAI) Centers and Sports Academies. The disbursal of scholarships shall be on the Direct Benefit Transfer (DBT) principle through the implementing agency. Every potential candidate will have to pass through the same competition structure to be eligible for scholarships under this Scheme in a particular year and his/her having received the scholarship during any previous year will not have any bearing on his selection in any subsequent year. Thus, the process of fresh selection every

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year will ensure that only the most deserving candidate will be eligible for scholarships, thereby maintaining reasonable standard. Such selected candidates will also be given preference for induction in various sports promotional schemes of the Ministry of Youth Affairs & Sports (MYAS)/Sports Authority of India (SAI), wherever feasible and if the selected talents so desire. The possibility of their induction in State sports academies may also be worked out with the State Governments. The scholarships will be granted in a graded manner for each level, i.e, the National level scholarships will be the highest while the district level the lowest.

The following sports infrastructures will be sanctioned under this scheme:-

S. No.	Particulars	At District/State level
1.	Synthetic Athletic Track	Rs. 7.00 crore
2.	Synthetic Hockey field	Rs. 5.50 crore
3.	Synthetic turf football ground	Rs. 5.00 crore
4.	Multipurpose Hall of size 60M x 40M x 12.5M	Rs. 8.00 crore
5.	Swimming Pool	Rs.5.00 crore
6.	Construction of Stadia complex at District Hqs.	Rs.50.00 crore

The cost of the project over and above the admissible grant mentioned above shall be borne by the grantee. State Governments/State Sports Council/State Sports Authority, Local Civic Bodies, School, Colleges and Universities under Central/State Governments and Sports Control Boards shall be eligible to receive assistance for creation of sports infrastructure under this scheme.

The erstwhile USIS scheme was converged with Member of Parliament Local Area Development (MPLAD) scheme with effect from March, 2012. In the new scheme of Khelo India, this convergence with MPLAD will continue on the lines of USIS and if a Member of Parliament contributes 50% of the grant admissible for an infrastructure project, two additional projects will be sanctioned in that State/UT. The total estimated cost of the Scheme in the year 2016-17 will be of the order of Rs. 500 crore. Budgetary allocation of Rs. 140 crore for Khelo India Scheme has been made during 2016-17.

(ii) The promotion of sports among person with disabilities:

The Ministry formulated a scheme for promotion of sports and games among disabled during 2009 on a pilot basis for a period of 5 years. The objective of the Scheme is broad-basing participative sports among the disabled. The Scheme of Sports & Games for the Disabled has the following components:-

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1) Grant for Training of Coaches
2) Grant for holding District, State & National level competitions for the disabled.

Budgetary allocation of Rs. 4 crore has been made for the Scheme of Sports & Games for Persons with Disabilities during 2016-17.

iii) National Playing Fields Association of India (NPFAI):

NPFAI was established in February 2009 as a Society under the Societies Registration Act 1860. Union Minister for Youth Affairs and Sports is the chairperson of the NPFAI and the members include senior officers in the Ministry of Youth Affairs and Sports, representatives of State Governments etc. The main objectives of NPFAI are: to protect, preserve, promote, develop and improve playing fields and open spaces and other facilities for sports and games; and to evolve a national policy on playing fields, playgrounds, play pitches, parks and open spaces. The NPFAI received Rs 50.00 lacs as seed money from the National Sport Development Fund in July 2009. The NPFAI had sanctioned Rs 192.00 lacs to the NDMC for development of 78 playfields in the NDMC area. This project has been completed

(B): Sports Excellence:

(i) The Scheme of Assistance to National Sports Federations (NSFs)

Provides financial assistance to NSFs for holding National Championships; participation of national teams in international competitions; organization of international tournaments; holding national coaching camps, including the engagement of foreign coaches; and equipment support. Budgetary provision made for the Scheme of Assistance to NSFs during 2016-17 is Rs. 165 crore.

(ii) National Sports Development Fund (NSDF) was instituted by the Central Government in 1998 with a view to mobilizing resources from non-governmental sources, including the private/corporate sector and non-resident Indians, with Government proving matching grant, for the promotion of sports and games in the country. In order to make contributions to the Fund attractive, 100% exemption from income tax is available on all contributions. The total money available in the Fund, as on 31.03.2016, was Rs. 125.00 crore.

iii) Scheme of Human Resources Development in Sports:

The Ministry of Youth Affairs & Sport revised the existing Scheme relating to Talent Search & Training and renamed it as Scheme of Human Resources Development in Sports in 2013-14. Under the revised scheme, the Government intends to focus on developing human resources in sports science and sport medicine for the overall development of sports and games in the country. Budgetary allocation of Rs. 4.00 crore has been made for scheme of human resource Development in Sport for 2016-17.

(C) Sports Incentives:

i) Rajiv Gandi Khel Ratna Award :

The Scheme was launched in the year 1991-92 Under this scheme, a medallion along with a cash award of Rs.7.5 lakh is given to the most spectacular and outstanding sportsperson of the year. Normally only one award is given every year. 28 sportspersons have been given this award since the inception of the scheme.

ii) Arjuna Award : was instituted in 1961 and is given to players who have exhibited good performance consistently for the previous three years at the international level and have

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shown qualities of leadership, sportsmanship and a sense of discipline. The awardees are given a statuette, a scroll of honor, ceremonial dress and award money of Rs. 5. 00 lakh. Normally, up to 15 awards can be given each year. 799 outstanding sportspersons from various disciplines have been conferred Arjuna Awards so far.

iii) **Dhyan Chand Award for Life Time Achievements in Sport and Games :** was instituted in the year 2002. This award is given to honor those sportspersons who have contributed to sports by their performance and continue to contribute to promotion of sports even after their retirement from active sporting career. The awardees are given a statuette, a scroll of honor, ceremonial dress and award money of Rs. 5.00 lakh. 45 sportspersons have been given this award since inception.

iv) **Dronacharya Award :** was instituted in 1985. This award honors eminent coaches who have assisted national athletes and teams in achieving outstanding results in international competitions. The awardees are given a statuette, scroll, ceremonial dress and a cash prize of Rs.5.00 lakh. Normally, up to 5 awards can be given each year. 88 Coaches have been given this award since its institution.

V) **Rashtriya Khel Protsahan Puruskar :** With a view to recognizing the contribution made to sports development by entities other than Sportspersons and coaches, Government has instituted from 2009 a new award entitled Rashtriya Khel Protsahan Puruskar, which has four categories, namely, community sports development,

vi) **Scheme of Special Awards to Winners in International sports events and their Coaches:** was introduced in the year 1986 to encourage and motivate outstanding sportspersons for higher achievements and to attract the younger generation to take up sports as a career. The Ministry has revised the Scheme on 29.01.2015, in which amount of cash award to medal winning sportspersons has been substantially enhanced and the discriminatory clause of the scheme under which medal winners in closed events like Para-Olympics, Special Olympics Championships for handicapped, Deaf, Dumb, Blind etc. was done away with and these events were included in the revised scheme.

vii) **Scheme of Pension to Meritorious sportspersons:**

This scheme was launched in the year 1994. Under this scheme, those sportspersons, who are Indian citizens and have won gold, silver and bronze medals in Olympic Games, World Cup/World Championships, Asian Games, Commonwealth Games and Paralympic games; attained the age of 30 years; and have retired from active sports career are eligible for life pension

Viii) **MAKA Trophy:** With a view to promoting competitive sports in colleges and universities, Maulana Abul Kalam Azad (MAKA) Trophy with a cash award of Rs.10 lakh is given to the University standing first in inter-university sports tournaments. The Universities standing second and third are given cash award of Rs. 5 Lakh and Rs. 3 lakh each, respectively.

Ix) **National Welfare Fund for sportspersons** was set up in March, 1982 with a view to assisting outstanding sportspersons of the past, living in indigent circumstances, who had brought glory to the country in sports. The scheme was last reviewed and revised in July 2009. Scheme of National Welfare Fund of Sportspersons has been reviewed again and has been revised extensively in May 2016. Under the revised Scheme, amount of annual income

Pune District Education Association's

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Two Day National Level Conference

"Sports for Sustainable Development in India"

2nd-3rd February, 2018

Organized by

Department of Physical Education and Sports

in association with

Savitribai Phule Pune University, Pune

Certificate

This is to certify that Prof. / Dr. Yogesh Pawar

of Mamasaheb Mohol college, Pune-38

participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Study of obesity in Women's

Yogesh

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Study of Obesity in Women's

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Obesity is increasing at an alarming rate throughout the world and has become a global prob
The World Health Organization has declared overweight as one of the top 10 health risks i
world and one of the top five in developed nations. According to recent estimates, there are
than one billion overweight people worldwide, and some 250 million of these are estimated
clinically obese, equivalent to seven percent of the adult population. Once considered a pro
related to affluence, obesity is now fast growing in many developing countries and in
neighborhoods of the developed countries.
Even in countries like India, which are typically known for high prevalence of under nutriti
significant proportion of overweight and obese people now coexist with those who are
nourished (Popkin, 2002). Comparison of two major studies conducted by National family
survey in 1998-1999 and in 2005-2006 shows that prevalence of obesity among Indian wom
elevated from 10.6% to 12.6% (increased by 24.52%). The prevalence is more profound
women of age between 40-49 years (23.7%), residing in cities (23.5%), having high qualifi
(23.8%). Although this number seems small in the international perspective, it is significant b
of the sheer size of population in India. In India the increased levels of obesity is pri
associated with the transition from rural to urban lifestyle. However, it is evident th
phenomenon is more profound among the urban populations in comparison to the rural ones.
A living person's exact body fat percentage generally cannot be determined, but there are
techniques which can be used to estimate it to a good degree of accuracy.

Near-infrared interactance

A beam of infra-red light is transmitted into the biceps. The light is reflected from the und
muscle and absorbed by the fat. The method is safe, noninvasive, rapid and easy to use.[4]

Dual energy X-ray absorptiometry

Dual energy X-ray absorptiometry, or DXA (formerly DEXA), is a newer method for est
body fat percentage, and is a very efficient and advantageous method of determinin
composition and bone mineral density.

Body average density measurement

The most accurate method of estimating body fat percentage was to measure that person's
density (total mass divided by total volume) and apply a formula to convert that to
percentage.[6]

Bioelectrical impedance analysis

The bioelectrical impedance analysis (BIA) method is a more affordable but less accurat
estimate body fat percentage. The general principle behind BIA: two conductors are atta
person's body and a small electric current is sent through the body. The resistance bet
conductors will provide a measure of body fat, since the resistance to electricity varies
adipose, muscular and skeletal tissue. Also reducing the reliability of this method is the
between models of the BIA devices: for instance when comparing outputs from a Tanita s

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Omron Body Logic handheld device the Tanita scale overestimated the percentage body fat in college-aged men by 40% and in college-aged women by 55%.[9]

Anthropometric methods

There exist various anthropometric methods for estimating body fat. The term anthropometric refers to measurements made of various parameters of the human body, such as circumferences of various body parts or thicknesses of skinfolds. Most of these methods are based on a statistical model. Some measurements are selected, and are applied to a population sample. For each individual in the sample, the method's measurements are recorded, and that individual's body density is also recorded, being determined by, for instance, under-water weighing, in combination with a multi-compartment body density model. From this data, a formula relating the body measurements to density is developed

Skinfold methods

The skinfold estimation methods are based on a skinfold test, also known as a pinch test, whereby a pinch of skin is precisely measured by calipers at several standardized points on the body to determine the subcutaneous fat layer thickness. These measurements are converted to an estimated body fat percentage by an equation.

Ultrasound

Ultrasound is used extensively to measure tissue structure and has proven to be an accurate technique to measure subcutaneous fat thickness. By making thickness measurements at multiple sites on the body you can calculate the estimated body fat percentage. Ultrasound techniques can also be used to directly measure muscle thickness and quantify intramuscular fat.

Height and circumference methods

There also exist formulas for estimating body fat percentage from an individual's weight and girth measurements.

1. **BMI**
2. Body fat can be estimated from your body mass index (BMI). The BMI is calculated from an individual's weight divided by the square of the height if expressed in kg/m^2, multiplied by 703 if expressed in lbs/in^2.

Need for study

Obesity has emerged almost unnoticed in our society. Problems of overweight and obesity are caused by a chronic imbalance between energy intake and actual energy needs of the body. The metabolic factors concerned include a low metabolic rate, low insulin sensitivity and high respiratory quotient. In addition, various socio-demographic factors such as smoking habits, dietary habits, socioeconomic situation, education level, use of contraceptives, postpartum status and rapid weight gain in childhood, have been recognized as modifying factors. While the problem of under-nutrition still exists in many parts of India, the additional burden of obesity due to increasing sedentary lifestyle, junk food habits in some urban and economically sound areas is really alarming. Regardless of its cause, obesity may be associated with a variety of risks. Obesity causes or exacerbates many health problems, both independently and in association with other diseases. It is related to the risk for developing non-insulin dependent diabetes mellitus, hypertension, and cardiovascular disease. It also creates an enormous psychological burden. Thus, obesity is associated with a significant increase in morbidity and mortality. There are numerous studies worldwide that have dealt with obesity and its consequences. However, in the Indian context, very

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limited information is available. Considering the economic burden and importance of overweight and obesity, documenting the patterns and trends in overweight and obesity in different Indian populations are of paramount importance. However, it is noteworthy to point out that, to date, there is no reliable estimate of the frequency of overweight and obesity among adult House working women in Pune city. Hence, the investigator conducted a survey to understand the obesity situation of adult House working women in Pune city.

Area and Population: The investigation was carried out during the year 2009-2010. The data were collected from adult House working women aged between 18 to 32 years in Pune city residing within the Mukundnagar, Parvati and Ghorpadi Peth area. The method used to measure the amount of fat in the body of the subjects. The purposive sampling method was used to select the sample for the study. Total 90 subjects were investigated during the study. 30 adult House working women from each selected area were tested using skinfold measurement method.

The measurements were taken at three places on the subjects body, at tricep, suprailac and abdominal region with the help of harpender caliper. The values were then compared using the norms available in total fitness book. The subjects were further divided into three age categories 18 – 22, 23 – 27, and 28 – 32 .years. After the data was collected it was processed through series of statistical analysis.

Analysis:

Table 1.

Descriptive statistic of subject

Age Group	N	Mean	Standard Deviation	Minimum	Maximum
18 to 22 years	27	28.52	6.59	17.90	40.50
23 to 27 years	31	32.90	5.96	18.10	41.70
28 to 32 years	32	42	13.90	32.90	57.50

Table 2.

Classification of subjects' according to body fat content.

Category of body fat	N (18 to 22 yr)	Percentage (18 to 22 yr)	N (23 to 27 yr)	Percentage (23 to 27 yr)	N (28 to 32 yr)	Percentage (28 to 32 yr)
Low	0	0%	0	0%	0	0%
Optimal	9	33%	3	10%	4	13%
Moderate	5	19%	4	13%	9	28%
High	6	22%	12	39%	9	28%
Very High	7	26%	12	39%	10	31%

Table 3

Descriptive statistic of subject between 18 to 32 years

N	Mean	Standard Deviation	Minimum	Maximum
90	31.23	6.44	17.90	57.50

Table 4.

Classification of subjects' aged between 18 to 32 years according to body fat content.

Category	N	Percentage
Low Body Fat	0	0%
Optimal Range of Body Fat	16	18%
Moderate Range of Body Fat	18	20%
High Body Fat	27	30%

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Very High Body Fat	**29**	**32%**

Result and conclusion: Of the 90 subjects tested 18% of them were in the range of optimal body fat. 20% of the women were in moderate range. 30% of the women were in the high fat range and the remaining 32% of the women were in the very high body fat category. When the total subjects were divided into 3 age groups it was found that in the 18 to 22 yrs group 50 % of then fall in the optimal and moderate body fat range and remaining in the high and very high range. The number of subject in the risk zone for the 23 to 27 age group and 28 to 32 years is 60% and above which is alarming. The increased levels of obesity can primarily associated with the transition from rural to urban lifestyle.

Recommendations:

- It emerges from the study that we should not put the issue of obesity on the back burner.
- It was found that there is a significant increase in overweight and obesity among women in Pune.
- There is an urgent need to recognize the gravity of the problem of obesity and therefore incorporate it in the general health system.
- Further elaborate should be undertaken to find the reasons tin the increase in body fat and obesity.
- A healthy lifestyle should be promoted to tackle this emerging health threat.

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES
SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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A Study on Artificial Neural network, an evolutionary technique in Data mining

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Abstract:-*An artificial neural network isan algorithm which is a wide branch of data mining. Both supervised and unsupervised learning applications are applied on neural network. It has a base of human brain or neural structure. This artificial neurons helps to form the decision support system. In this field, machine experiences learning process like human and generatessignalon the basis of previous as well as current data.The collection of such artificial neurons which are connected to each other is called artificial neural network. Neural network is a complex adaptive system that can change its internal structure on the basis of information flowing through it. Every neuron of this network shows an intelligent behavior. These neurons of information works in the field of statistics, genetic engineering, pattern recognition, machine learning, robotics etc.In machine learning or in robotics decision making process is depending on learning process of ANN. So, ANN is a parallel distributed processing algorithm.This paper illustrates how these neurons or neural network works and how does it help to mine last granule of data through variety ofits application. Besides that, it mentions various other issues and aspects of neural network.*

Keywords:-neuron,neural,granule, network,mining, hypothesis,ANN,perceptron,weights

Introduction:-A millions of data are available in this world. Since we are living in the information age, the need of converting data into information is necessary. This can be possible with data mining where this data is analyzed. Data mining provides various algorithms for such analysis. This millions of data are stored in data warehouse. Thus data warehouse is a repository system where such data are maintained separately from an organization's operational databases.So,Data mining is the process of discovering patterns and knowledge from large amounts of data.This neural network algorithm of data mining helps to match or compare many patterns of data to each other on the basis of which it creates computationalmodel.Neural network acquires knowledge through learning and knowledge of this network stores within inter-neuron connection strengths called synaptic weights. This model further leads to prediction. With the help of such model we could mine as much data as we can.

Content:-

Neural Network

"*Neural network is the study of such adaptable nodes which has created from many learning tasks, stores as an knowledge and make it available for future reference.*" Here every task is a process of creating neuron or node. Each task has its own data. As the human brain is an intelligent enough to investigate from the given data and could able to derive hypothesis, neural network works exactly the same. The neural network is an intelligent model which has large number interconnected processing units that computes many complex patterns and derive meaningful results.

This algorithm classifies the given multi-dimensional data, applies conditions on to it for similarities or does statistical analysis which leads to prediction. In many cases an NN (neural network)is an adaptive system that changes its structure based on external or internal information that flows through the network during the learning phase. Thus, artificial neural network involves in classification, clustering, pattern recognition for learning process. An artificial neuron is called perceptron. These neurons are connected to each other. Network having input node called receivers and output connection called transmitter. Connection weights acts as a synaptic junctions. Learning occurs through changes in the value of connection weights.

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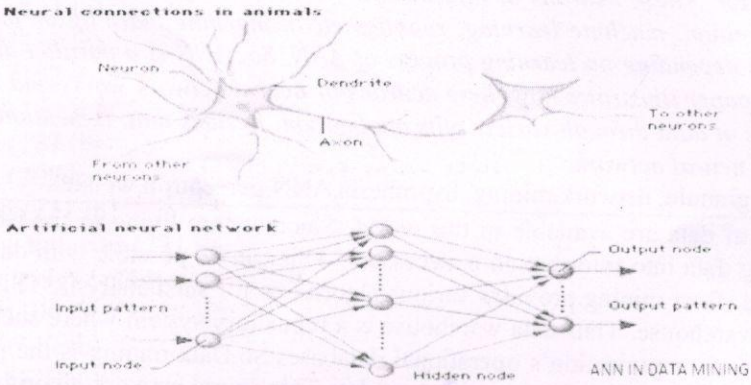
Properties Artificial Neural Network:-

- Information is stored in connections hence no memory required.
- It is a parallel processing.
- Connectivity is a must among neurons.
- Having learning and generalization ability.
- Robust in nature.

The generalization ability of neural network is based on:

- How the training data is represented to the network.
- The architecture of a network.
- The complexity of a given problem.



Working mechanism of neurons in animal :-

In the animal, all the neurons with its dendrite are connected to each other and form tree like a structure.They accept input from the surrounding and pass it to other neurons where axon works like a transmission line. Here, every neuron plays a vital role in recognizing the pattern of given input data and hence data is keep on passing from one neuron to the other. Once the pattern is matched on the basis of certain hypothesis then prediction is made. For this pattern matching neuron uses previous data or experience as a reference.

Working mechanism of neurons in ANN:-

In a same way ANN(Artificial Neural Network) works. An artificial neuron is a device which has many inputs and one output. All the nodes of neurons accept the data from the surrounding and generates an input signal. This input signals is then passes to other nodes for pattern matching. This pattern matching can be done on the basis of previous data and derives hypothesis. Once the pattern is recognized then output signal is generated by a output node decision is made. Through ANN machine learns everything like human. Thus ANN is a demanding field in data mining.Generally every neural network consists following threelayers:

1) **Input layer**:-The input unit of this layer accepts all raw information and feed into the network. It receives an input valuesof each observation. It represents the pattern to the network and pass it to the hidden layer.
2) **Hidden layer**:-In this layer actual processing is done through weighted connectivity of neurons. The values entering the hidden nodes multiplied by weights. The total weighted inputs are then added to produce a single number.

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3) **Output layer**:-The node of this layer accepts information from hidden layer and generates response variable.

Data sets in ANN:-

1) Training set:- A set of examples need to be selected in such a way that, it should fit the parameters of network. One complete cycle has to be implemented over a network.
2) Validation set:- The examples which will be selected for this set can able to alter the architecture of network. For example to choose the number of hidden units in a neural network.
3) Test set:- Here, the set of examples should be chosen in such a way that it can able to assess the performance of network by giving and also need to check how network successfully gives a prediction through input.

Types of artificial neural network:-

1) *FEED FORWARD NETWORK*:-Here input layer of source nodes assigns into an output layer of neurons but not vice-versa is known as single feed-forward or acyclic network. That means forwarding the data from source to destination.
2) *MULTILAYER FEED FORWARD NETWORK*:-This network has one or more layers whose computation nodes are called hidden neurons. The main function of this hidden neuron is to form an interaction between input node and output node. In short, it works as a mediator. The input node passes the signal to the hidden neurons of 1st layer. The output signal of 2nd layer works as a input signal of 3rd and so on.
3) *RECURRENT NETWORK*:- In this network the output of neuron is fed back to its own input. In a repetitive manner this process works due to which dynamic behavior occurs. It has a cyclic path.

Other types of Neural Network:-

1) **Modular Neural Network**—It is the combined structure of different types of the neural network like multilayer perceptron, Hopfield network, recurrent neural network etc which are included as a single module into the network to perform independent task of whole complete neural networks.
2) **Physical Neural Network**—In this type of artificial neural network, electrically adjustable resistance material is used to emulate the function of synapse instead of software simulations performed in the neural network.

Training issues of ANN:-

- Ensures prime training.
- Learning parameters should be adequate.
- Data preparation is necessary.

Training approach of ANN:-

- **Supervised training**:- In this approach, both inputs and outputs are provided where network whatever errors are generated that are sending back to the system or network by which flow of information can be controlled.The set of data, which enables the learning, is called the "training set."During the learning of a network, the same set of data is processed many times. In supervised learning set of data needs to be hold back to test the system or network. If a network can't able to solve the problem then both input and output can be reviewed. Through this approach both input and output can easily be memorized.

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- **Unsupervised training**:-In this approach, inputs are provided but desire output are not provided. The system itself decides what to do with given inputs. The system should adapt the methods of processing an input. Network has to decide the complete function of every element within the system.
- **Reinforcement training**:-In this type of learning we need to strengthen the work of system.The network receives some feedback from the environment. After receiving the feedback, the network performs modifications of the weights to get better information in future. Thus, this type of approach is based on feedback and to a certain extent it is similar to supervised learning.

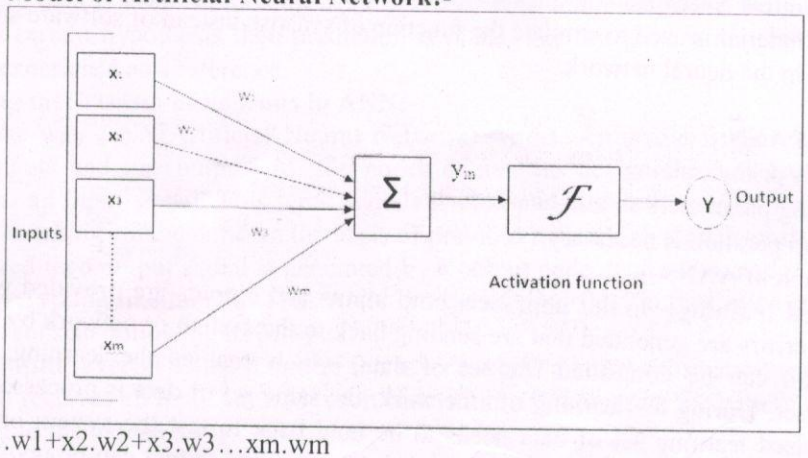
Objectives of network training:-

- Establish maximum acceptable error rate.
- Train the network using validation testing
- Need to validate the trained network against the separate training data.

Analysis after the training :-

- Examine and visualize the constructed neural network model.
- Check the sensitivity of input attributes.
- Develop some analytical techniques.
- Remove unwanted attributes.

- **Examine and visualize the constructed neural network model:-** We could use some graphical tools to display the response or output from selected input variables.
- **Network analysis:-.** Need to check the sensitivity of input attributes of hidden nodes as well. Then manual analysis of weight values is to be done through graphical tools. Convert an equation to a executable code.
- **Develop some analytical techniques:-** Develop few analytical techniques for analyzing various factors or aspects of network. Then the weight analysis of a network is to be done.
- **Remove unwanted attributes:-**Remove unwanted attributes from network which excess the load of network and it may interfere in the process of computation.
- **Model of Artificial Neural Network:-**



yin=x1.w1+x2.w2+x3.w3…xm.wm

i.e., input yin=∑mixi.wi

output can be

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Y=F(yin)

The function of neuron is to sum the given inputs and produce the output of given sum which is greater than threshold value. ANN multiplies each component of input by the weight of its connection. Then it sums all the weighted inputs and deducts threshold value, afterwards ANN transforms total weighted input into the output using activation function.

Let us see the steps that perceptron follows:-

- Receive inputs
- Weight inputs
- Sum inputs
- Generate output

How does neural network works?

- ANN receives an input from the external world in the form of pattern and image in vector form.
- These inputs are mathematically labeled by the notation X(n) for n number of inputs.
- Each input is then multiplied by corresponding weights.
- Weights are nothing but information that is used by neural network to solve the problem.
- The weighted inputs is then added inside the neuron.
- In case the weighted sum is zero then bias is added to make the output non-zero.
- The sum corresponds to any numerical value ranging from 0 to infinity.
- In order to get desire value, threshold value is set up. For this sum is pass through activation function.
- The activation function is set of the transfer function which is used to get desire output.

Learning rule of ANN:-

- Hebb's rule:-The basic rule is that if a neuron receives an input from another neuron and if both are highly active , the weight between the two neurons should be increased.
- Hopefield rule:-If the desired output and the input are both active or both inactive, then there is a change in weight connection between two neurons, it has to be increment otherwise it has to be decrement.
- Delta rule:-This rule suggests that the change in the input connections of two neurons to minimize the difference between the desired output value and the actual output of a processing element.
- Competitive learning rule:-The neurons that are having the largest output is declared the winner. So, now winner can adjust its weight connection.

The learning process of ANN:-The memorization of patterns can be categorized into two parts:

- Associative mapping:- Here, network learns to produce a particular pattern of on a given set of input units. This enables the network to complete the pattern which could be similar to previously learned data. In this process network learns to store the relationship among patterns.
- Regularity detection:- In this process neurons learns to respond to particular properties of input pattern. The response of each unit has a particular unit.

Transfer function:-The behavior of ANN depends on the weight connection of neurons and the input-output function i.e transfer function. This transfer function is of 3 types.

- Linear unit:-The output movement is proportional to the total weighted output.
- Threshold unit:- The output is set at two levels, depending on whether the total input is greater than or less than some threshold value.

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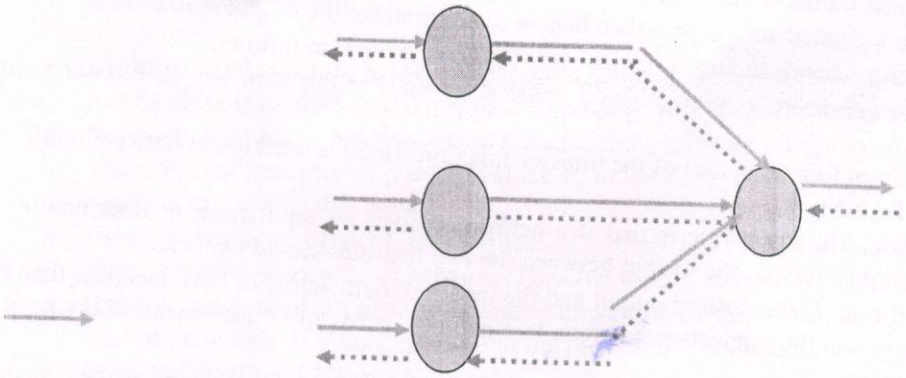
- Sigmoid unit:- The output changes continuously but not exactly as input changes.

Back-propagation algorithm:-This algorithm of ANN sends back the error through the network to correct all weights.Back-propagation algorithm consists of the repeated application of the following two passes:

- **Forward pass**: in this step the network is activated on one input and the error of (each neuron of) the output layer is calculated.
- **Backward pass**: in this step the network error is used for updating the weights. Starting at the output layer, the error is propagated backwards through the network, layer by layer.

Calculation of error is based on the difference between target and actual output.

$$E=\frac{1}{2}\sum_j (t_j - o_j)^2$$



Network activation forward step
Error propagation backward step

Compute $\frac{\partial E}{\partial w_{ij}}$ for all w_{ij}

w_{ij}-weight from node I to node j O_j-Output of node i.e $=f(x_j=1/(1+e^{-x}j)$
X_j- total weighted input of node E= Error for one pattern over all output nodes
n

$$=\sum_{i=0} w_{ij}O_i$$

Design issues of ANN:-

- Architecture of network
- Structure of neurons
- Learning rules

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Let us discuss the above issues one by one

Architecture of network:-First of all how many nodes are required in the network ?that has to be decided.

- Then determine the number of network weights.
- Afterwards layer of a network has to be decided.
- Besides that, How many nodes per layer is also important.
- Then the method of data processing.
- Ensures the connectivity of all neurons in the network.
- Then the concept of hypothesis model needs to be seen.

Structure of neurons:-

- How an input is integrated ?
- Then the choice of activation(transfer) function is important. Whether it is linear, sigmoid etc.

Learning rules:-

- Selecting learning rules.
- Then weight space search technique.

Data preparation for ANN:-

- Determine appropriate and adequate inputs.
- Combine data into working databases.
- Estimate the missing values.
- Remove exceptions.
- Determine the probabilities of categories.
- We need to select examples from random selecting process.
- Eliminate redundant attributes.
- Combine all attributes.
- Group the discrete values of attributes.

Guidelines for using ANN:-

- Select the best possible method for both training as well as for learning.
- Check the hidden units first.
- Select proper input variables.
- Decides the method of processing.
- Determine validation technique.

Advantages and disadvantages of neural network:-

1) **Advantages**:-

- Neural network works well while dealing with linear and non-linear data.
- Even if few units fail in the network it responds to the given data.
- Neural network works from analyzed data and does not need reprogramming.

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2) **Disadvantages**:-

- Neural network requires diverse set of training data for learning.
- It requires large space of computer memory.
- Without training it cannot able to compute the data.

Neural network Vs Conventional computer

Parameter	Neural network	Conventional computer
Approach	It always takes a different approach for problem solvingi.e learning approach	It always accepts set of instructions from useri.e algorithmic approach
Working	It works like a human brain	It follows specific steps to solve the problem
Learning	It learns with example. Does not need to be programmed	It needs to be programmed.
prediction	Operations are unpredictable.	Operations are predictable.

Framework of ANN:-

- Assign random weights to all the nodes to apply the algorithm.
- Find out the activation rate of hidden nodes besides activation rate of input nodes and output node.
- Monitor the error rate and restructure the connectivity of all nodes.
- Readjust the weight between input node and hidden node.
- Repeat the process until objective is met.
- Check the final score of output node.

Application area of ANN:-

- Pattern recognition
- Speech recognition
- Image compression
- Handwriting recognition
- Stock exchange prediction
- Whether forecasting
- Medicines

Now, we will discuss few applications of neural network

1) **Handwriting recognition**:-The pattern of handwritten character is input. For such program user need to train the network before it applies to actual input variables. The two common application handwriting recognition they are:
    - Optical character recognition for data entry
    - Validation of signatures over bank cheques

The perceptron of first layer accepts an input where each perceptron is connected to the other Perceptron of the next layer. These perceptron of input layer passes the data to next(hidden) layer. It is then processed in this layer. After processing it is then forward to the output layer which generates desire output with its output node.

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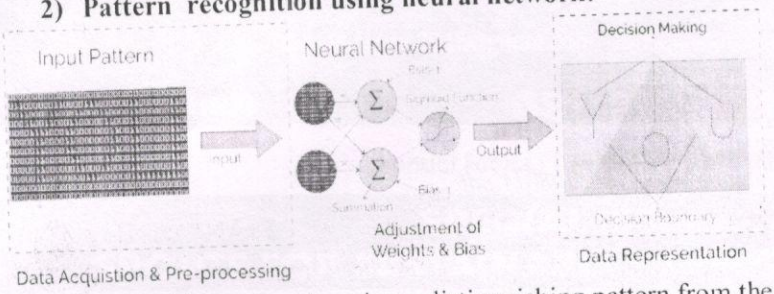
2) Pattern recognition using neural network:-



Pattern recognition means learning a distinguishing pattern from the given environment and make the categories accordingly and take the decision. Some of the examples of pattern recognition are: Fingerprint image, handwritten word, human face etc. Pattern recognition consists following functions:

1) Supervised classification
2) Unsupervised classification

There are three aspects related to pattern recognition

- Data acquisition and preprocessing
- Data representation
- Decision making

Following are the approaches for pattern recognition

- Template matching
- Statistical
- Syntactic matching
- Artificial neural network

3) **Neural network in medicine:-**Neural network is ideal for recognizing disease using scans because it does not need specific algorithm. Neural network learns with the help of example.

4) **Neural network in image compression**:-Neural network can do compression and decompression of data. The network can reduce eight bits of data to three bits and vice-versa. Thus, it can restructure an image.
5) **Neural network in signal processing**:- This network is capable enough to do the filtering of electronic noise. It can differentiate pulses.

Conclusion:- Artificial Neural Network is a connectionist system which is inspired by biological neural system that can able to learn or recognize any complex pattern of input from the world and gives output i.e decision like human.The neurons of network storenumerous information in the form of weights as human brain stores. Due to ANN classification, clustering and regression analysis of data became easy. Even if any error is generated this model sends it back to network through its back – propagation algorithm as human corrects his behavior through the mistakes. This model can able to derive correct hypothesis and on the basis of which it gives accurate prediction.ANN is capable enough to mine last particle of data. Thus, Neural network is becoming a valuable tool in the field of

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neuroscientific research. Hence this model works well in Artificial Intelligence where it reduces the gap between man and machine.

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Dshilvant

Prof. Dipali Shilvant
Co-coordinator

Prof. Amol V. Kale
Co-ordinator

Dr. M.M. Shikare
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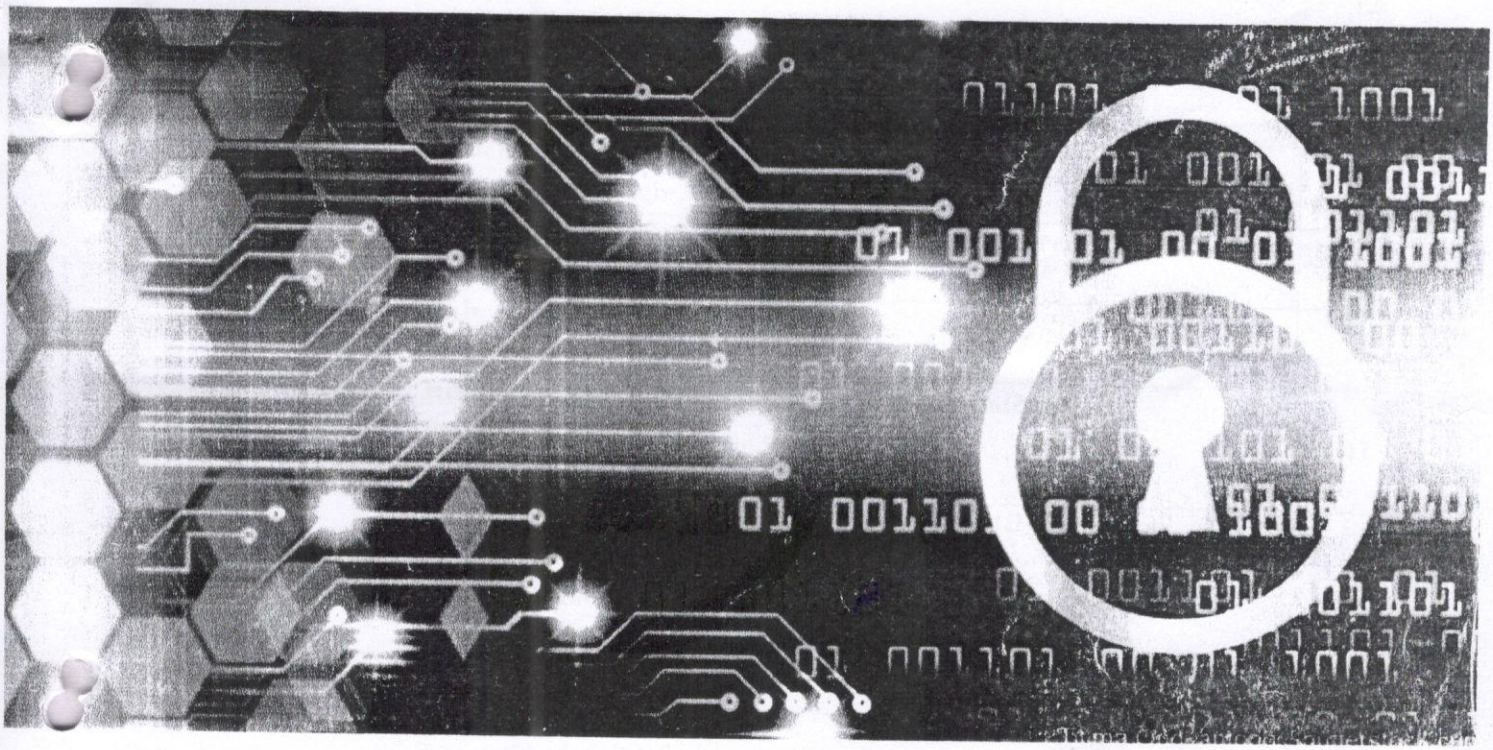

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RECENT TRENDS IN CLOUD SECURITY AND VIRTUALIZATION

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Abstract:
The current cloud infrastructure demands variousinnovativesecurity strategies. These strategies should be implemented by considering all possible cyber attacks but at the same time it should be properly analyzed. This can be possible with virtualization.The virtualization technology supportsand limits security capabilities in order to secure wide area environment such as the cloud.Thus, there is a needtoimprovisethetraditional virtualization architecture.

Keywords:- *Cloud,attack,IOT,virtualization,Virtual Machine,DoS,SSH,NIST,LDAP*

Introduction

Cloud computing is a network-based environment that focuses on sharing computations and resources. Actually, cloud computing is defined as a pool of virtualized computer resources: Thus virtualization is the key to cloud computing, since it is the enabling technology which allows the creation of an intelligent abstraction layer which hides the complexity of underlying hardware or software. A cloud computing platform supports, self-recovering, highly scalable programming models that allows workloads to recover from many expected hardware and software failures.

Current and emerging cyber attack:-

1) Destructive DoS, IOT attacks will rise. Cybercriminals will find it easy to extend their reach because there are so many IoT devices containing outdated code based on poorly-maintained operating systems and applications with well-known vulnerabilities.
2) Rising threats against virtualized and cloud systems. Attacks against physical hardware will increase which leads the possibility of exploiting virtualized cloud systems. Attackers might misuse the host or other guests running on a shared host, attack privilege models, and perhaps access others 'data..

Security predictions:-

- By 2020, investment will rise in the field of artificial intelligence/machine learning-based tools that reduces IT failures.
- By 2018, most of the organizations will implement a cloud visibility and control tool that leads to fewer security failures.

Working on Global cyber security front and privacy landscape:-

- Developing new security policies and focusing new risks..
- Need to tighten, monitor and control information flow.
- More focus on cloud infrastructure and its security techniques.

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Six emerging security technologies:-

- AI, Machine, and Deep Learning:-
- Cloud-Specific Applications and Solutions:-
- Endpoint Hardware Authentication:-
- Emerging Security Technologies for Preventing Data Loss:-
- User Behavior Analytics (UBA):-
- Blockchain :-

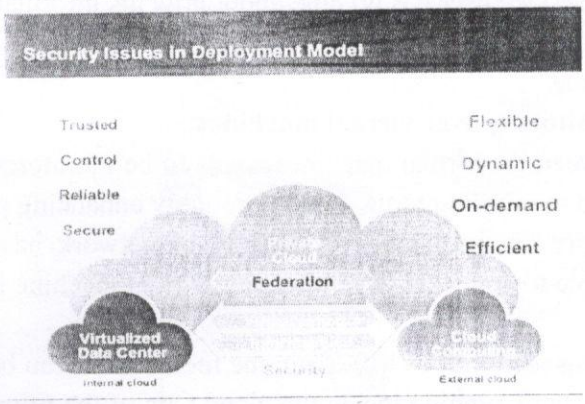
The following section will now focus on security of cloud infrastructure with virtualization.

Cloud computing

Cloud computing is "A model for enabling universal, convenient, on-demand network access to a shared group of configurable computing resources like networks, servers, storage, applications, and services etc. that can be rapidly running and released with minimal management effort or service provider interaction."

NIST (National Institute of Standard and Technology)identifies three service models of cloud:

- **Infrastructure as a Service (IaaS):** "The capability ofmodel is to provide to the computing resources like processing, storage, networks, and other fundamental servicesthrough which the consumer is able to deploy and run arbitrary software. This can include operating systems and applications." IaaS typically provides you computers, which may be virtual, and where we can choose an operating system to run on it and do what we want with them. A popular example of IaaS is Amazon Web Services (AWS), including its Amazon Elastic Compute Cloud (EC2) that provides scalable virtual private servers using Xen. Other examples include Windows Azure, Google Compute Engine, and Rackspace Open Cloud. OpenStack is open source software that lets you implement your own IaaS.
- **Platform as a Service (PaaS)**: "This type of model has capability to provide various platforms tothe consumer which could deploy onto the cloud infrastructure. The consumer does not have to manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but can control over the deployed applications and possibly configurationor settings for the application-hosting environment." Examples include Google App Engine, Red Hat OpenShift (built on OpenShift Origin), Heroku, and Windows Azure Cloud Services. Amazon Web Services (AWS) also provides support as a PaaS. OpenShift Origin is open source software that lets you implement your own PaaS.
- **Software as a Service (SaaS):** "Thistype of model provides the numerous applications to the consumer which can run on cloud infrastructure." Here you are just using (via a network) an application that can very rapidly scale. Examples include SalesForce and Google docs.



Possible attacks on cloud computing can be classified into:-

1. **Resource attacks:**
   These kinds of attacks include manipulating the available resources by mounting a large-scale attack on collection of internet-connecteddevices. These kinds of attacks target either cloud providers or service providers.
2. **Data attacks:**
   These kinds of attacks include unauthenticated modificationsin sensitive data at nodes, or performing configuration changes to enable a sniffing attack via a specific device etc. These attacks are focused on cloud providers, service providers, and also on service users.
3. **Denial of Service attacks:**
   The creation of a new virtual machine is not a difficult task, and thus, creating reprobate VMs and allocating huge spaces for them can lead to a Denial of Service attack. These attacks can be done on service providers when they opt to create a new VM on the cloud. This kind of attack is generally called virtual machine rambling.
4. **Backdoor:**
   Another threat on a virtual environment empowered by cloud computing is the use of backdoor VMs that leak sensitive information and can destroy data privacy.

Virtualization

In computing, **virtualization** refers to the act of creating a virtual (rather than actual) version of something, including virtual computer hardware platforms, storage devices, and computer network resources.

Virtual security in cloud computing

The virtual machines that provides agility, flexibility, and scalability to the cloud resources by allowing the vendors to copy, move, and manipulate their VMs at will. The term *virtual machine* essentially describes sharing the resources of one single physical computer into various computers within itself. *VMware*and *virtual box* are very commonly used virtual systems on desktops. Cloud computing effectively stands for many computers pretending to be one computing environment. Obviously, cloud computing can have many virtualized systems to maximize resources.

Now a days more and more organizations implement the "Cloud Infrastructure" , malicious hackers keep finding ways to get their hands on valuable information by

manipulating precautionary measures and breaking the security layers (if any) of cloud environments. One issue is that the cloud-computing scenario is not as transparent as it seems. The service user has no clue about how his information is processed and stored. In addition, the service user cannot directly control the flow of data/information storage and processing.

Traffic monitoring over virtual machines:-

Traffic between the virtual machines needs to be monitored closely by using at least a few standard monitoring tools.After thoroughly enhancing physical security, it's time to check security on the inside. A gateway of network has to be well-configured and should be able to apply security when any virtual machine is reconfigured, migrated, or added.

The following section tries to explain the method that can be used to check the integrity of virtual systems running inside the cloud.One of the primary focuses of this integrity is to check the unified integration of existing virtual systems like VMware and virtual box. This would lead to file integrity checking and increased protection against data losses within VMs.

Data on cloud infrastructure:-

Data on a cloud should be encrypted with suitable encryption and data-protection algorithms. Using these algorithms, we can check the integrity of the user profile and system profile. To enhance the security aspect even more, after a particular environment is used, it is best to reload the system and destroy all the residual data. By using incoming IP addresses we can determinethescope on Windows-based machines. and using SSH configuration settings on Linux machines, will help maintain a secure one-to-one connection.

Light weight Directory Access Protocol (LDAP) and Cloud Computing:

LDAP is an extension to DAP (directory access protocol). As the name suggests, it gives small pieces of code that helps by locating organizations, individuals, and other files or resources over the network. Automation of manual tasks in a cloud environment is done using a concept known as *virtual system patterns*. These virtual system patterns enable fast and repeatable use of systems. Having dedicated LDAP servers is not typically necessary, but LDAP services have to be considered when designing an efficient virtual system pattern.

LDAP servers to cloud management would lead a buffering of existing security policies and cloud infrastructure. This also allows users to remotely manage and operate within the infrastructure.

An architecture for Securing Virtualization in Cloud Environment:

The system assumes the attacker is located in any form within the guest VM. This system is also asynchronous in nature and therefore is easier to hide from an attacker. Asynchronicity prevents attacker from detecting the system. The model believes that the host system is trustable. When a guest system is placed in the network, it's vulnerable to various kinds of attacks like, viruses, code injections (in terms of web applications), and buffer overflows. Other lesser-known attacks on clouds include DoS. keystroke analysis, and estimating traffic rates.

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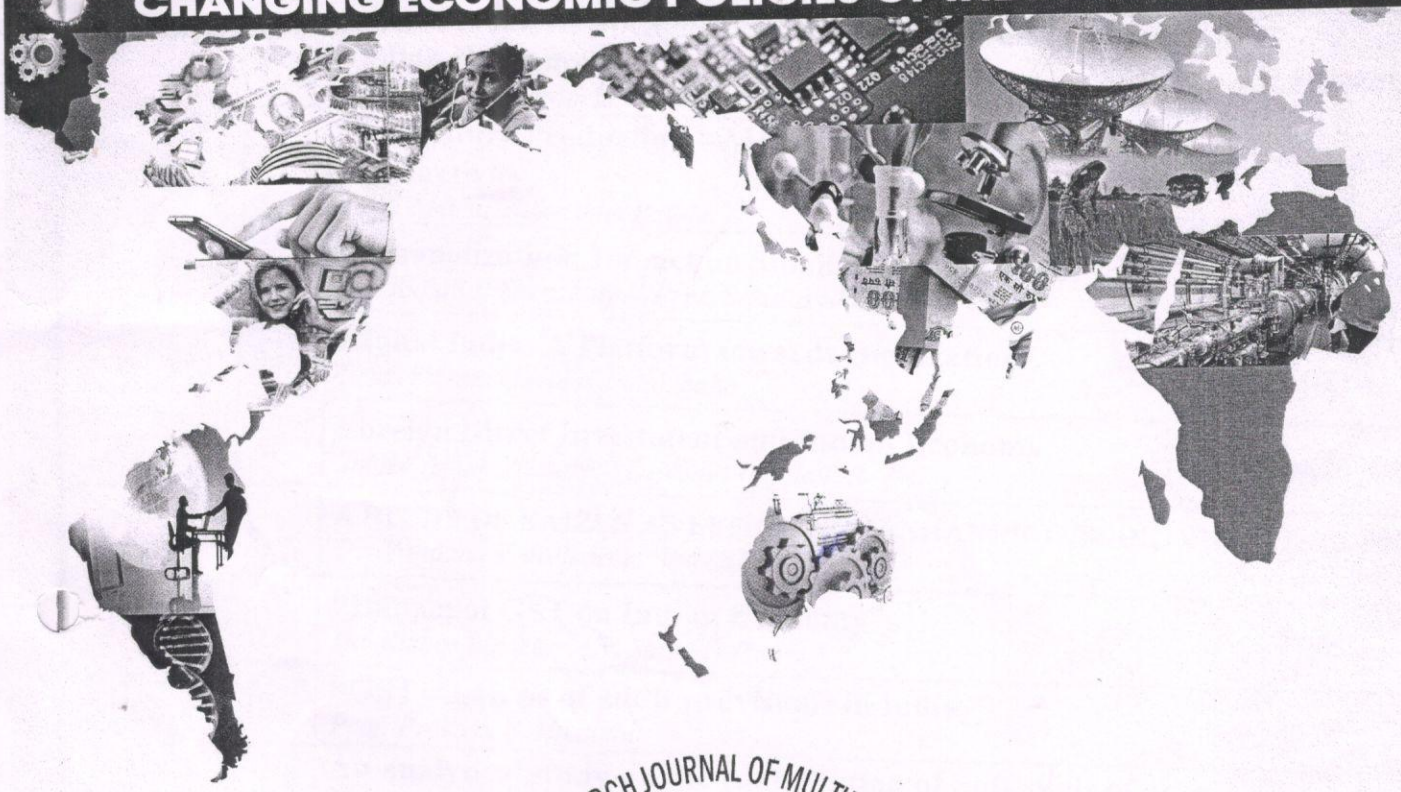

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MAKE IN INDIA

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Abstract

Today make in India is one of the business friendly reforms invited by our Hon. Prime Minister Narendra Modi. Applying Say's law 'supply creates its own demand. India's unique combination of democracy demography and demand makes it possible to harness the top fruits of globalization. The main aim of this project show- in a pure classical economics after liberalization ,privatization and globalization (LPG). In the area of health and tourism sector and the food processing industries the Govt. can attract FDL In the educational sector there is scope for increasing number of foreign students earn foreign exchange. Make in India ,since its very appearance on the political and economic front has grasped the attention of policy makes and thinkers all around the world in general and of India in particular for a successful. In this way nearly two decades of economic liberalization, couple with use domestic demand a growing middle class, a you population and high return on investment make in India a incredible investment destination.

Keywords:- Make in India, Needs of Make in India, Sectors focuses on Make in India.

Introduction

What is Make in India Campaign The Make in India campaign was launched and started by Prime Minister Narendra Modi in India on September 25, 2014 in a function at the Vigyan Bhavan. Basically it is an initiative of the Government of India to encourage multinational, do- mestic as well as, companies to manufacture their products in India. Indeed, it hopes to make India a major manufacturing hub. India has emerged, after first quarter of 2015, as the top destination globally for investment, beating our next to door neigh- bour as well as the States. During the end of 2014 on 29th December the Department of Industry Policy and Promotion conducted a workshop, which was attended by Modi, his cabinet ministers and chief representatives of states as well as various industry tycoons. The major expectation from this campaign is that it will create around 100 million job opportunities for youths in India over time. The aim is to take a share of manufacturing in country's gross domestic product from 16% to 25% by 2022 as stated in national manufacturing policy. Major objective of this scheme focuses on 25 sectors. The sectors Automobiles, textiles and Garments, Biotechnology Wellness, Defiance, Manufacturing, Ports, Food Processing Mining and Media .

Needs of Make in India

The manufacturing in India by MNCs is to be promoted under make in India concept. India has basically to promote the health and tourism sector. This will attract foreign currency in India. The initiative of make in India is expected to attract the FDI for capital investment purposes and the technological investment in various economics sectors in Indian Economy. However the investment prospects by Japan, Germany, South Korea in the various rail and road project is the outcome of the make in India concept. Today, discussion on the smart cities and Metro rail project for various cities in India is the outcome of make in India concept. This concept is expected to increase the growth in infrastructure. It is essential to promote the growing services and industrial sector in Indian economy. Make in India will help increasing job opportunities which are now sometimes on the basis of the outsourcing of the work. This is especially in the IT and related sector. Focus is being

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on various aspects i e. job create and skill development in various sectors of economy specially IT bio-technology, electronics, chemicals and pharmaceuticals. In this way 25 are to be taken under the concept of make in India. In this way the manufacturing sector has played a modest role in providing formal employment which partially explains India's low growth elasticity of poverty reduction in urban areas. The main objective of the mega program is to ensure that manufacturing sector which contributes around 15% of the country's Gross domestic Products (GDP) is increased to 25% in next few years.

Changing Paradigm in Manufacturing Sector after the initiation of Make in India

Campaign India before 1991 was a much less developed and underutilized economy in terms of globalization. FDI (foreign Direct Investment) before 1991 globalization reform was 97 (U.S. million with a GDP growth less than 3%, but then came the globalization phase for India, which opened Indian market for the rest of the world thus increasing the FDI to 129 (U.S. million in 1991-1992 financial year, with GDP as 4.2%, this was the time when Indian economy witnessed a high growth rate as compared to previous year (before globalization). And the trend went on of increasing FDI and increasing growth of GDP. Sectors like retail, FMCG, automobile, software, health sector etc saw a healthy FDI. In 2008 after the market crisis in India growth rate went down to 6.7% than 7.1 percent of previous years. Till 2013 FDI in India was 31,731 (U.S. million In 2014 after winning the general election Modi, announced a dynamic campaign called MAKE IN INDIA, which brought about 41,223(U.S. million up-till mid of2015 with GDP growth of 8.1 brought smiles Pasco in Indian economy, world renowned manufacturers like for investment. Thu STEEL, TETRA PACK etc, to India with smiling faces India came over the world such that Modi's MAKE IN INDIA campaign became famous all economy 2015. was ranked 7th among the top ten FDI most promising source f in all "MAKE IN INDIA's" main objective is to attract the potential manufactures from over the world to invest in Indian economy which will result in huge employment generation.

Sectors Make in India focuses on the following Five sectors of the economy:

Chemicals And Petrochemicals Summary

Seventh largest producer of chemicals worldwide and third largest producer in Asia. (by output) The estimated size of Indian chemicals sector stands at approximately USD 139 billion. Fourth largest global producer of agro chemicals. Total production of the major chemicals including petrochemicals was 23.9 million tons during 2015-16 while production of polymers stood at around 9 million tons. Chemicals sector also acts as a key enabling industry and provides support for variety of other sectors like agriculture, construction, leather etc

DEFENCE MANUFACTURING

India has the third largest armed forces in the world. The allocation of Defence in the India's union budget is approx USD 34.53 billion and 31.1% of the defence budget is spent on capital acquisitions. 60% of defence related requirements are met by imports which offers a huge opportunity for import substitution.

ELECTRICAL MACHINERY

Market growth in past 10 years 11.6% Domestic Power Equipment industry growth in past 10 years 11.9% Export growth in past 10 years 18.6% Major Electrical Equipment industry growth in past 10 years 8.3% & in past 5 years 4% Estimated market value is expected to reach USD 100 billion by 2022.

PHARMACEUTICALS :-

Third largest pharmaceuticals market by 2020 in terms of incremental growth 20% of global exports in generics, making it the largest provider of generic medicines globally. USD 45 Billion in

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revenue by 2020, revenue of USD 55 billion by 2020 as base case, and can grow to USD 70 billion in a aggressive case scenario. USD 26.1 Billion in generics by 2016. USD 200 Billion to be spent on infrastructure by 2024.

India's filing of Drug Master Files' (DMF's) with USFDA as of Dec 2013 is 3411, the highest filed by any country in the world. Total exports of Drugs, Pharmaceuticals for 2013-14 at USD 15,095 million, recording a growth rate 2.5% over the corresponding period of previous years.

PORT AND SHIPPING

118 projects involving investment of USD 7.73 billion have been approved in last four years. India has 12 major ports and 64 minor ports handling Export Import cargo. Indian ports handled 1605 million metric tonnes of cargo in 2015-2016 USD 2.69 billion invested in last three years in Ports & Shipping sector.

Conclusion :-

The Make In India movement started in September 2014. The main aims of make in India is creating such an environment to lure foreign producers and investors to come and create jobs in our country and enable domestic firms to compete globally. However this program is to exploit every possible source to raise the share of manufacturing in GDP from 16% to 25% by 2022 and also to create 100 million manufacturing jobs over the same period make in India initiative is based on four pillars i.e. new processes, new infrastructure, new sectors and new mindset. The campaign make in India focuses on 25 sector i e. automobiles, construction, food machinery, defense manufacturing, chemicals, IT& BPM, railways, electrical pharmaceuticals, thermal power, textiles and garments, roads and highways, media and entertainment, space, parts, wellness tourism and hospitability leather, mining, renewable energy, electronic systems, biotechnology etc along with live projects like industrial corridors, FDI policies and details of investor facilitation cell. "Make in India' concept was already in existence in India right from the times of East India Company when the SKF Bearings company had started its manufacturing plant in Calcutta before 150 years. In this way, this campaign is to boosts up Indian manufacturing sector by attracting business from around the world to generate huge employment increase trade and spur economic growth.

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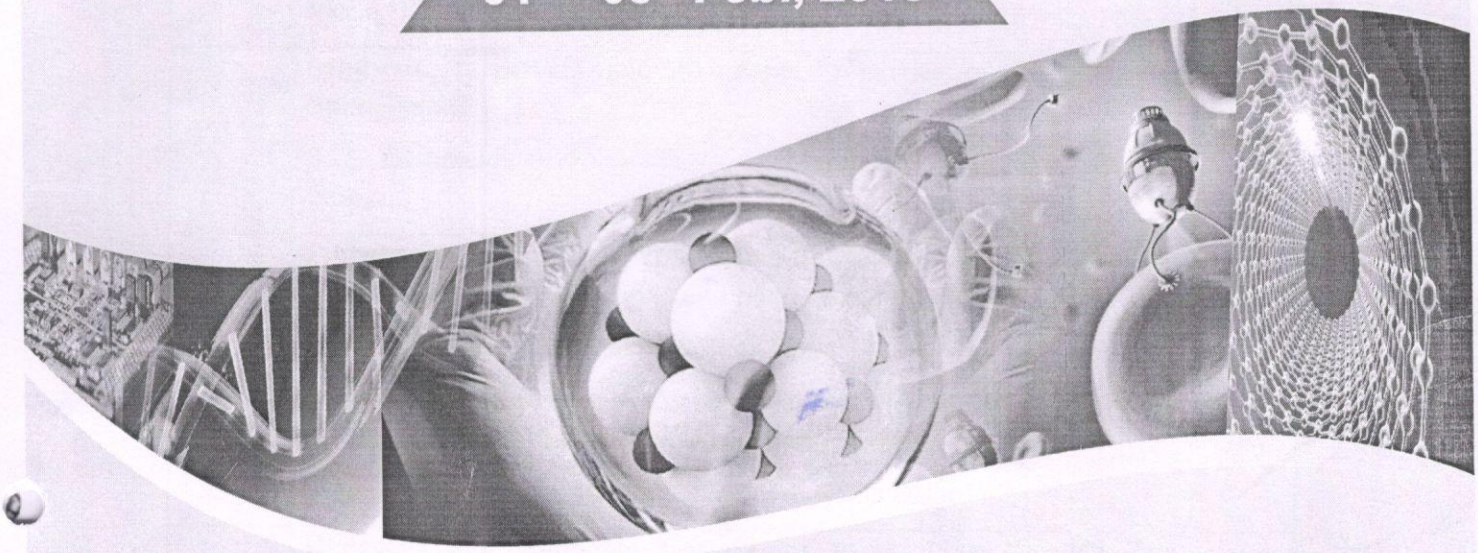

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Hydrogen and Ammonia Gas Sensor using Silver Loaded Zno Nanorods

Sapana Rane[1*], Neha Joshi[2], Sudhir Arbuj[2], Sunit Rane[2], Suresh Gosavi[3*]
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Abstract

This paper reports the preparation of resistive type thick film sensor by simple screen printing technique using nanostructured Ag-ZnO. The prepared Ag-ZnO sensor showed high sensitivity towards H_2 gas. Sensor prepared with pure ZnO nanostructures showed operating temperature beyond 300 °C whereas sensor prepared using Ag-ZnOnanostructures showed superior gas-sensing performances with reduction of operating temperature to 214 °C as compared to pure ZnO.The response and recovery time's of the sensor was 10 s and 110 s respectively. Similarly, for NH_3 gas, the Ag-ZnOsensor showed very good response of 3.7 at the operating temperature of 210°Cas compared to pure ZnO nanostructures.

INTRODUCTION:

In recent decades, Zinc Oxide (ZnO) nanostructures have achieved a great interest of numerous researchers because of their wide application as gas-sensor [1-3].It is one of the most interesting material being considered for gas sensing application of various gases including ethanol, H_2, CO, H_2S, NH_3, etc due to its high chemical stability, low cost and short response time. ZnO-related gas sensing involves the chemisorptions of oxygen on the oxide surface, followed by charge transfer during the reaction between chemisorbed oxygen and target gas molecules, changing the surface resistance of the sensor element [4].However, gas sensors based on ZnO have certain limitation such as low sensitivity and high optimum operating temperature that restrict the use of ZnO. Also, pure ZnO films showed lower stability in corrosive, humid ambient due to large amount of oxygen vacancy. ZnO nanorods provide much larger length-to-diameter and surface-to-volume ratio than bulk ZnO and ZnO films. Owing to the physical and photoelectrical properties, one-dimensional (1-D) ZnO nanorods have attracted considerable attention and have promising applications in nanosensor [5-7]. Many researchers have devoted themselves towards improving the performance of ZnO sensor, in order to lower its working temperature and enhance the gas selectivity [8]. To the best of our knowledge as on date, much progress has been made either by employing ZnO nanoparticles or by adding catalysts to the ZnO sensors [9]. Usually, high sensitivity and quick response can be expected for a sensor made from porous materials, since it has a comparatively large surface area. In addition, the gases will quickly diffuse into the pores and the surface reactions will take place at a higher rate. Considering the versatility of ZnO as the gas sensing material, significant efforts are being taken to overcome these limitations and thus to improve the sensing performance by developing hybrids such as semiconductor-semiconductor and metal-semiconductor material. Surface modification is one of the most effective methods used to improve the gas-sensing properties of metal oxides.

The use of noble metal modifiers such as Pd, Pt, and Au have resulted in sufficient growth in sensitivity and decrease in operating temperatures [10-11]. Among them, as a comparatively cheaper noble metal, Ag nanoparticles can act as catalyst to accelerate the chemisorption process of metal oxides and greatly improve their gas-sensing performance. However, relatively very few researchers have reported the use of Ag-modified ZnO with enhanced gas-sensing properties.Therefore, the detailed study on the solvothermal synthesis of ZnOnano rods and loading of Ag nanoparticles with different mol.% on the surface of ZnOnano rods using photochemical reduction technique, materials characterization using various spectroscopic techniques and hydrogen gas sensing properties with respect to Ag loading on the ZnO surface is reported in this paper.

SYNTHEIS OF MATERIALS AND PREPARATION OF SENSOR FILMS:

ZnO nanostructures were synthesized bysolvothermal reaction technique. For this purpose we used Zinc acetate (10 mmol) and NaOH (20 mmol). The above materials is dissolved in methanol and mixed and further heated at 200 °C for 24 hrs. in an autoclave. After completion of reaction, material was washed by distilled water and dried using oven at 50 °C. In order to prepare the Ag-ZnO nanostructures, the photochemical deposition technique was used for loading of Ag onto ZnO. Ag was deposited having different concentration i.e. 1 and 5 mol % on the surface of ZnO nanostructures. The thick films were prepared using the synthesized nanostructured ZnO and Ag-

ZnOpowders as a functional sensing material. Appropriate quantities of the functional powder material and the organic vehicle were mixed thoroughly to obtain the homogeneous paste. Thick films of 1x1 sq. inch size were prepared using screen printing technique on glass substrate. These prepared films were then dried under IR lamp for 15 minutes and subsequently annealed in the muffle furnace at 400 °C with dwell time of 1 hour having ramp rate of 2 °C/ min. The thickness of the sensing films was around 30 µm. To measure the electrical resistance of the films, two aluminum foil contacts were made on the top of the films.

RESULTS AND DISCUSSION:

The XRD patterns of prepared Ag-ZnO nanostructures were investigated using the XRD technique and results are depicted in Fig. 1. The observed X-ray diffraction peaks at 2θ = 31.7, 34.4, 36.2, 47.5, 56.6, 62.8 and 67.9° correspond to *hkl* planes (100), (002), (101), (102), (110), (103) and (112) respectively, confirms the formation of crystalline ZnO having hexagonal wurtzite phase in all prepared compositions. Additionally, sharp and intense XRD pattern of synthesized Ag-ZnO matches with standard ZnO pattern (JCPDS No. 36-1451) indicating high phase purity and crystallanity. Along with ZnO reflection peaks, the silver peaks are also visible in case of Ag-ZnO samples. The reflection peaks at 2θ = 38.1, 44.2 and 64.4° correspond to *hkl* planes (111), (200) and (220) respectively confirms the presence of cubic metallic silver phase (JCPDS No. 04-783).The morphological analysis of the ZnO and Ag-ZnO nanostructures was performed under field emission microscope.

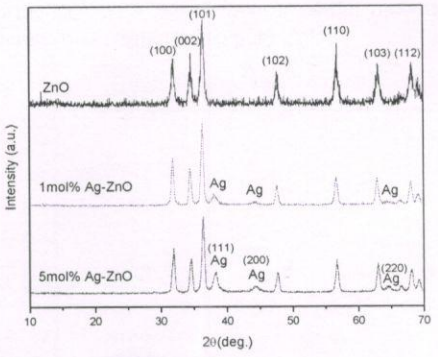


Figure 1: X-ray diffractogram of ZnO and Ag-ZnO nanostructures

FESEM micrographs of pure ZnO and Ag-ZnO nanostructures are shown in Fig.2. The FESEM image indicates the formation of rod like morphology having length around 50 to 200 nm and diameter *ca* 30 nm. The Ag loading with varying concentration was deposited on ZnO surface by photochemical reduction method. The FESEM images of Ag loaded ZnO nanostructures (Fig. 2c, d) also show same nano rod morphology as pure ZnO (Fig. 2 a, b) along with spherical nanoparticles that might be of Ag.

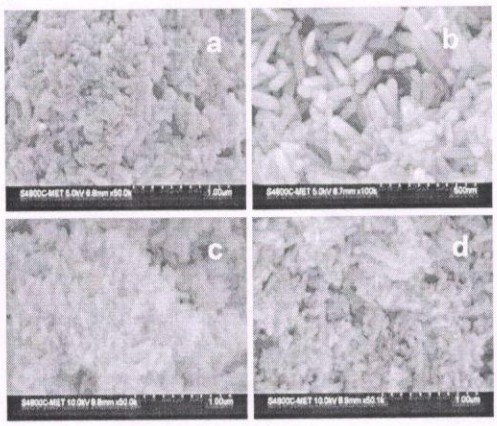


Figure 2: ***FESEM micrographs of synthesized material: (a, b) ZnO, (c) 1% Ag-ZnO and (d) 5 % Ag-ZnO***

The gas sensitivity of a film is usually measured as the percentage change in film resistance on the exposure of gas or may be defined as the ratio of its resistance in air and resistance in presence of a gas or vice versa. The gas sensing properties of the prepared sensing thick films were carried out for H_2 gas. The gas concentrations from 75 ppm to 1050 ppm were varied to study the gas sensing response of the pure ZnO and Ag-ZnO films. Figure 3 shows the typical gas response curves of the pure ZnO and Ag-ZnO films for 750 ppm H_2 gas. In case of pure ZnO film sensor, it can be noted that there is petty response around 90 °C but again there is continuous increase in response up to 300 °C. Beyond this limit we could not detect the response due to the limitations of our gas sensing measurement system. The trivial response occurred around 90 °C is very less and therefore could not be an operating temperature of the sensor. From the experimental observations we can say that operating temperature in case of pure ZnO film sensor might be beyond 300 °C. The sensor film with 1% Ag-ZnO also showed a trivial response of 1.73 at 83 °C and again higher response of 4.9 at 242 °C. Similar trend was observed in case of sample with 5% Ag-ZnO. The sample showed minor repose of 1.69 at 80 °C and highest response of 4.29 at 214 °C. However the response is slightly lower that 1% Ag-ZnO sample.

It can be seen from the observed results that the loading of Ag on ZnO nanostructures has played a significant role in reducing the operating temperature of the sensor for H_2 gas. The optimum

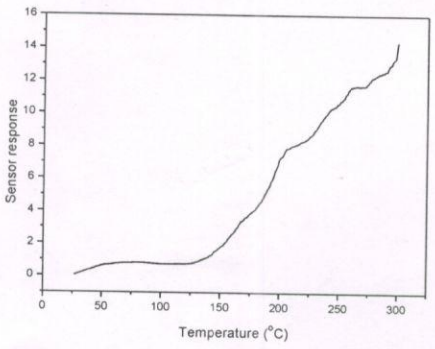
loading will surely lower down the operating temperature of the sensor with obtaining the reasonable sensor response.

The sensor response at different concentration of H_2 gas at the operating temperature of 83 °C for 1% Ag-ZnO sample were measured and it showed linear response with respect to concentrations of H_2 gas.The response and recovery time of the sensor was also measured for the H_2 gas. Figure 5.9 shows the graphical presentation of response and recovery time of 1% Ag-ZnO sensor for H_2 gas. The sensor showed the response and recovery times of 10 s and 110 s respectively.

For comparison study, gas sensing properties of prepared sensing thick films were carried out for NH_3 gas. The sensor showed very good response of 3.7 to NH_3 gas at operating temperature of 210°C for 5% Ag-ZnO hybrid sensor as compared to pure ZnO nanostructures. To avoid the repetitiveness, the data is not shown here.

CONCLUSION:

One dimensional (nanorod morphology) ZnO powders were synthesized by usingsolvothermal reaction technique.Ag nanoparticles were deposited on thesurfaceof the ZnOnanorods by photochemical deposition technique. FESEM and TEM analysis confirms the formation of rod like morphology having length 50 to 200 nm and diameter of 30 nm. Resistive type nanostructured ZnO thick film sensor were prepared on glass substrate by simple screen printing technique. Sensor showed high sensitivity to H_2 gas. The sensor prepared with pure ZnO nanostructures showed operating temperature beyond 300 °C, whereas the sensor prepared using Ag-ZnO nanostrcures showed superior gas-sensing performances with the reduction in the operating temperature as compared to pure ZnO,



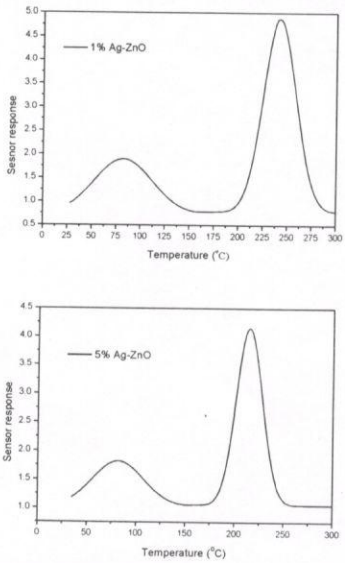


Figure 3: Sensor response of pure ZnO and Ag-ZnO films for 750 ppm H_2 gas

The operating temperature reduced to 242 °C for 1% Ag-ZnO sensor which further reduced to 214 °C for 5 % Ag-ZnO based senor. The sensor showed the response and recovery time's of 10s and 110s respectively. For NH_3 gas, the sensor showed very good response of 3.7 at the operating temperature of 210°C for 5% Ag-ZnO hybrid sensor as compared to pure ZnO nanostructures.

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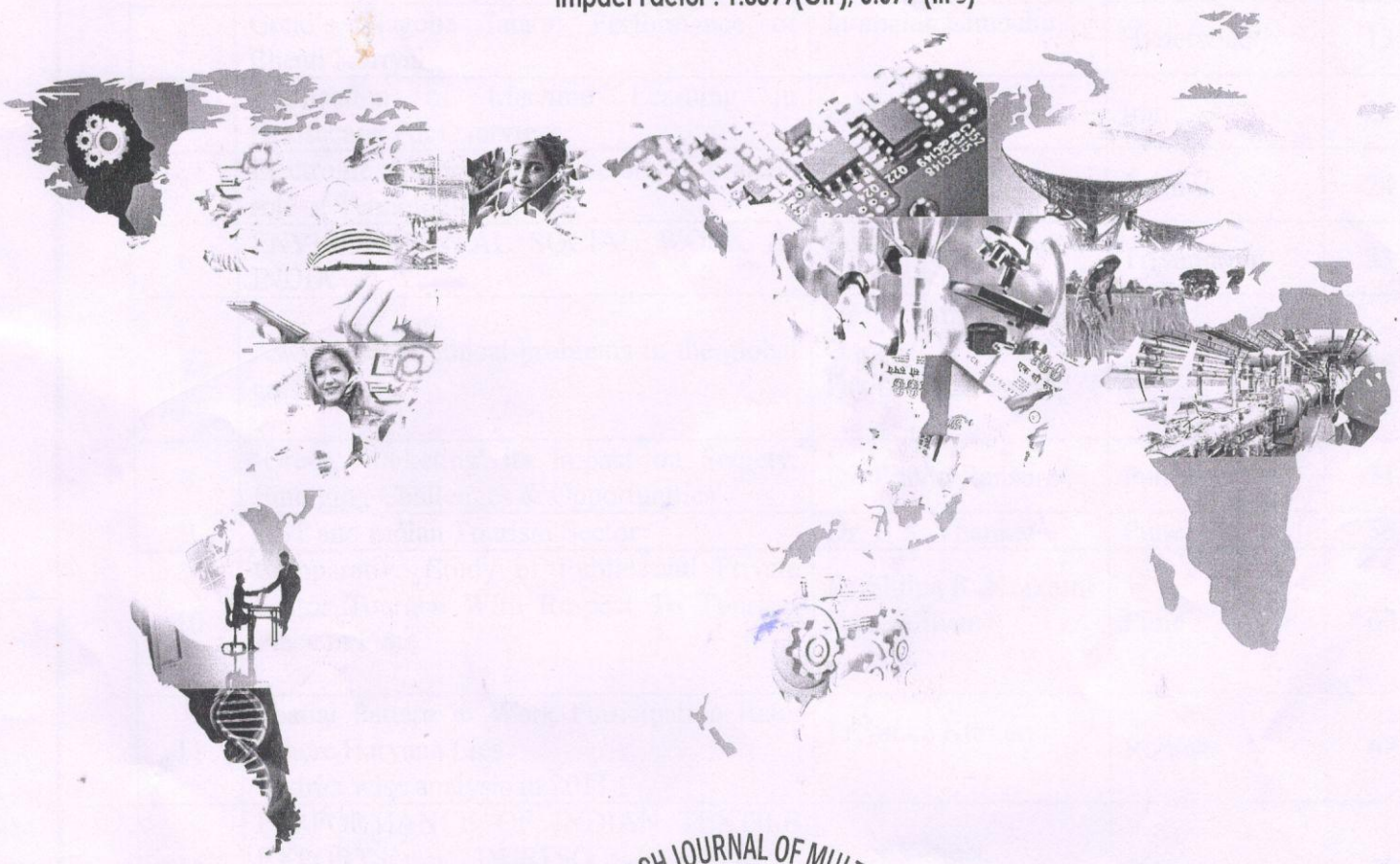

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प्रमुख जागतिक समस्या : एक दृष्टिक्षेप

डॉ. भरत राठोड
सहा. प्राध्यापक, राज्यशास्त्र विभाग,
पुणे जिल्हा शिक्षण मंडळाचे, मामासाहेब मोहोळ महाविद्यालय, पौड रोड, पुणे. ३८

गोषवारा ;:

विसाव्या शतकात निर्माण झालेले राजकीय व सामाजिक द्वेषाचे राजकारण, वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, लोकसंख्या व गरिबी, बेसुमार वृक्षतोडीमुळे निर्माण झालेली तापमानवृद्धी या समस्या एकविसाव्या शतकात गंभीर स्वरुप धारण केलले आहे. वांशिक संघर्षाने युरोप व दक्षिण आशियायी खंडास आजपर्यंत प्रभावित केले आहे. अल कायदा, तालिबान, इसिस या एकविसाव्या शतकातील सर्वात जहाल संघटनांनी हजारो लोकांचा बळी घेतला आहे. जगाची वाढती लोकसंख्या व गरिबीने आरोग्याच्या समस्या निर्माण झाल्या आहेत. वाढत्या लोकांच्या बेशिस्त वागण्यामुळे, औद्योगिक कचरा, बेसुमार वृक्षतोड, वाहनांच्या अतिरेकी वापरामुळे हवा प्रदुषीत होत आहे. यातूनच जागतिक तापमान वाढीच्या समस्येने आज जगासमोर एक आव्हान निर्माण केले आहे. या आव्हानांचा किंवा समस्यांचा सामना करण्यासाठी जगातील सर्व राष्ट्रांनी युनो संघटनेच्या अंतर्गत येऊन काम करणे गरजेचे आहे.

प्रस्तावना ;प्दजतवकनबजपवदद्ध:

दुस–या महायुद्धानंतरच्या काळात विशेषत: विसाव्या शतकाच्या उत्तरार्धात निर्माण झालेल्या प्रमुख समस्येत प्रामुख्याने वांशिक संघर्ष, अण्वस्त्राची स्पर्धा, दहशतवाद, वाढती लोकसंख्या व गरिबी, हवाप्रदूषण व तापमानवृद्धी यांचा समावेश होतो. या सर्व समस्या ख–या अर्थाने मानवनिर्मित आहेत. आपल्या राजकीय व भौतिक जीवन जगण्याच्या स्वार्थातून या समस्या निर्माण झालेल्या आहेत. दुस–या महायुद्धानंतर जगातील अनेक देशांत वांशिक संघर्षाला सुरुवात झाली. जगाला प्रमुख महाशक्तींतील अण्वस्त्रांची स्पर्धा विनाशाकडे नेत आहेत. दहशतवाद हा महाशक्तींच्या स्वार्थीय राजकारणाचा परिपाक आहे. लोकसंख्या वाढीमुळे दारिद्रय व गरिबीची समस्या निर्माण झाली आहे. जंगलतोडीमुळे निर्माण झालेले हवाप्रदूषण व तापमानवृद्धीचे स्वरूप आज पराकोटीला पोहोचले आहे. या समस्या निवारणाच्या बाबतीत जगातील सर्वच राष्ट्रे प्रयत्न करत आहेत. परंतु या समस्या निवारणात त्यांना फारसे यश आलेले दिसून येत नाही. संयुक्त राष्ट्र संघटनेचे प्रयत्नही अपुरे पडत आहेत. म्हणून आज एकविसाव्या शतकात या समस्या गंभीर स्वरुप धारण करत आहेत.

प्रस्तुत शोधनिबंधात वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, वाढती लोकसंख्या गरिबी, हवाप्रदूषण व तापमान वृद्धी या प्रमुख जागतिक समस्यांचा व उपाययोजनांचा विचार करावयाचा आहे.

संशोधन अध्ययनाचे महत्त्व ;ैपहदपपिबंदबम वि जनकलद्ध:

संपूर्ण जग व दक्षिण आशियास अनेक समस्यांनी दीर्घकाळ प्रभावित केलेले आहे. त्यामुळे, सामाजिक, राजकीय, आर्थिक विकास व जागतिक शांतता निर्माण करण्यास बाधा निर्माण झालेली दिसून येते. त्यामुळे या समस्यांपैकी प्रबळ समस्या कोणकोणत्या आहेत यांचे स्वरूप कसे आहे यादृष्टीने संशोधन अध्ययनाचे महत्त्व आहे.

संशोधन अध्ययनाची उद्दिष्टये ;व्इरमबजपअमे वि जनकलद्ध :

१. जगातील प्रमुख समस्या कोणकोणत्या आहेत याचे अध्ययन करणे..
२. जगातील प्रमुख समस्येचे उपाययोजना व शिफारशी करणे.

गृहीतके ;भ्लचवजीमेपेद्ध:

१. जागतिक समस्येबाबतीत युनोच्या वेगवेगळया परिषदा व राष्ट्राराष्ट्रांतील कराराच्या माध्यमातून प्रयत्न होत आहेत.

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२. जागतिक समस्येबाबत महाशक्ती राष्ट्रांनी राजकीय दुटप्पीपणाची भूमिका घेतलेली आहे.

संशोधनाची पद्धती ;त्मेमंतबी उमजीवकवसवहलद्ध :

प्रस्तुत अध्ययनात विश्लेषणात्मक, वर्णनात्मक व सांख्यिकीय पद्धतीचा अवलंब करण्यात आला आहे.

विषय मांडणी व विश्लेषण:

जागतिक समस्या

१. वांशिक संघर्ष :

वांशिक संघर्षाचे निराकरण करणे आज जगापुढील प्रमुख आव्हानांपैकी एक आहे. ही समस्या जगाला दीर्घकाळापासून प्रभावित करत आलेली आहे. आज बहुतांश राष्ट्रांत वांशिक संघर्ष सुरु आहे. श्रीलंकेतील तमिळ–सिंहली, तुर्कस्थान इराक आणि इराणमध्ये कुर्द, बोस्निया, क्रोएशिया, सर्बियामध्ये सर्ब, भारतात नागा, मिझो, बोडो, पाकिस्तानात पक्तुन, बलुच, मोझाहिर, न्युझीलॅंड माओरी, बांग्लादेश हिंदू, खांडा, हुतु आणि त्सुत्सी हे होत. या वांशिक संघर्षात हजारो लोकांचा बळी गेला आहे. वांशिक संघर्ष त्या देशाच्या सरकारविरोधात वेगळ्या राष्ट्रांच्या निर्मितीसाठी व आर्थिक राजकीय अधिकारांच्या प्राप्तीसाठीचा आहे. दक्षिण आफ्रिकेतील तसेच लॅटिन अमेरिकेतील काळे–गोरे वांशिक संघर्ष जगाला परिचित आहे. ऑस्ट्रेलिया अमेरिकेत भारतीय नागरिकांवर वारंवार होणारे हल्ले वांशिक द्वेषाचे प्रतिक आहे. आज जगात वांशिक संघर्ष दिवसेंदिवस वाढत चालले आहे.

इसिस ;ैपै. प्सेंउपब ैजंजम वि प्मतंब ंदक ैपतपलंद्ध या दहशतवादी संघटनेने सिरीया इराकला शियापंथीय राष्ट्रांची निर्मिती करण्याचे ध्येय बाळगून आहे. यामुळे संपूर्ण अरबराष्ट्रांत वांशिक संघर्षाचे लोण वाढत चालले आहे. संपूर्ण इस्लामी राष्ट्रातील तरुण व तरुणी, महिला या दहशतवादी संघटनेत सहभागी होत आहेत. जानेवारी २०१६ च्या प्रारंभी सौदी अरेबियातील राजघराण्याने ४७ कैद्यांबरोबरच शियापंथीय मौलवी शेख निम्र अल निम्र या धर्मगुरुस फाशी दिली. यामुळे सौदी अरेबियाबरोबरच इराणमध्ये मोठ्या वांशिक दंगली उसळल्या. गेल्या अनेक दिवसांपासून सौदी अरेबिया व इराणमध्ये धुसफूस चालू आहे. दक्षिण आशियालाही वांशिक संघर्षाला तोंड द्यावे लागत आहे. बांग्लादेश, पाकिस्तान, भारतातील नागालॅंड, आसाम ही राज्ये वांशिक द्वेषाला बळी पडली आहेत.

श्रीलंकेतील वांशिक संघर्षाने जगाला व दक्षिण आशियायी उपखंडाला सर्वाधिक प्रभावीत केले आहे. २००९ साली सैनिकी कारवाईत प्रभाकरणची हत्या करुन श्रीलंकेतील वांशिक संघर्ष संपविण्यात आले आहेत. २०१५ पासून नेपाळने धर्मनिरपेक्ष राज्यघटना स्वीकारली. नवीन राज्यघटनेमुळे नेपाळमध्ये पहाडी नेपाळ भारु, आदिवासी आणि भारतीय मूळ असणारे मधेशी यात वांशिक भेद, जातीय तेढ निर्माण झाली आहे. नवीन राज्यघटनेत भारतीय मूळ असणारे मुख्यत्वे बिहार आणि उत्तरप्रदेशमधील मधेवंशीय लोकांचे राजकीय हक्क डावलले जात आहेत. त्यामुळे भारत नेपाळ सीमेवर तीव्र आंदोलने करण्यात आली आहेत. या आंदोलनात शेकडो लोकांचे बळी गेले आहे. २१ व्या शतकात अरब राष्ट्रातील वांशिक संघर्षाबरोबरच इतर खंडातील वांशिक संघर्ष जागतिक विकासासमोर आव्हान निर्माण करणारे आहे.

२. अण्वस्त्रांची स्पर्धा :

एकविसाव्या शतकातील आणखीन एक गंभीर समस्या म्हणजे वाढती अण्वस्त्रांची स्पर्धा रोखणे हे होय. दुसऱ्या जागतिक महायुद्धानंतर शीतयुद्धाला सुरुवात झाली. या शीतयुद्धाच्या काळात अमेरिका व रशियाने नाटो, सिटो, सेन्टो, अंजुस, वार्सापॅन्ट सारख्या लष्करी संघटनांची निर्मिती केली आहे. यातूनच आण्विक शस्त्रास्त्रांची स्पर्धा सुरु झाली. आज जगात रशिया–अमेरिका, ब्रिटन–फ्रान्स, उत्तर कोरिया–दक्षिण कोरिया, पॅलेस्टाईन–ईस्त्राईल, भारत–चीन, भारत–पाकिस्तान, जपान–द. कोरिया अशा राष्ट्रांत अण्वस्त्रांची स्पर्धा आहे. जगातील अण्वस्त्रधारी राष्ट्रांची सिप्री–स्टॉकहोम इंटरनॅशनल पीस रिसर्च इन्स्टीट्यूट २०१३ चा अहवालातील माहिती दाखविणारा तक्ता पुढील प्रमाणे

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तक्ता क्र. १. अण्वस्त्रधारी राष्ट्रे

अ.क्र.	अण्वस्त्रधारी देश	अण्वस्त्रांची संख्या
१.	रशिया	१२०००
२.	अमेरिका	९६००
३.	चीन	४४०
४.	ब्रिटन	२२५
५.	फ्रान्स	३००
६.	इस्त्राईल	८०
७.	भारत	६० ते ७०
८.	पाकिस्तान	६० ते ७०

संदर्भ : सिप्री–२०१३चा अहवाल

वरील तक्त्यावरुन असे दिसून येते की, आज जगातील एकूण आठ राष्ट्रे अण्वस्त्रधारी राष्ट्रे म्हणून ओळखली जातात. दक्षिण व उत्तर कोरियाकडेही रासायनिक अण्वस्त्रे आहेत. ६ जानेवारी २०१६ रोजी उत्तर कोरियाने अणुबॉम्बपेक्षा घातक असलेल्या हायड्रोजन बॉम्बची चाचणी व २०१७ मधील वेगवेगळया क्षेपणास्त्रांच्या चाचण्या घेत संपूर्ण जगाला हादरवून सोडले आहे. उत्तर कोरियाची ही अनपेक्षित अणुबॉम्बची निर्मिती अमेरिकेबरोबरच संपूर्ण जगाला धडकी भरवणारी आहे. दक्षिण आशियातही शस्त्रास्त्रे व अण्वस्त्र निर्मितीची स्पर्धा चालू आहे. चीन–भारत, भारत–पाकिस्तान ही राष्ट्रे अण्वस्त्रसंपन्न असून भारत व पाकिस्तानकडे अनुक्रमे ६० ते ७० अण्वस्त्रे आहेत. याशिवाय भारताने पृथ्वी, ब्रह्मोस, अग्नी, निर्भय, शौर्य यासारख्या मिसाईल व क्षेपणास्त्रे तयार केली आहेत. तर पाकिस्तानने शाहीन, धोरी, बाबर, गझनवी यासारखी क्षेपणास्त्रे बनवली आहेत. चीन हे मोठी लष्करी क्षमता असणारे राष्ट्र आहे. जगातील अण्वस्त्रधारी देशांनी ही स्पर्धा थांबवून विकास व शांततेच्या मार्गाने मार्गक्रमण करणे गरजेचे आहे.

३. दहशतवाद :

विसाव्या शतकाच्या उत्तरार्धात निर्माण झालेला दहशतवाद आज २१ व्या शतकाच्या दीड शतकात गंभीर स्वरुप धारण केले आहे. प्रत्येक राष्ट्रांत कोणतीनकोणती दहशतवादी संघटना असून दररोज दहशतवादी हल्ले होऊन लोक मारले जात आहेत. नायजेरियात–बोकोहारम, अफगाणिस्तानात तालिबान, अल कायदा, पाकिस्तानात जैश ए महंमद, लष्कर ए तोएबा, पाकिस्तानी तालिबान, अल कायदा, सिरीया इराकमधील इसीस, अलकायदा, रशियाचे चेन दहशतवाद, भारतात सिमी, नक्षलवाद, नेपाळ–माओवाद, बांग्लादेशातील इस्लामी कट्टरवाद यामुळे संपूर्ण दक्षिण आशिया दहशतवादाच्या छायेखाली आहे.

खरे तर दहशतवादाच्या विस्ताराला महासत्ताच कारणीभूत ठरली आहे. सोव्हिएत रशियाच्या विस्ताराला विरोध करण्यासाठी अमेरिकेने ओसामा बीन लादेनला पाठीशी घातले. या माध्यमातुनच लादेनने जिहादि संकल्पनेला चालना दिली. अफगाणिस्तानातील तालिबानी राजवट अमेरिकेच्या धोरणाचाच परिणाम आहे. ११ सप्टें. २००१ रोजी अमेरिकेवर झालेल्या दहशतवादी हल्ल्यानंतर अमेरिका मानसिक व आर्थिकदृष्ट्या खचली गेली. त्यातुनच दहशतवादाच्या विरोधात अफगाणिस्तान, इराकमध्ये मोहिमा आखल्या गेल्या. ओसामा बीन लादेनचा शोध घेवून एका दशकानंतर पाकिस्तानातील एटादाबाद येथे लादेनचा अमेरिकेने नाट्यमयरीत्या खात्मा केला.

ओसामा बीन लादेनच्या खात्म्यानंतर जगाला असे वाटले की, दहशतवादाला आळा बसेल, परंतु अगोदरच फुटून अबु–अल–बगदादी नावाचा दहशतवादी इसिस ;ैै.ैसंउपब ैजंजम वि प्मतंब ंदक ैपतपलंद्ध या नावाची अत्यंत विषारी संघटना स्थापन केली. सिरीया व इराकमध्ये तिचा मोठा प्रभाव असून अलीकडेच या संघटनेने पॅरीस, ग्रीस, अमेरिका, तुर्कस्थान, इस्तांबूलमध्ये अत्यंत विद्ध्वंसक हल्ले करुन शेकडो लोकांना मारले

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आहे. दक्षिण आशियातील पाकिस्तान, बांग्लादेश, भूतान, नेपाळ, श्रीलंका, अफगाणिस्तान या राष्ट्रांना गेल्या अनेक दशकांपासून दहशतवादाला तोंड द्यावे लागत आहे. दहशतवादाने हजारो लोकांचे बळी गेले आहेत. पाकिस्तान या दहशतवाद्यांना भारताच्या विरुद्ध वापरत असून भारतातील मुंबई, जम्मू–काश्मीर, हैद्राबाद, दिल्ली अशा अनेक शहरांत दहशतवादी हल्ले केले जात आहेत. सन २०१० ते २०१७ या आठ वर्षांच्या काळात दक्षिण आशियात दहशतवादी कारवायांमुळे मृत्यू पडलेल्यांचा तपशील दाखविणारा तक्ता पुढीलप्रमाणे

तक्ता क्र. २ दहशतवादी कारवायांमध्ये मृत्युमुखी पडलेल्यांचा तपशील

(२०१० ते ६ ऑगस्ट २०१७)

अ.क्र.	वर्ष	नगरिक	सुरक्षारक्षक	दहशतवादी	एकुण
१.	२०१०	२५७१	८४४	६०१३	९४३१
२.	२०११	३१७३	९६२	३२८४	७४१९
३.	२०१२	३२७०	८७१	२९०२	७०४३
४.	२०१३	३५३६	८८७	२२४४	६६६७
५.	२०१४	२२१७	७०३	३६३१	६५५१
६.	२०१५	११४४	४९६	२८३७	४४७७
७.	२०१६	८५४	४७६	१५०५	२८३५
८.	२०१७	५३३	२४९	६६३	१४४५
एकुण		१७२९८	५४८८	२३०७९	४५८६८

संदर्भ: ऐंजचण्वतह कंजमरू ६६८६२०१७

वरील तक्त्यावरुन असे दिसून येते की, २०१० ते ६ ऑगस्ट २०१७ या कालावधीत दक्षिण आशियातील दहशतवादी कारवायात नागरिक, सुरक्षारक्षक, दहशतवादी यांचा मोठया प्रमाणात मृत्यू झाला आहे. सन २०१० ते ६ ऑगस्ट २०१७ या कालावधीत एकूण १७२९८ नागरिकांचा मृत्यू झाला तर सुरक्षारक्षक ५४८८ व दहशतवादी २३०७९ इतके मारले गेले. या सात वर्षाच्या काळात एकूण ४५८६८ लोकांना आपले जीव गमवावा लागला. एकुणच जगातील अनेक राष्ट्रांत व दक्षिण आशियात दहशतवाद ही एकविसाव्या शतकात जगासमोर एक गंभीर समस्या असून युनोसहीत जगातील प्रत्येक राष्ट्राने दहशतवाद निर्मूलनासाठी प्रामाणिक प्रयत्न करणे गरजेचे आहे.

४. वाढती लोकसंख्या व गरिबी :

वाढती लोकसंख्या व गरिबीने आज जगासमोर अनेक गंभीर समस्या निर्माण केल्या आहेत. आज जगाची लोकसंख्या एकूण ७३२३४५७ इतकी आहे. सर्वाधिक लोकसंख्या आशिया खंडाची असून चीन व भारत अनुक्रमे पहिल्या व दुसऱ्या क्रमांकावर आहेत. संयुक्त राष्ट्रसंघाच्या आर्थिक व सामाजिक व्यवहार मंडळाने जागतिक नागरीकरण समृद्धी अहवाल १० जुलै २०१४ रोजी प्रसिद्ध केला आहे. या अहवालात असे नमूद करण्यात आले आहे की, आशिया व आफ्रिका खंडात एकूण ग्रामीण लोकसंख्येच्या ९० : लोकसंख्या आहे. जगातील लोकसंख्येच्या ५४: लोकसंख्या शहरात आहे. सन १९५० मध्ये जागतिक शहरी लोकसंख्येचे प्रमाण ३०: होते. इ.स. २०५० पर्यंत जगात राहणाऱ्या लोकांचे प्रमाण ६६: इतके असेल. असा अंदाज युनोच्या अहवालात व्यक्त करण्यात आला आहे. सध्या जगात उत्तर अमेरिका, लॅटिन अमेरिका आणि कॅरेबियन राष्ट्रात अधिक शहरी लोकसंख्या असून त्याचे प्रमाण ८२:ए ८०: आणि ७३: इतके आहे. याउलट आशिया, आफ्रिका

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खंडात शहरी लोकसंख्या अनुक्रमे ४०: आणि ४८: आहे. २०५० मध्ये या खंडातील शहरी लोकसंख्येचे प्रमाण अनुक्रमे ६४: आणि ५६: इतके असेल.

सध्या जगातील ग्रामीण लोकसंख्या ३.४ अब्ज इतकी आहे. यामध्ये घट होवून इ.स. २०५० पर्यंत ती ३.२ अब्ज इतकी होईल. भारतात सर्वाधिक ग्रामीण लोकसंख्या असून त्याचे प्रमाण ८५७ दशलक्ष आहे. तर चीनची ग्रामीण लोकसंख्या ६३५ दशलक्ष इतकी आहे. दक्षिण आशिया हा सर्वाधिक लोकसंख्या असणारा प्रदेश म्हणून ओळखला जातो. एकूण जगाची व दक्षिण आशियाची लोकसंख्या दाखविणारा तक्ता पुढीलप्रमाणे

तक्ता क्र. ३ जग व दक्षिण आशियायी राष्ट्राची लोकसंख्या (आकडेवारी कोटीमध्ये)

अ.क्र.	देश	लोकसंख्या	लोकसंख्या विकासदर
१.	जग	७३२३४५७	१.०६:
२.	भारत	१२६६८८३५९८	१.१९:
३.	पाकिस्तान	२०१९९५५४०	१.४५:
४.	भूतान	७५०१२५	१.०९:
५.	नेपाळ	२९०३३९१४	१.२४:
६.	बांग्लादेश	१५६१८६८८२	१.५:
७.	श्रीलंका	२२ २३५	०.८:
८.	मलदीव	३९२९६०	०.०७:
९.	अफगाणिस्तान	३२३३२०२५	२.३४:
१०.	जगाच्या तुलनेत	२३.४०	भूभाग २.९६:

संदर्भ : ण वतसक थ्ंबज इववा. रनसल २०१६

वरील तक्त्यावरुन असे दिसते की, दक्षिण आशियायी राष्ट्रांच्या लोकसंख्येचे प्रमाण हे प्रचंड आहे. दक्षिण आशियात लोकसंख्येच्या प्रमाणात भारत पहिल्या क्रमांकावर असून १.२६ कोटींपेक्षा जास्त लोकसंख्या भारताची आहे. याचा विकासदर १.१९: इतका आहे. दुसऱ्या क्रमांकावर पाकिस्तान आहे. त्यांचा विकासदर भारतापेक्षा जास्त असून याचे प्रमाण १.४५: आहे. तिसऱ्या क्रमांकावर बांग्लादेश आहे. बांग्लादेशच्या लोकसंख्या वाढीचा दर १.०५: आहे. त्यानंतर अफगाणिस्तान, नेपाळ, श्रीलंका, भूतान, मालदीव यांचा क्रमांक लागतो. ही लोकसंख्येच्या बाबतीत लहान राष्ट्रे आहेत. जगाच्या तुलनेत ही लोकसंख्या २३.४०: इतकी आहे. यांचा एकूण भूभाग २.९६: इतके आहे. वाढत्या लोकसंख्येमुळे द. आशियायी राष्ट्रांना लोकसंख्येला आळा घालण्यासाठी धोरणात्मक कार्य करणे अत्यंत आवश्यक आहे.

जगाच्या तुलनेत द. आशियायी राष्ट्रांचा विचार केल्यास असे दिसून येते की, जगातील सर्वाधिक लोकसंख्या असणाऱ्या राष्ट्रांत दारिद्रयाचे प्रमाणही अधिक आहे. मानव विकास अहवाल २०१४ चे अध्ययन केल्यास असे दिसून येते की, द. आशियायी राष्ट्रांतील बहुआयामी दारिद्रयाचे प्रमाण सर्वात कमी मालदीव राष्ट्राचे २.०: इतके आहे. तर सर्वात जास्त भारताचे ५५.३: इतके आहे. भूतान २९.४, नेपाळ ४१.४, पाकिस्तान ४५.६, बांग्लादेश ४९.५ : तर श्रीलंका व अफगाणिस्तानची आकडेवारी उपलब्ध नाही. या राष्ट्रातील बहुआयामी दारिद्रयामुळे दक्षिण आशियायी राष्ट्रांच्या विकासात मोठी समस्या निर्माण झाली आहे.

५. हवाप्रदूषण व तापमानवृद्धी :

हवा प्रदूषण व तापमानवृद्धी ही एक प्रमुख समस्या असून जगातील सर्वच राष्ट्रांच्या अमर्याद व बेशीस्त वागण्याचे द्योतक आहे. संयुक्त राष्ट्र संघटनेच्या आरोग्य विभागाने ;ॅभ्व. ॅवतसक भ्मंसजी व्तहंदप्रंजपवदद्ध इ.स. २०१२ या वर्षातील जागतिक हवाप्रदूषणाचा अहवाल २५ मार्च २०१४ रोजी प्रसिद्ध केला आहे. आरोग्य संघटनेच्या या अहवालात असे नमूद करण्यात आले आहे की, हवेच्या प्रदूषणामुळे २०१२ या वर्षात ७० दशलक्ष नागरिकांचा मृत्यू झाला आहे. तसेच २०१२ मध्ये घरगुती हवा प्रदूषणामुळे ४.३ दशलक्ष नागरिक मृत्यूमुखी पडले आहे. मृत्यूमुखी पडलेले नागरिक प्रामुख्याने अल्प आणि मध्यम उत्पन्न देशातील आहेत. तर ३.७ दशलक्ष नागरिक वातावरणातील प्रदुषणामुळे मृत्यू झाले.

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अमेरिकेतील येक आणि कोलंबिया विद्यापीठातील द येले सेंटर फॉर इन्व्हायरमेंटल लॉ ॲण्ड पॉलिसी ;जीम ल्ंसम ब्मदजतम वित म्दअपतवदउमदजंस सूं दक च्वसपबलद्ध आणि कोलंबिया सेंटर फॉर इन्टरनॅशनल अर्थ सायन्स इन्फोरमेशन नेटवर्क ;ब्वसनउइपंशे ब्मदजतम वित प्दजमतदंजपवदंस म्ंतजी बपमदबम प्दवितउंजपवदद्ध या दोन विभागांनी नुकतीच एक जागतिक पाहणी केली. त्या पाहणीनुसार हवा प्रदुषणाबाबत सर्वाधिक प्रदूषण असणारे देश प्रामुख्याने लिबीया (१२३), बोन्सीया आणि हरझे गोव्हिना (१२४), भारत (१२५), कुवेत (१२६), येमेन (१२७), दक्षिण आफ्रिका (१२८), कझाकिस्तान (१२९), उझबेकिस्तान (१३०), तुर्कमेनिस्तान (१३१), इराक (१३२) ही राष्ट्रे आहेत. तर स्वित्झरलॅंड (१), लाटविआ (२), नॉर्वे (३), लक्झेंबर्ग (४), कॉस्टारीका (५), ही राष्ट्रे सर्वाधिक कमी प्रदूषण असणारी राष्ट्रे आहेत. हवा प्रदुषणामुळे मानवजातीवर व संपूर्ण सृष्टीवर अनिष्ठ परिणाम होत आहेत. त्यामुळे हवा शुद्ध कशी राहील यासाठी जगातील सर्वच राष्ट्रांनी प्रामाणिकपणे प्रयत्न करणे गरजेचे आहे.

संपूर्ण जगाला भेडसावणारी आणखी एक महत्त्वाची समस्या म्हणजे जागतिक तापमानवाढ होय. दरवर्षी तापमानात वाढ होत आहे. २०१६ व २०१७ ही वर्षे आजपर्यंतची सर्वात जास्त तापमान असलेली वर्षे म्हणून ओळखली जातात. २०१५ मध्ये आंध्रप्रदेशात जवळपास १५०० लोक तापमानवाढीमुळे मृत्यू पावले आहेत. तापमान वाढीमुळे एकीकडे दुष्काळ पडतोय तर दुसरीकडे अतिवृष्टी होत आहे. बर्फ वितळून समुद्राच्या पाणीपातळीत वाढ होत आहे. जास्त लोकसंख्या असणाऱ्या व प्रदूषीत राष्ट्रांत ही समस्या गंभीर बनली आहे. एकूणच पृथ्वीवरील ऋतुचक्रच बदलुन गेले आहे. तापमानवाढीमुळे पृथ्वीची भूपृष्ठीय रचना, भौगोलिक आकारच बदलत चालला आहे. वाढत्या तापमानवाढीचा फटका अंटार्क्टिका सागराला बसत आहे. जुलै २०१७ मध्ये अंटार्क्टिका महासागरात वेगाने हालचाली झालेल्या आहेत. संपूर्ण बर्फाचे विभाजन दोन तुकड्यांत झालेले आहे. त्यामुळे अंटार्क्टिकात अतिशय प्रचंड वेगाने होणा–या बर्फाच्या वितळण्यामुळे समुद्राची पातळी वाढणार आहे

ब्रिटीश कोलंबिया विद्यापीठातील प्राध्यापक मिरोल कोपेस यांच्या मते, जगातील हवामान बदलास कार्बन डायऑक्साईड, क्लोरोफ्लोरो कार्बन, मिथेन नायट्रेट ऑक्साईड इ. हरित वायू कारणीभूत आहेत. हरित वायुंच्या निर्मितीमध्ये जगातील विकसीत व विकसनशील देश कारणीभूत आहेत. हवामान बदल निर्देशांक अहवाल २०१४ मध्ये जगातील सर्वाधिक कार्बन उत्सर्जन करणाऱ्या देशांची यादी जाहीर करण्यात आली आहे. ती यादी पुढील तक्त्यात दर्शविली आहे.

तक्ता क्र. ४ जगातील सर्वाधिक कार्बन उत्सर्जित करणारे दहा देश

अ.क्र.	देश	जगातील स्थूल देशांतर्गत उत्पादनातील हिस्सा	जागतिक लोकसंख्येतील हिस्सा	ज्गातील कार्बन डाय ऑक्साईड निर्मितीतील हिस्सा	जागतिक प्राथमिक उर्जा पुरवठयातील हिस्सा
१.	जर्मनी	४.०२:	१.१८:	२.२३:	२.३८:
२.	भारत	५.६६:	१७.८४:	५.१४:	२.७२:
३.	इंडोनेशिया	१.४१:	३.४८:	२.३०:	१.५९:
४.	ब्राझील	२.८७:	२.८३:	४.१२:	२.०६:
५.	युनाइटेड स्टेट्स	१८.८१:	४.४८:	१५.५०:	१६.७१:
६.	चीन	१४.६३:	१९.४२:	२२.९५:	२०.९१:

७.	ज्पान	५.५९:	१.८४:	३.५४:	३.५२:
८.	कोरिया	१.९५:	०.७२:	१.७६:	१.९९:
९.	रशियन फेडरेशन	२.९९:	२.०४:	४.९०:	४.३७:
१०.	कॅनडा	१.७५:	०.५०:	१.५८:	१.९२:

वनतबमरू ब्सपउंजम बींदहम च्मतवितउंदबम प्दकपंए २०१४ए च्व्छण्६ण

वरील तक्त्यावरुन असे दिसुन येते की, २०१४ मधील हवामानबदल निर्देशांक अहवालानुसार कार्बन डायऑक्साईड निर्मितीमध्ये सर्वाधिक हिस्सा चीनचा (२२.९५:) आहे. यानंतर अमेरिका (१५.५०:), भारत (५. १४:), रशिया (४.९०:), ब्राझील (४.१२:) यांचा क्रमांक लागतो. आकडेवारीवरुन जे देश प्रचंड वेगाने आर्थिक प्रगती साध्य करीत आहेत त्यांच्याकडून प्रचंड प्रमाणात कार्बन उत्सर्जन होवून हवामानात बदल घडून येत आहेत हे स्पष्ट होते.

जगातील हवामान बदल व तापमानवाढीची दाहकता अधिक जाणवू लागल्यामुळे आज सर्वच राष्ट्रे पर्यावरण संवर्धनासंदर्भात एकत्र येत असताना दिसून येतात. युनोनेही वेळोवेळी जागतिक हवामान परिषद व तापमान वाढीची कारणे शोधण्यासाठी परिषदांचे आयोजन करत आहे. ३० नोव्हेंबर ते ११ डिसेंबर २०१५ दरम्यानही फ्रान्समधील पॅरिस येथे हवामान बदल विषयक जागतिक परिषदेचे आयोजन करण्यात आले. या परिषदेत जगातील एकूण १९५ राष्ट्रांनी सहभाग घेतला. या परिषदेत भारताची भूमिका स्पष्ट करताना भारताचे पंतप्रधान नरेंद्र मोदी म्हणाले की, सन २०३० पर्यंत भारत हरितगृह वायुंचे उत्सर्जन ३५: पर्यंत कमी करेल आणि स्थापित उर्जा निर्मिती क्षमतेच्या ४०: उर्जा पुनर्विकरणीय उर्जास्त्रोतापासून मिळवली जाईल. तसेच वातावरणातील किमान २.५ अब्ज टन कार्बन डायऑक्साईड शोषून घेण्याची क्षमता असलेले वनीकरण तयार करण्याची भारताची योजना असल्याचे मोदी यांनी नमूद केले. भारतातील दिल्ली सरकारही हवेतील प्रदूषण कमी करण्यासाठी वाहनधारक चालकांसाठी 'ऑड इन वन' ही योजना राबवत आहे. एकुणच हवामान बदल व तापमान वृद्धीने मानव जातीवर विपरीत परिणाम होत असुन एकविसाव्या शतकात जगासमोर गंभीर आव्हान निर्माण झाले आहे. हवामान बदल व तापमान वृद्धीत घट करण्यासाठी युनोसहीत जगातील सर्वच राष्ट्रांनी प्रामाणिकपणे प्रयत्न करणे गरजेचे आहे.

सारांश:

वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, वाढती लोकसंख्या व गरिबी, प्रदूषण व तापमानवृद्धी या जगातील प्रमुख पाच समस्यांचे अध्ययन केल्यास असे दिसून येते की, या समस्यांची व्याप्ती खूप मोठी व दीर्घकालीन आंतरराष्ट्रीय राजकारणावर या समस्या परिणाम करणा–या आहेत. या समस्यांच्या बाबतीत जागतिक शिखर संघटना असणारी युनोने अधिक वेगाने व परिणामकारक कार्य करणे गरजेचे आहे. वरील समस्यांत लोकसंख्या हा मुद्दा सोडला तर इतर समस्येत जागतिक महासत्तांचा दुटप्पीपणा व राजकारण वेळोवेळी आडवे आलेले आहे. त्यामुळे महासत्ता व इतर राष्ट्रांनी समन्वय साधून जगाच्या व प्रादेशिक व राष्ट्राचे हित साध्य करण्यासाठी व जागतिक शांतता निर्माण करण्यासाठी प्रामाणिक प्रयत्न करण्याची आवश्यकता आहे.

उपाययोजना व शिफारशी:

१. जागतिक पातळीवर वांशिक संघर्ष रोखण्यासाठी युनोने कायमस्वरुपी उपाययोजना केल्या पाहिजेत.
२. वांशिक संघर्षासंदर्भात प्रादेशिक व राष्ट्रीय स्तरावर कायदा केला पाहिजे.
३. आण्विक शस्त्रास्त्रस्पर्धेस आळा घालण्यासाठी युनोच्या माध्यमातून कडक कायदे करावे.
४. दहशतवादी संघटनांचा बिमोड करण्यासाठी महाशक्ती राष्ट्रांनी एकत्र यावे.
५. लोकसंख्या वाढीस लगाम घालण्यासाठी जागतिक पातळीवर युनोने कायदे करावे.

६. पर्यावरणासंदर्भातील कायदे व कराराचे जगातील सर्व राष्ट्रांनी पालन केले पाहिजे.
७. जागतिक हवाप्रदूषण व तापमानवृद्धी रोखण्यासाठी अमेरिका, चीन, भारत यासारख्या राष्ट्रांनी एकत्रीत कार्य केले पाहिजे.
८. अमेरिका समवेत इतर महाशक्ती राष्ट्रांनी जागतिक समस्येबाबतीत दुटप्पी भूमिकेचा अवलंब करु नये.

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He / She presented a paper entitled "Role of online Banking System in Cashless Economy"

His / Her active participation in this seminar is deeply appreciated.

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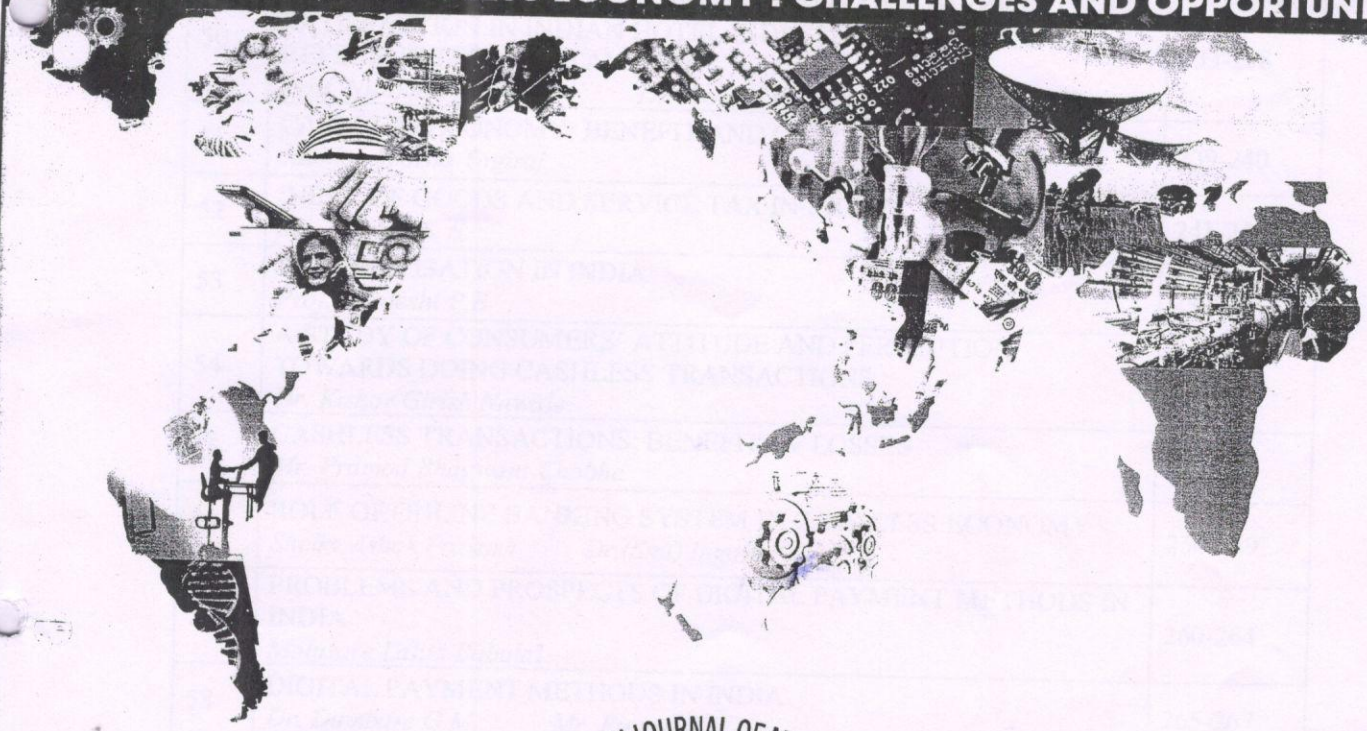

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ROLE OF ONLINE BANKING SYSTEM IN CASH LESS ECONOMY

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Abstract

Today traditional banking services based on lending and deposit taking operations only part of banking activities Indian banking industry touches the lives of millions of people and it is growing at a fast pace. This industry is facing number of challenges like changing needs and perceptions of customers, amendments in various laws, advancements in information and communication technology etc. The pressure of meeting these challenges have compelled banks to change the old ways of doing the business and in order to improve the quality of services, reduction in transaction cost and to bring transparency in transactions, banks have invested huge funds in ICT and have adopted ICT networks for delivering a wide range of banking products and services in recent past. This paper aims to provide an overview of the electronic banking services highlighting various aspects of e banking. E banking, a term used for new age banking represents an automated delivery of new and traditional banking products and services directly to customers through electronic.

Key Words :- *Banking Industry, Strengths of E Banking, Drawbacks of E Banking, E-Commerce Security Threats, E banking, Online banking and mobile banking.*

Introduction:

Banking in India has been through a long journey which has witnessed a number of changes which covers the traditional banking practices from British rules to independence, than up to nationalization of banks in 1969, Nationalization to privatization of banks and now increasing number of foreign banks. This sector has undergone a huge transformation especially in the last two decades when a number of innovations changed the way of banking. The banking sector is being reshaped by globalization, privatization, competition and customer needs Developments in the field of information and communication technology strongly support the growth and inclusiveness of the banking sector by facilitating inclusive economic growth. Technology in Indian banking has evolved substantially from the front end operations with back office automation to today's online, centralized and integrated solutions. with the development of information technology we have experienced following major events that took place in the banking business.

- Card based payments Debt / credit cards
- Introduction of Electronic Clearing Services (ECS)
- Introduction of Electronic Fund Transfer (EFT)
- introduction of National Electronic Fund Transfer (NEFT)

Strengths of E Banking:

Now a day's many banks have begun to offer customers the option of online-interne banking i.e. E banking, a practice that has advantages for both parties The convenience of being able to access the accounts at any time as well as the ability to perform transactions without visiting a local branch increases the popularity of e banking. Internet banking i.e. E banking has plenty of perks. These includes

1. Customers convenience Direct banks are for business there nternet connection. They are open 24 hours a day, 365 year. customer service is normally provided around the clock. Teal time

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account balances and information is available at the touch of a few buttons. This makes banking faster, easier, efficient and even more effective. Updating and maintaining a direct account is also easier

2. Services Direct banks typically have more robust websites that offer a comprehensive set of features that may not be found on the website of traditional banks. These include functional budgeting and forecasting tools, financial planning capabilities, investment analysis tools, loan calculators and equity trading platforms. In addition, they offer free online bill payments, online tax forms and tax preparation
3. Mobility Internet banking also includes mobile capabilities New applications are continually being created to expand and improve this capability on smart phones and other mobile devices
4. Transfer Accounts can be automatically funded from a traditional bank account via electronic transfer. Most direct banks offer unlimited transfer at no cost
5. Ease of use Online accounts is easy to set up and require no more information than a traditional bank account. Many offer the option of inputting the customers date online or downloading the forms and mailing them in. If the customer runs into a problem, he has the option of calling or e-mailing the bank directly
6. It provides various services to the businessmen at par with the international standards with low transaction cost
7. Speed and easiness of conducting the digital transactions compared to paper based dealing with walk in customers
8. E banking gives customers the control over nearly every aspect of managing his bank account. Besides, the customers can buy and sell securities, information, check currency rates, check balances, see which cheques are cleared transfer money, view transaction history and avoid going to actual bank .
9. Internet banking is also environmentally friendly, electronic transmissions requires no paper, reduces vehicle traffic and are virtually pollution free. eliminate need for buildings and office equipments

Drawbacks of E Banking:

Although the E Banking is advantageous not only to the banks but also to Although the E banking customers over traditional banking, it is associated with certain drawbacks which cannot be overlooked by the customers. Following are certain drawbacks of E banking

1) Traditional banking provides the opportunity to develop a personal relationship with that bank which is not possible in E banking.
2) Poorly delivered E banking services can be slow and time consuming.
3) it can be difficult for an average bank customer to get familiarized with the bank s website and E banking channel as each bank has its own unique website and methods.
4) There is a need to building up a pool of software application developers and database administrators who can handle E business application under proper supervision.
5) E banking could result in the siphoning off money by perpetrators of computer crime. Therefore, banks need to put place of computer security related hardware and software.
6) The technological transformation has also created a near among customers due to security, unawareness and unfamiliar with the use of technology.
7) Because the internet allows services to be provided from anywhere in the world, there is a danger that banks will try to avoid regulation and supervision.

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8) Traditional banks sometimes offer special services to loyal customers such as preferred rates and investment advice at free of cost. In addition, routine services required for many financial and legal transactions such as no bank guarantee etc is not , available on line

E-COMMERCE SECURITY THREATS

1) **Tricking the Shopper:** These attacks involve surveillance of the shoppers behavior, gathering information to use against the shopper. For example, a mother's maiden name is a giving away a password once the challenge question is provided, then not only has this been compromised, but it is also likely that the shopper used the same login ID and password on other sites
2) **Snooping the shopper's computer**: Millions of computers are added the Internet every month. Most users' knowledge to of security vulnerabilities of their additionally, software and hardware vendors, in their quest to ensure that their products are easy to install, ship products with security features disabled. In most cases, enabling security features requires a non-technical user to read manuals written for the technologist The confused user does not attempt to enable the security features. This creates a treasure trove for attackers.
3) **Sniffing the network**: In this scheme, the attacker monitors the data between the shoppers computer and the server. He collects data about shopper or steals personal information, such as credit card numbers. There are points in the network where this more practical than others. This style
4) **Guessing passwords**: Another common attack is to guess a user's password. as the of attack is manual or automated. For example, if the shopper uses their child's name of password. Automated attacks have a higher likelihood of success, because the probability guessing a user ID/password becomes more significant as the number of increases Tools exist that use all the words in the to test user combinations, or that attack popular user ID/password combinations. The attacker can automate to go against multiple sites at one time

Conclusion:

The Reserve Bank of India is doing its best to methods of payments which will bring security and efficiency to the payments system and make the whole process easier banks. The Indian banking sector been growing innovating and trying to adopt and implement electronic payments to enhance the system. Though the Indian payment systems have always been dominated by paper-based transactions, e-payments are not far behind. since the introduction of e-payments in India, the banking sector has witnessed growth like never before This has happened as a result of advances in technology and increasing consumer awareness of the ease and efficiency of internet and mobile transactions. In the case of India, the RBI has played a pivotal role in facilitating e-payments by making it compulsory for banks to route high value transactions through Real Time Gross Settlement (RTGS) and also introducing NEFT (National Electronic Funds Transfer) and NECS (National Electronic clearing Services) which has and businesses to electronic methods of payment. With the changing times and changed the methods of payments in India. E-payments in India have been growing at a fast rate of 60% last Due to the efforts of the RBI and the BPSS (Board for Payments and settlement system) now over 75% of all transaction volume are in the electronic mode, including both large- value and retail payments. Out of this 75%, 98% come from the RTGs (large-value payments) whereas a meager 2% come from retail payments. This means consumers have not yet accepted this as a regular means of paying their bills and still prefer conventional methods. Retail payments if made via electronic modes are done by ECS (debit and credit) EFT and card payments

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This is to certify that Mr. / Mrs. / Prof. / Dr. Ashok Prakash Shelke

of Mamasaheb Mohol College, has participated / presented the paper entitled

Foreign Direct Investment and Indian Economy

at the State Level Seminar on "Changing Economic Policies of India : It's Impact" held on 2nd February, 2018 at Mamasaheb Mohol College, Pune.

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Foreign Direct Investment and Indian Economy

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[1]Research Scholar, [2]Asso.Professore
Prof. Ramkrishana More Arts, Commerce & Science Akurdi,

Abstract

Make in India was launched by Prime Minister, Narendra Modi on 25 September 2014, to encourage companies to manufacture their products in India. He has launched this ambitious campaign with an aim to turn the country into a global manufacturing hub. This study focuses on the changes in FDI rate after introduction of Make in India by Modi and growth due to increase in the FDI rate. In August 2014, the Cabinet of India allowed 49% foreign direct investment (FDI) in the defence sector and 100% in railways infrastructure. FDI inflows before and after the "MAKE IN INDIA" campaign were compared using the quantitative data which has been collected from various reports like Reserve Bank of India Ddtabase on Indian Economy, database of department of Industrial Policy and Promotion. It has been analyzed that there is high correlation between Industrial Production and FDI inflows. The effect of FDI on economic development ranges from productivity increased to enable greater technology transfer

Keywords: FDI, FDI Opportunities in Indian Economy, FDI. Challenges before Indian Economy

Introduction

FDI is now regarded as a important driver of a growth. Emerging market economics look upon as a one of the easiest means to fulfill their financial, technical, employment generation, competitive efficiency requirements This created opportunities for location advantages and the facilitated strategic alliances, joint alliances, joint ventures, collaboration over R & D. FDI is one example of international factor movements. A foreign direct investment is controlling ownership in business enterprise. A FDI is an investment in form of controlling ownership in a business one country by an entity based in another country. The organization of economic co-operation and development (OECD) define a control as a owning 10% or more of the business Business that make foreign direct investment are often called multinational corporation (MNC). With the initiation of globalization, developing countries, particularly those in a Asia have been witnessing immense surge of FDI in flows during the past two decades. Even though India has been a late comer to FDI scene compared to other east Asian countries.

The Indian Scenario:

With a contribution of 14% to the national GDP and employing 7% of the total work force (only agriculture employs more) in the country, the retail industry is definitely one of the pillars of the Indian economy. India being a signatory to world trade organizations General Agreement on Trade in services, which include wholesale and retailing services, had to open up the retail trade sector to foreign investment 51% investment in a single brand retail outlet was permitted in 2006. The Union Cabinet on 24 November 2011 approved 51% foreign direct investment (FDI) in multi-brand retail. The cabinet also decided to raise the cap on foreign investment in single-brand retailing to 100% from 51% An estimated Rs.30-lakh-crore retail sector was thus opened to foreign investors by clearing a bill that allows 51 per cent investment in multi-brand retail. India currently allows 51% foreign investment in single-brand retailers and 100 per cent for wholesale operations but no FDI in multi-brand retail.

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- shortage of desirable talent and lack of skilled manpower.
- The inefficiencies in the current supply chain and the presence of numerous intermediaries are difficult to curtail. Along with the above mentioned opportunities the following regarded as major challenges, Risk and Uncertain, Challenge to sovereignty of nation Workers are profit is not fixed.etc

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GLOBALIZATION AND INDIAN INDUSTRY

[1]Shelke Ashok Prakash, [2]Dr.(Smt) Ingole P.S
[1]Research Scholar, [2]Asso.Professore
Prof.Ramkrishana More Arts, Commerce & Science Akurdi,Pune

Abstract-

Globalization in India has been advantageous for companies that have ventured in the Indian market. By simply increasing their base of operations, expanding their workforce with minimal investments, and providing services to a broad range of consumers, la companies entering the Indian market have opened up many profitable opportunities. Indian companies are rapidly gaining confidence and a themselves now major players in globalization through international expansion. From steel to Bollywood, from cars to IT, Indian companies are setting themselves up as powerhouses of tomorrow's global economy.

Key words :- Indian Industries and Industrialization , Textile Industry, Food Processing Industry, Chemical Industry, Steel Industry, Software Industry, Mining Industry, Petroleum Industry, Effects of Globalization on Indian Industry

INTRODUCTION

India has been successful in achieving autonomy in producing different basic and capital products since independence. The productivity of the major Indian industries incorporates aircraft, vessels, automobiles, steam engines, heavy electrical equipment, construction machinery, chemicals, precision equipments, communication instrument, power generation and transmission tools and computers.

Indian Industries and Industrialization

since independence to 1980: During this period there was restrictive growth of private sector and government's permission was required to set up any private enterprise in India Despite this the GDP grew at a rate of 1.4% per annum from 1940-1970. other factors such as poverty and famine lowered India's economic growth rate during this period and with the presence of very few top producers of major industrial goods the absorption of was greater which lead to monopolistic pricing. India during this domestic productivity phrase lagged behind in terms of economic growth the rest as of world grew and flourished through overseas trade.

1980 to mid-1990s : Post 1980s India saw liberalization and achieved further impetus in mid-1991. The nation witnessed historical upsurge in per capita GNP in 199495 the industrial output growth registered 8.4% growth and the exports rose by 27%. This resulted in a 10%drop in inflation in the mid-1990s.

after 1990s: Since its liberalization policy, India has opened several public sector enterprises. The exports saw a 17% rise in 1994 and 28% in 1995-96, over 90% of India's imports are backed by export revenues. At present the current account arrears is less than 1% of GDP and foreign-exchange profits are soaring at $20 billion. The food stocks have witnessed an all-time increase of 37m tones.

The private sector, which was neglected by previous governments, contributes to two-thirds of India's GDP The shift of the state's responsibility from a chief investor to a catalyst of private enterprise has paved way to a new accord on liberalization. Experts believe that the contribution of India in the world GDP is estimated to increase from 6 to 11% by the year 2025,

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while on the flip side the contribution of us in world GDP is presumed to decline from 21% to 18%. This indicates towards the emergence o India as the third biggest global economy after US and China. The evaluation is supported by the overall development in all the sectors in India, in which the key sector is the industry sector.

Going by the past records the Industry sector in India registered a growth rate of 6.2 in October 2003, which further increased by 4% in the corresponding month of the next fiscal year.

List of major industries in India:

Textile Industry: This industry covers a wide range of activities ranging from generation of raw materials such as jute, wool, silk and cotton to greater value added goods such as readymade garments prepared from different types of manmade or natural fibres. Textile industry provides j opportunity to individuals, thus playing a major role in the nation's economy. It has 4 per cent share in GDP and shares 35% of the gross export income besides adding 14% o value addition in merchandizing sector.

Food Processing Industry: In terms of global food business, India accounts less than 1.5% inspite of being one of the key food producing nations worldwide. But this on the other hand also indicates the enormous possibilities for the growth of this industry. Supported by the GDP estimates, the approximate expansion of this sector is between 9-12% and during the tenth plan period the growth rate was around 6-8%, Food processing industry provides job opportunities to 1.6 mm people and it is estimated to expand by 37 mm by 2025

Chemical Industry: Indian chemical industry generates around 70,000 commercial goods ranging from plastic to toiletries and pesticides to beauty products. It regarded as the oldest domestic sector in India and in terms of volume it gives a sense of pride to India by featuring as the 12 largest producer of chemicals. With an approximate cost of $28 billion, it amounts to 12.5% of the entire industrial output of India and 16.2% of its entire exports. Under chemical industries some of the other rapidly emerging sectors are petrochemical, agrochemical and pharmaceutical industries Industry:

Cement industry : India has 10 large cement plants governed by the different State governments. Besides this India have 115 cement plants and around 300 small cement plants. The big cement plans have installed competence of 148.28 million 11.10 tons per annum whereas the mini cement plants have the total capacity of million tones per annum. This totals the capacity of Indian cement industry at 159.38 million tonnes. Ambuja cement, J K cement, Aditya cement and L & cement are some of the major steel companies in India.

Steel Industry: steel industry is 400 years old and has a past record of Indian registering 4% growth in 2005-06. The production during this period reached at 28.3 million tones. India steel industry is the 10th largest in the world which is evident from its Rs 9,000 crore of capital contribution and employment opportunities to more than 0.5 million people. The key players in steel industry are Steel Authority of India (SAIL), Bokaro Steel Plant, Rourkela Steel Plant, Durgapur Steel Plant and Bbilai Steel Plant.

Software Industry: Software Industry registered a massive expansion in the years. This industry signifies India's position as the knowledge based economy with a Compounded Annual Growth Rate (CAGR) of 42.3%, In the year 2008, the industry grew by 7% as compared to 0.59% in 1994-95.

Mining Industry: The GDP contribution of the mining sector industry varies from 2.2% it to 2/5% only but going by the GDP of the total industrial sector to contributes around 10% to 11%.

Even mining done on small scale contributes 6% to the entire cost of mineral production. Indian mining industry provides job opportunities to around 0.7 million individuals.

Petroleum Industry: Petroleum industry started its operations in the year 1867 and is considered as the oldest Indian industry. India is one of the most flourishing oil markets in the world and in the last few decades has witnessed the expansion o top national companies like ONGC, HPCL, BPCL and IOC.

Effects of Globalization on Indian Industry

Effects of Globalization on Indian Industry started when the government opened the country's markets to foreign investments in the early 1990s. Globalization of the Indian industry took place in its various sectors such as steel, pharmaceutical petroleum, chemical, textile, cement, retail, and BPO.

Globalization means the dismantling of trade barriers between nations and the integration of the nations economies through financial flow, trade in goods and services, and corporate investments between nations. Globalization has increased across the world in recent years due to the fast progress that has been made in the field of technology, especially in communications and transport. The government of India made changes in its economic policy in 1991 by which it allowed direct foreign investments in the country. As a result of this, globalization of the Indian Industry took place on a major scale.

The various beneficial effects of globalization in Indian Industry are that it brought in huge amounts of foreign investments into the industry, especially in the BPO pharmaceutical, petroleum, and manufacturing industries. As huge amounts of foreign direct investments were coming to the Indian industry, they boosted the Indian economy quite significantly. The benefits of the effects of globalization in the Indian Industry are that many foreign companies set up industries in India, especially in the pharmaceutical BPO, petroleum, manufacturing and chemical sectors, and this helped to provide employment to many people in the country. This helped reduce the level of unemployment and poverty are that in the country. Also the benefit of the effects of globalization on Indian Industry the foreign companies brought in highly advanced technology with them and this helped to make the Indian industry more technologically advanced.

The various negative effects of globalization on Indian Industry are that it increased competition in the Indian market between the foreign companies and domestic companies with the foreign goods being better than the Indian goods, the consumer preferred to buy the foreign goods. This reduced the amount of profit of the Indian industry companies. This happened mainly in the pharmaceutical, manufacturing, chemical, and steel industries The negative effects of globalization on Indian Industry are that with the coming of technology the number of labor required decreased and this resulted in many people being removed from their jobs. This happened mainly in the pharmaceutical, chemical, manufacturing, and cement industries.

The effects of globalization on Indian Industry have proved to be positive as well as negative. The government of India must try to make such economic policies are beneficial and not harmful.

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participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Sports Policy for Disabled People in India.

Yogesh

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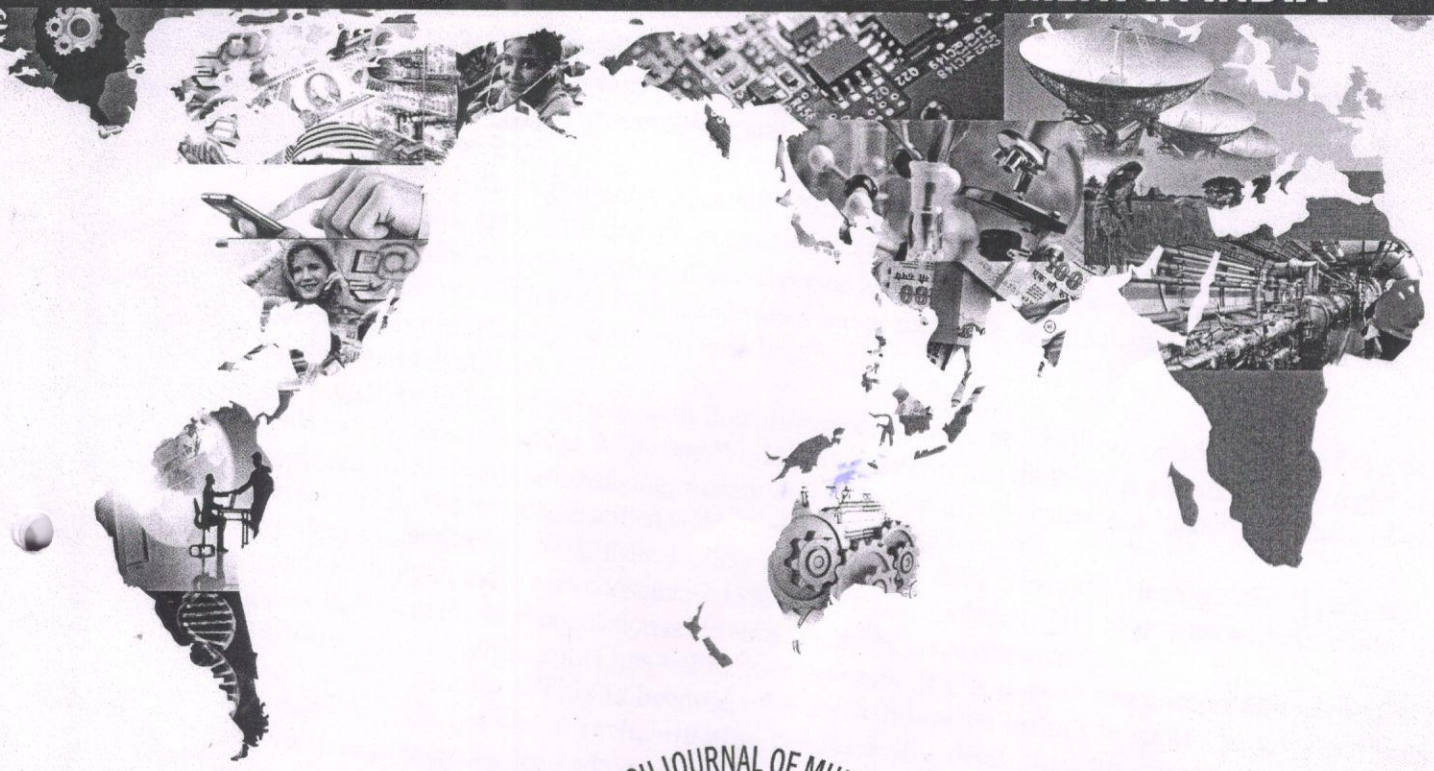
SPECIAL ISSUE ON SPORTS FOR SUSTAINABLE DEVELOPMENT IN INDIA



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Sports policy for Disabled People in India

Dr. Rupali P Shendkar
Mamasaheb Mohol college Paud road Pune

Introduction

Today, the idea of people with a disability being able to participate in sport and physical activity is not s uncommon. In many developed countries, opportunities exist from the grassroots to elite levels for people with disability to showcase their abilities in sport and physical activity. But this is not the case in all parts of the worl Whilst there has been progressive and positive change in quality of life for people with disabilities and the interest in participation in sport which is not only in many developed countries but in developing countries lik India also. Studying it therefore, will help us to better understand and appreciate the contribution of various earlie as well as latest policies and organizations for the promotion of disable sports in India.

What is Disability?

Anyone may experience disability at some point in his/her lifetime. Disability is a normal part of the human experience, and people with disabilities are part of all sectors of the community: men, women, and children; indigenous and non-indigenous; employers and employees; students and teachers; consumers and citizens.

Definitions of Disability:

- The World Health Organisation states that "disability is a restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being."
- United Nations Assembly defined disabled person as "any person unable to ensure by himself, wholly or partially, the necessities of a normal individual and/or social life, as a result of deficiency, either congenital or not, in his or her physical or mental capabilities".

Population of Disability:

Estimating the number of people with disabilities worldwide at 1 billion, or 15 percent of the world's population, the report from the WHO and World Bank confirms that disability is a major issue on a global scale. The causes of disability are evolving, mainly due to longer life expectancy, a higher prevalence of chronic illnesses, and also an increase in armed violence and natural disasters.

According to the Census 2001, there is 28% in Movement, 49% Seeing6% Hearing, 7%, Speech and 10% Mental Disability in India who constitute 2.13% of the total population. 75% of persons with disabilities live in rural areas, 49% of disabled population is literate and only 34 % are employed.

Disability Sport: While sport has value in everyone's life, it is even more important in the life of a person with a disability. This is because of the rehabilitative influence sport can have not only on the physical body but also on rehabilitating people with a disability into society. Furthermore, sport teaches independence. Nowadays, people with a disability participate in high performance as well as in competitive and recreational sport.

From the late 1980s, organizations began to include athletes with disabilities in sporting events such as the Olympic Games and Commonwealth Games. However, many sports are practiced by persons with a disability outside the formal sports movements, for example: Wheelchair basketball, Wheelchair dancing, Weightlifting, Swimming, and many other sporting activities you can join if you are mentally or physical disabled.

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Major disability sporting events include:

Disabled Veterans - The U.S. Department of Veterans Affairs' Adaptive Sports programs are dedicated to motivating, encouraging and sustaining participation and competition for disabled. Studies show that adaptive sports provide numerous benefits including:

- Less stress
- More independence
- Higher achievement in education and employment
- Reduced dependency on pain and depression medication
- Fewer secondary medical conditions (i.e., diabetes, hypertension)

Deaflympics - The Summer and Winter Deaflympics are among the world's fastest growing sports events.

Special Olympics - The global Special Olympics movement got its start on 20 July 1968, when the First International Special Olympics Games were held at Soldier Field, Chicago, Illinois, USA.

Disability Commonwealth Games - For the first time in the Games history a number of Para-Sports were included in a fully inclusive Sports Program in Manchester 2002 when 20 countries sent both male and female elite athletes with a disability to compete in 10 events across 5 different Para-Sports; Athletics, Lawn Bowls, Swimming, Table Tennis and Weightlifting. **Paralympic Games** - A multi-sport event for athletes with physical, mental and sensorial disabilities. This includes mobility disabilities, amputees, visual disabilities and those with cerebral palsy. The Paralympic Games are held every four years, following the Olympic Games, and are governed by the International Paralympic Committee.

The Role of Sport for People with Disabilities:

- Sport can play a key role in the lives and communities of people with disabilities, the same as it can for people without a disability. There is a wealth of evidence to support participation in sport and physical activity for people with a disability concerning trends, barriers and benefits of participation.
- Scientific research has been conducted across disability groups that make known participation in sport leads to improved levels of physical health and well-being. It has also been shown to improve physical fitness and general mood in psychiatric patients with depressive and anxiety disorders. Additionally, it has been linked to improvements in self-confidence, social awareness and self-esteem and can contribute to empowerment of people with disabilities.
- Sport can have a positive impact on the lives of people with disabilities but many face challenges to getting involved in sport.
- In article 30 of International Disability Alliance Guidance Document May, 2010regarding Participation in cultural life, recreation, leisure and sport clearly states about Access to culture, recreation, leisure and sport are also important areas to be taken into account for the full participation in society of persons with disabilities and create following questions:
  - Does public funding provided to cultural, leisure/touristic and sporting facilities and organizations require compliance with accessibility standards?
  - Do general accessibility plans include the elimination of barriers in culture, recreation, leisure and sport?
  - Is the State providing support to disability-specific initiatives in the area of sports and culture?
  - Is the State promoting and supporting deaf culture?

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National Policy for Persons with Disabilities

Objective: Provision will be made for special sports, cultural and recreation for physical, mental, intellectual, and social development of people with disability.

Policy: Sports, cultural and recreational activities will be carried out in accordance with the nature of disability and necessary human resources related to this will be developed for physical, mental, intellectual and social development of people with disability.

Appropriate provisions will be made to provide access to people with disability in entertainment sports, gardens etc.

Strategy:

- Trainers training program will be carried out to operate sports, cultural and recreational activities for people with disability.
- Provision will be made for an additional unit for development of sports related to people with disability in addition to provision for representation of people with disability in the National Sports Council.
- Provisions will be made for sports and recreation in educational institutions where children with disability study in accordance to nature, and necessary materials and assistance related to this will be provided

The National Disability Sports Organisations: The National Disability Sports Organisations are a good starting point for many disabled people who want to be more active. They provide advice, support and opportunities for people of all ages with specific impairments.

Achievements and Performance of Sports for Disable in India

- Handicapped sports are also included in prestigious ARJUNA AWARDS since1995.
- There are championships as Disabled cricket, blind cricket which are conducted every year
- There were more than 150 players from 14 countries participated in APC Badminton Cup which was held in December 2008
- In IWAS World Games more than 680 athletes from 43 countries took part and India stood 2ndin Medal Tally with a total of 110 medals which was hosted in the year 2009 at Bangalore.
- Gold Medal with the World Record at the 2004 Athens Paralympics Games.
- Special Olympics Bharat is a National sports Federation, recognized by the Ministry of Sports and Youth Affairs, Government of India. The team representing India at 2011 Special Olympics World Summer Games.

Other Special Events

- Special Olympics Bharat was given responsibility for the conduct of these inclusive sports programs in, two major inclusive schemes, one for the Disabled and other PYKKA which were activated in 2010.
- Specialist Trainers from the UK conducted two Trains the Trainer courses specifically for inclusive games for disabled through International Inspiration Program of the British Council. They trained 60 Master Tutors in two courses held in Goa and New Delhi. These Master Tutors conducted the training of the first 60 Master Tutors who trained the first 600 to top Trainees in the LNUPE University to conduct inclusive sports for all children with all disabilities.

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Special Awards / Recognition

- Mr. Satish Pillai was honored for his contribution to the promotion of sports in the country with the Dhyan Chand Life time award by the President of India .
- The De Rozio Award for excellence in Human Enrichment and Education.
- In the Special Educators Category was awarded to Ms.Lina Bardhan.
- Area Director SOBhara – West Bengal who has served the Special Olympics Program for more then20 years
- Rehabilitation Council of India has recognised training done by Special Olympic Bharat which is an organisation recognised by Government of India for approval of education method for the special educators.
- All the educators undergoing training will be accredited with 30 CRE points to fulfill the requirement of 100 points overperiod of 2 years for renewal of their education certificate for the training conducted by Special Olympic Bharat at Lakshmi Bai National University of Physical Education, Sports Authority of India and Community Coaches camps.
- National Trust felicitates 20 Special Olympians from different states who represented India at the 2007 Special Olympics Summer Games were awarded with a plaque, shawl and Rs. 25000/ -at the functions held in their respective states.
- Special Athletes participated in the Queen's Baton Torch run in several States during the Commonwealth Games Delhi 2010

Indian Blind Sports Association

The Association has always played a prominent role in promoting sports among the visually handicapped. It was the initiative of BRA that Indian Blind Sports Association was formed in 1986 as the national level body for the promotion of athletics and different sports for the blind. Indian Blind Sports Association is recognized by the Indian Olympic Association and is affiliated with the International Blind Sports Federation, the apex world blind sports organization, and with Paralympics Committee of India. BRA also hosts jointly with Indian Blind Sports Association, national-level Sports Meets for the Blind once every two years. The Sports Meet is the largest sports event for the visually impaired in the country which attracts hundreds of sports persons from institutions across the country from different states who compete in athletics, chess and swimming.

Conclusions

However, the situation on the ground remains mixed. Persons with physical disabilities are unable to enjoy leisure activities on an equal basis with others as long as transportation systems and public buildings continue to lack barrier-free access, a problem which has not been addressed on a consistent basis by the Government. However, organizations and establishments like the Wheelchair Sports Federation of India, the Indian Blind Sports Association, and the Special Olympics Bharat do provide opportunities for physically and mentally differently-able athletes to participate in sporting activities. Unfortunately, there remains no institution available to coach elite differently-able athletes in India, leaving a gap in attainment of the goals outlined in State policy. In order for persons with disabilities to be able to participate in leisure activities at the level described in government policies, stricter enforcement of these laws is needed.

Under the Constitution of India, there are certain fundamental rights that can be enforced in courts of law. These fundamental rights include the right to equality (Article 14) and the right to live in dignity (Article 21).Disabled citizens have the same rights as other citizens and should be given the opportunities to participate effectively in society.

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Recommendations and suggestions

- Increase support and funding to conduct empirical studies on topics of disability sport and adapted physical activity including, participation levels, attitudes, legislation, barriers and benefits of sport and physical activity.
- Develop further studies of mental health and psychological well-being as an outcome of sport participation for people with a disability.
- Affordable technologies, and increasing accessibility and universal designs in both the environment and the structures/rules of sports.
- Produce inclusive coaching manuals and educational material in multiple languages and formats to make it accessible to developing countries
- Research and develop monitoring and evaluation tools to ensure quality sport programmes are being implemented effectively and meeting target outcomes.
- Create opportunities to share knowledge, experiences and best practice.
- Utilise new technologies and online communication to enhance collaboration between development organisations, researchers and programmed staff.

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Dr. Shendkar R.P.

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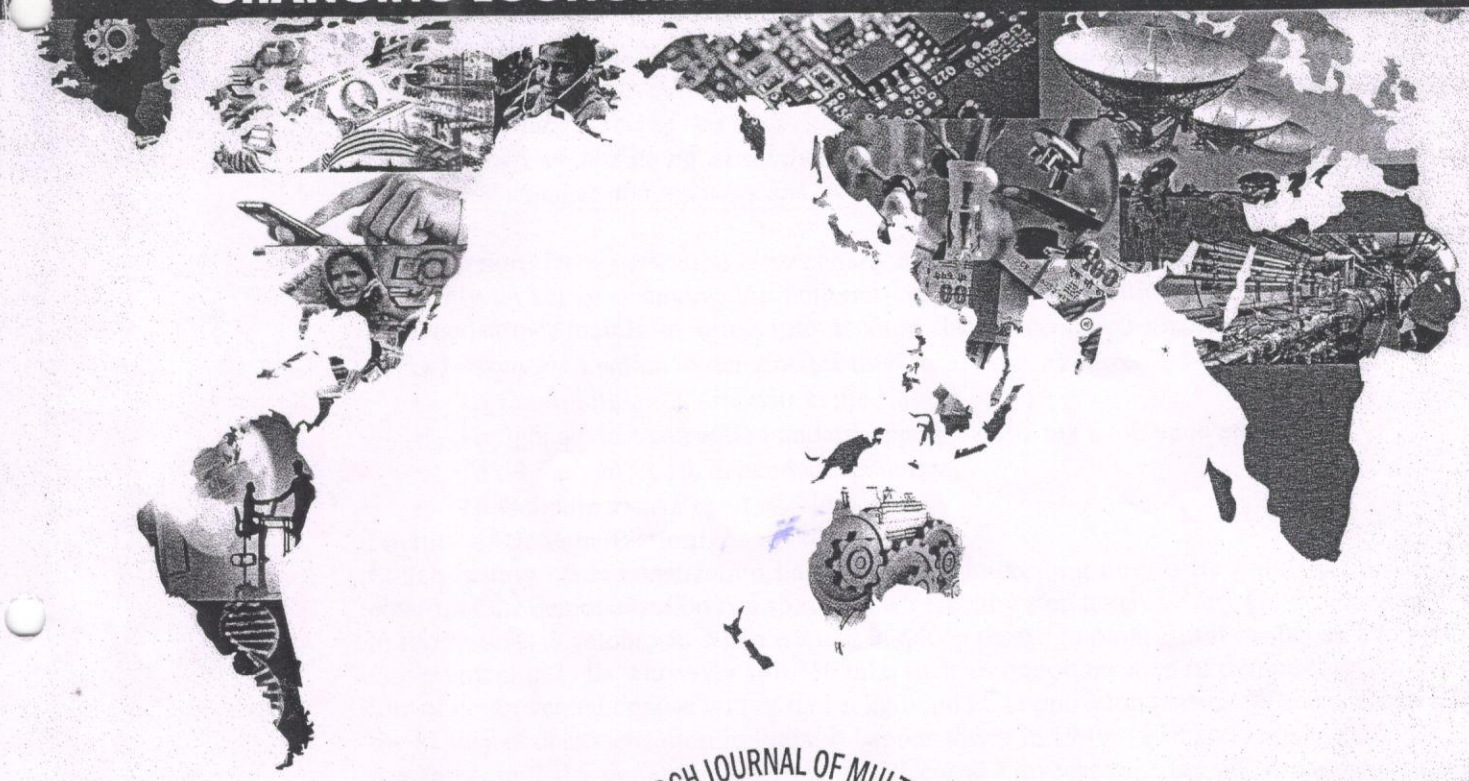
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT



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IMPACT

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Demonetization: Impact on Small Scale Industries

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Abstract:
Demonetization is one of the important tools used by the government of India to deal w barrier mainly named as black money as well as the other reason as to increase the im plastic money and E-Transaction within the business and for other activities. Indian economy of the fastest growing economies in the world and the policies and norms being footstep up government held quite responsible for the any extreme change in the growth of economy scale industries act as the backbone Nation. The economic development of the Nation ge depends upon the status of this Small scale Unit.
In this paper we are going to analysis the impact of demonetization on Indian economy analyze the changes and agendas link with the demonetization.

Introduction: Demonetization is essentially an act of band the currency unit from its legal s is mainly an act of changing the national currency of any nation. There may be any re demonetization, mainly to bring into account the unaccounted income of the Nation. Th many reasons for a nation to demonetize their local units of currency:–

- To Control inflation rate within the Nation.
- To fight against corruption and misappropriation, tax avoidance etc.
- To discourage a cash dependent economy.
- To facilitate trade Export and Import.

History of Demonetization:
Indian history of demonetization has been quite interesting due to its political impact. It clear that the demonetization has show to be a Healthy step taken by any Govt. which only l to the Nations development when we talk in a long term situation. But it is also an interestin Government in India whenever spirit to take such an important Step of demonetization has l lots of controversial oppose within its background and opposition parties. When we took a l the history of demonetization in India, It happen thrice in 1946, 1978 and recently in 2016.
Recently, in 2016 our prime minister and Central Government has taken a courageous demonetization, with effect to which all the 500/- and 1,000/- Rs currency has been demo from the immediate effect. The main reason behind this step is to fight against the black mo to bring into account the ban accounted currency spread over the nation. Though due to t many effects has been taking place some positive some negative but it is one of the e necessity of the nation.
The worst hit sector due to its effect has been SSI who is completely depends upon the r currency and investment which get blocked due to the step of demonetization. Considera effect has been only for the shorter period of time, its long term impact can be easily qui coming future.

SSI (Small Scale Industries):
In Indian economy small-scale and cottage industries take up an important place, because employment potential and their contribution to total industrial output and

Characteristics of Small-Scale Industries:
1) Technology

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2) Management and control
3) Area of operation
4) Ownership
5) Dispersal of units
6) Flexibility

In Indian economy small-scale and cottage industries occupy an important place, because of their employment prospective and their contribution to total industrial output and exports. Government of India has been quite actively working in promoting this sector as this sector has a big impact over the development of the nation.

Summary Results of Third Census with Respect SSI

Registered	Un–Registered	Total
25.39	6.86	32.25

Table 1: No of Units (In Lakhs Nos.)

1) Table showing the Small Scale Industries Status in India

2) Details of Coverage

Total no. of units surveyed	**22,62,401**
Number of working units	**3,74,974(61%)**
Number of closed units	**8,87,427 (39%)**

Table 2 Registered SSI Sector

No Of Village / Urban Blocked Surveyed	**19,579**
No. of unregd. SSIs/ SSSBEs selected for survey	**1,68,654**
No. of unregd. SSIs/ SSSBEs actually surveyed	**1,67,6665**

Table 3: Unregistered SSI Sector

Not aware of the provisions for registration	**53.13%**
Not interested	**39.86%**
Complicated procedure	**3.87%**
Local laws/ regulations do not permit	**1.76%**
Clearance not available from Municipality etc	**1.38%**

Table 4: Estimated no. of units and reasons for non-registration
(Ref:dcmsme.gov.in)

Impact of Demonetization on Small Scale Industries:

Small scale industries is the backbone of the Indian economy development and Demonetization is an remedial measure taken by the central Govt. to cure and boost the economy of the nation, still the sector which is most negatively affected by this action is SSI, Its impact on small Scale industries are :

1) **Slowed Down Progress Rate:** SSI units mainly required lots of working capital and transaction of money from various entities to the target entity but due to demonetization the market lacked the sufficient amount of currency which is essential for these units to run fluently and smoothly.
2) **Dip in Revenue:** the revenue generation Of SSI has been highly affected by the demonetization. As the working required get ostentatious, it directly resulted in the revenue generation get cut down and hence completely affected the growth rate of units. As per All India Manufacturing Organization Report, a dip in 50% revenue generation has been viewed in SSI units due to demonetization.

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3) **Cut Off in Jobs:** The Most Adverse effect that could have been avoided or needs to be rec in the future is the cut off the job in this units, As per the All India Manufacturing Organiz Reports , In the first 34 days small scale industries has losses 35% of the Job. The All Manufacturing Organization report has criticized the government for not anticipating repercussions of demonetization. It says the government was "not prepared for such a jo industries even after one month."
4) **Plunge GDP:** a dip in GDP has been immediately observe in the fourth quarter of 2016-17 first quarter of 2017 -18 GDP Growth rate, though this is just an temporary effect due to impact of demonetization on Indian industrial sector and will be move up soon as the Govt. predicted a high increase in GDP in December 2017.

Effect of Demonetization Over The Nation:

Demonetization is an bold step taken by the Govt. of India for the future benefits and prospect the Nation, Though it bring vast complications and some uneasy periods at the starting but as time gone pass it will bring stability and balance with its penalty. Shortage of currency at the sta period is one of the most equal sign of demonetization during its starting phase. One thing tha needed to be criticized a bit is the policies and preparation prior to the announcement of monetary action, but it is hard to predict is there any proper channel or any preparation can be d prior to the demonetization. It can be said that with time the demonetization will bring lots positive with the accounted no of currency and by removing the other causes which are affect the growth of the Nation.

Conclusion:

- The Small Scale units are the most adversely affected unit due to Demonetization because its working nature mainly revolves around the monetary system. And demonetization i curative measure mainly deals with the monetary system of the Nation.
- As per the acchotam survey Demonetization would leave a negative effect on the small a medium enterprises, job creation and rural consumption in the short-term whereas the lar and well-organized sectors stand to benefit in the long-term, according to a rece ASSOCHAM Bizcon Survey.
- The contrast in perception pointed out by the survey is quite severe. According to t survey, 81.5% of the participants felt that Small and Medium Enterprises have be impacted and would still suffer the remaining impact for one more quarter. However, an equal number of respondents said that for big enterprises, the extraordina measure of demonetization impact would be positive. But its effect and impact are on temporary in nature as soon as the money supply get normal in the market the negative impa get neutralize and the action of demonetization taken by the government only boost th performance of this unit.

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"Sports for Sustainable Development in India"

2nd-3rd February, 2018

Organized by

Department of Physical Education and Sports

in association with

Savitribai Phule Pune University, Pune

Certificate

This is to certify that Prof. / Dr. SHINDE SHIVAJI B

of Research schallar, T.M.V. PUNE

participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Importance of adventure sports and tourism potential of forts in Pune District.

Yogesh

Dr. Yogesh Pawar
Co-ordinator

Dr. Mahendra Avghade
Vice Principal

Bhosale

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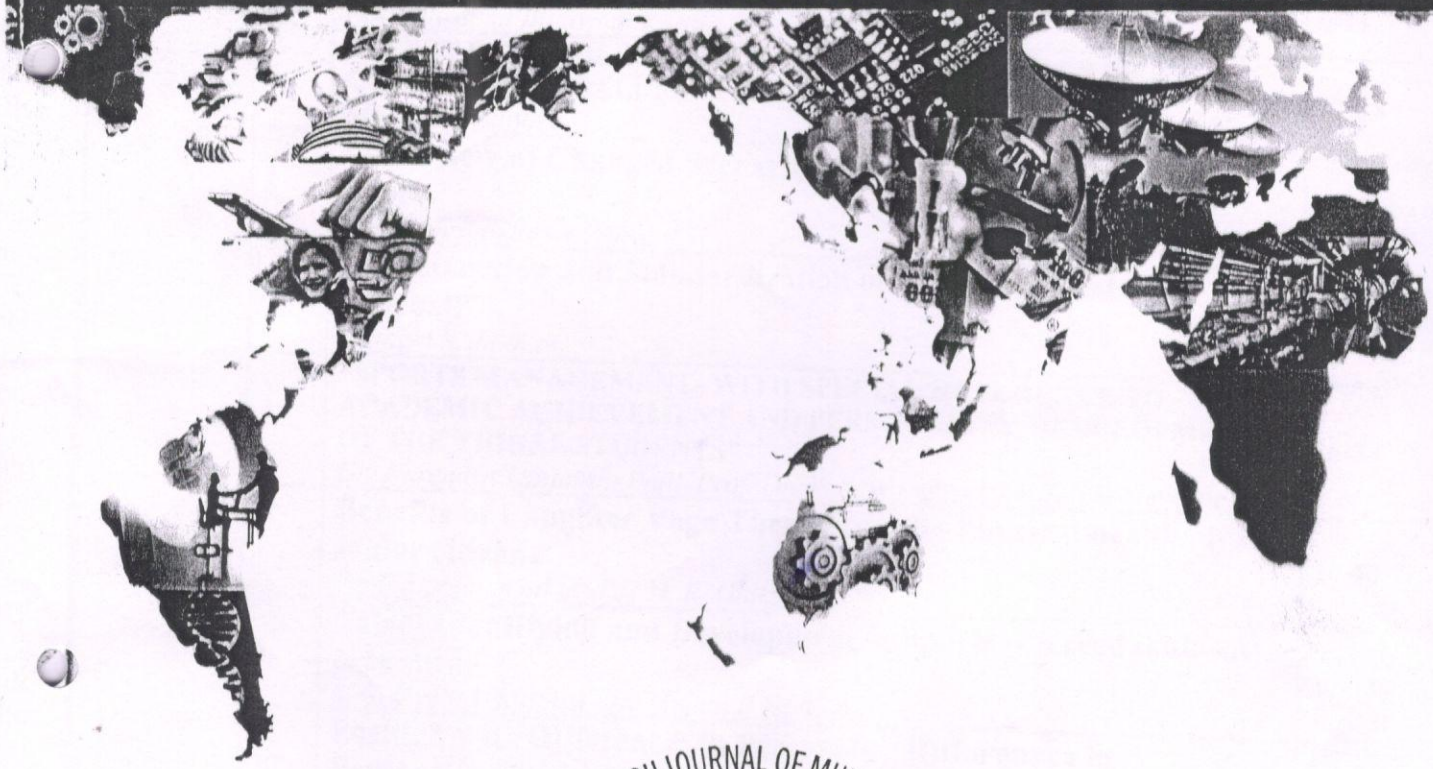

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Importance of adventure sports and tourism potential of forts in Pune District

Shivaji B.Shinde
Research Scholar, T.M.V., Pune.

ABSTRACT

Geographical information is necessary for the sustainable planning and management of the resources in the area. The area selected for proposed research is Pune District. Such study would be helpful to Government for planning and making strategic planning for District. Moreover, such study may provide potentiality to increase at glance current information of whole district. Besides this planners, administrators, layman and those who are interested in research in the field of economic and social planning, strategic study and social and economic development may get the benefit. In this present study try to provide an integrated plan for tourist places forts in the Pune district with some special case studies. Also, importance of adventure sports is stated. To give attention towards man power development and training through such study can be done by this project. It brings socio-cultural benefits to the local community in terms of employment opportunities, environmental and health awareness.

Key: Tourist Information System (TIS), sustainable planning, adventure sports.

INTRODUCTION

Tourism is considered as one of the world's largest industry. India is a developing nation. The Government and their agencies as well as private sector units and individuals are taking various measures to promote tourism. Promotion of tourism can contribute immensely to our economy. Many years tourism was neglected at various levels but now a day's concentrated effort are being made to improve the position and standard of tourism and for also the social benefit of the people. Pune district is highly rich by its scenery, spiritual base and its culture. Tourism industry will change the future of the district and will improve the social, cultural, economic status of the district; this was the main motive behind selection of this study area.

Pune district lies in the Western Ghats or Sahyadri mountain range and it extends on to the Deccan plateau on the east. With its physiography it has abundance of forts and fortress located in it. With the long-standing bastion of the maratha empire and home to the legendary King Shivaji, the Pune district is marked by magnificent land forts, testimony to its glorious past. Every taluka in Pune district has significant forts located in the district. It is necessary to preserve and conserve them, as well as it can be great potential for creating job opportunities for the local people. Most of the forts in Maharashtra are in dilapidated condition. It represents history, they must be preserved. The study will help to aware people to conserve these sites. Tourism is the major subject of job and other means of subsistence for the local people at fort sites increasing number of tourists will surely be beneficial to the local people. They can earn some amount by providing meals and other things needed by the visitors. Business and jobs for locals will be created due to conservation of forts.

STUDY AREA

The study area, Pune district, usually termed as the cultural capital of Maharashtra. It situated at 559 m ASL and lies between 17° 54' to 19° 24' N Latitude and 73° 33'to 75° 10' Longitude. The total geographical area of the district is 15643sq.km. The district headquarters

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the district place is Pune. The district consists of 14 tahasils. The area of district is surrounded by Thane district in the north and northwest, Raigarh district in the west, Satara district in south, Solapur district in the south and southeast and Ahmadnagar district to the east. (Fig. 1)

OBJECTIVES

Against the above background, the present work attempts to study the Tourist Information System for tourism development in the Pune district. The broad objectives of the proposed study are:

1. Assessment of site and situation of forts in Pune district.
2. Assessment of present day fort tourism in Pune district.
3. To identify and examine the tourism potential of the forts in Pune district.
4. To identify the importance of adventure tourism sports.

Location Map

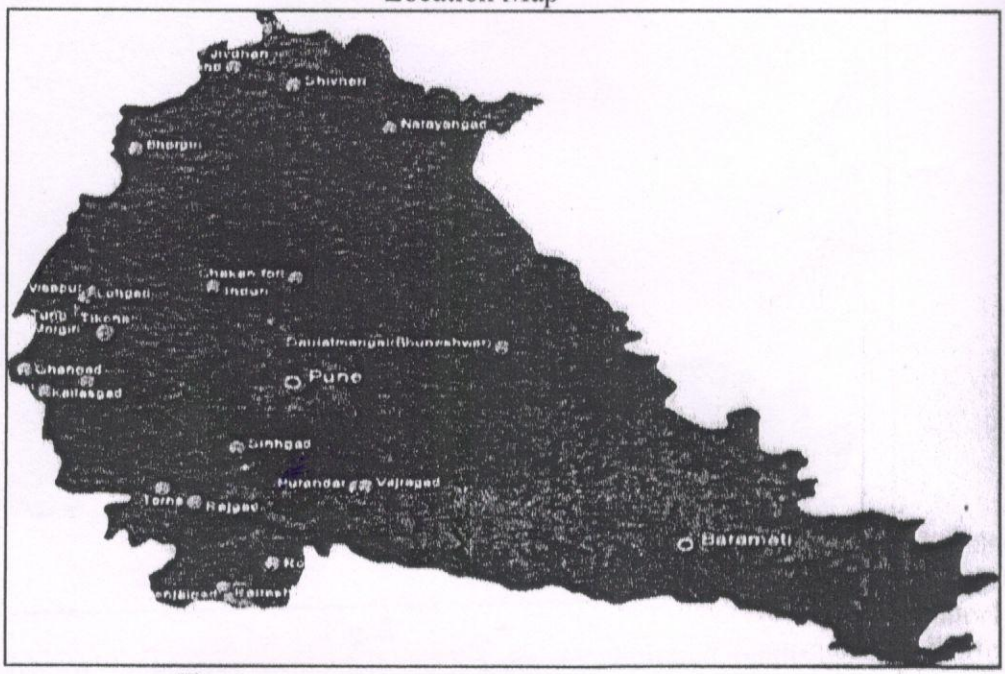

Fig. 1

METHODOLOGY AND DATABASE

In order to understand for the sustainable development and planning of forts in Pune district the methodology adopted for the present study is divided into three phases are namely pre-field work phase, field work phase and post field work phase.

In the first phase i.e. pre-field work phase literature review i.e. previous work carried out by other researchers are obtained from various journals, internet, visit to the MTDC resort to know about annual tourist flow, collection of survey of India toposheet (SOI) having scale 1:250000 (47/E,47/F,47/I,47/K,47/M,47/N,47/O), Atlas, Gazetteers, District Census Handbook, Tourist maps, etc. use for collection of information, District Resource map of Pune district published by

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Geological Society of India, Government published map of Pune district P.W.D. map, and other were completed with help of S.O.I. toposheets (Fig. 2).

In the second phase i.e. fieldwork phase extensive field surveys were undertaken, to existed tourist places and newly found tourist places. The questionnaire filled in this phase. During this field surveys tourist facilities regarding destination photographs, GPS reading altitude and the related information is noted which were also useful to site suitability study.

Digital Elevation Model

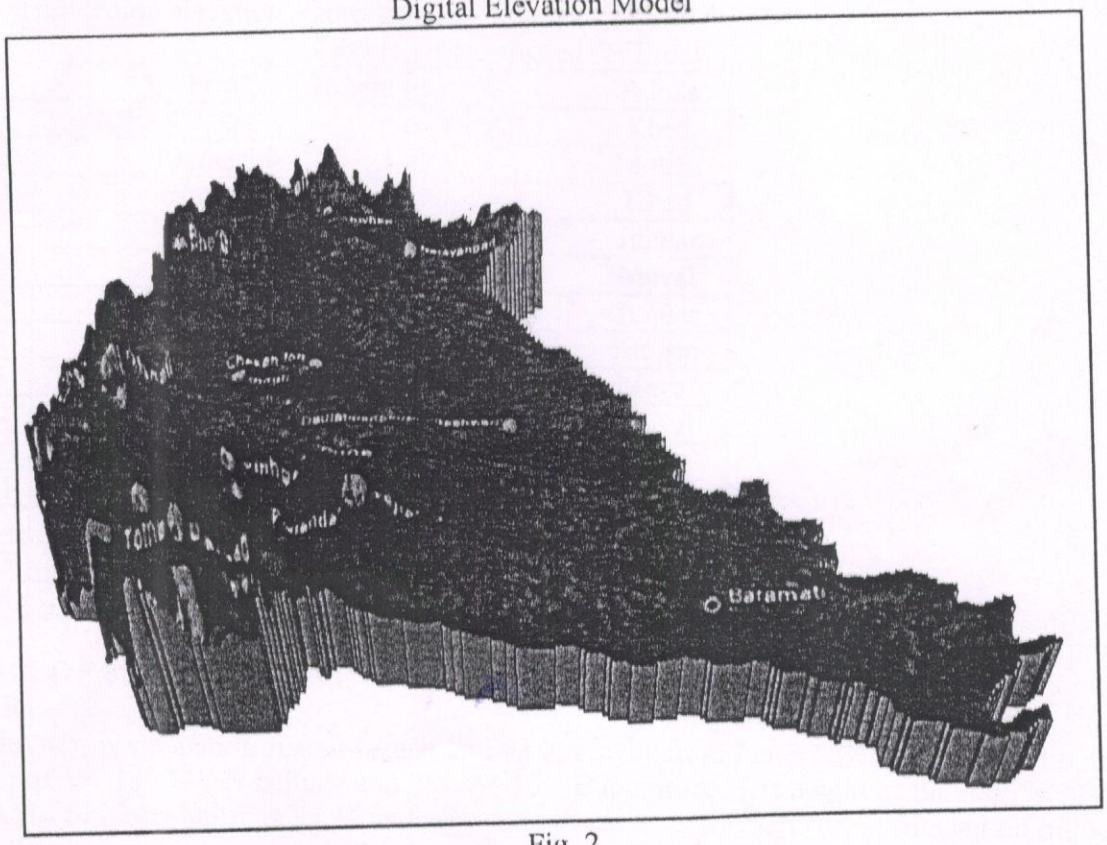

Fig. 2

In the third phase i.e. Laboratory worked is carried out. Government published map then digitization to generate thematic layer i.e. point layer- tourist places, tahasil headquarter, line layer- roads, railways, rivers and polygon layer- dams, reservoirs etc. and map were georeference same time. Integrating all above information and maps with help of GIS software. Finally these thematic layers are analyzed to demarcate tourism potential zones.

POTENTIAL TOURIST CENTERS FORTS IN PUNE DISTRICT

The term potential means something existing but not yet fully exploited. There are various criteria to selecting new potential suitable sites i.e. on the basis of phsiography, climate, and purpose of visit, on the basis of natural and cultural resources. The district has vast and rich tourism resource potential of different cultural background in all its 14 tahsils. We classified potential suitable sites forts on the basis of natural and cultural resources, i.e. Pune, Haveli, Junnar and Baramati. Potential tourist centers are selected in this manner they represent the entire Pune and same problem found in similar type of tourist centers in throughout the district.

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Potential suitable sites are very rich in natural and cultural resources, these tourism resources are not fully utilized because inadequate tourist facility, lack of information regarding this centers. New potential suitable sites forts can provide more scope for a generation of employment opportunities due to increases tourist facilities in terms of different socio economic and marketing indicators also bring money and reducing the regional disparities in Pune district. New potential suitable sites forts will be reducing the pressure on existed tourist centers and also reducing the migration of local peoples towards the Pune city.

There are 32 forts in Pune district. Every fort has its own importance and uniqueness. The forts are selected according elevation controlled sampling.

Table1: Forts selected for Study

Sr. No.	Fort	Height (m)	Taluka
1	Chakan	618	Khed
2	Rajmachi	692	Mulshi
3	Bhorgiri	735	Khed
4	Shivneri	998	Junnar
5	Tung	964	Maval
6	Nimgiri	980	Junnar
7	Ghangad	982	Mulshi
8	Tikona	988	Maval
9	Lohgad	1016	Maval
10	Rajgad	1307	Velhe
11	Sinhgad	1308	Haveli
12	Purandar	1320	Purandar
13	Torna	1358	Velhe
14	Raireshwar	1375	Bhor

Source: Author Compile

ANALYSIS OF SHIVNERI FORT

SHIVNERI

Shivneri is situated in Junnar tahasil and 93 km away from Pune. Shivneri is located at the intersection of 19° 13' 38'' N latitude and 73° 49' 15'' E longitude. The height of Shivneri is 914.4 m above ASL. Shivneri has number of underground caves. The Shivneri fort is situated on hillock and hence the various parameters of climate become the resource of tourist activity. Shivneri offer more prospects with its combination of cool pleasant summer climate along with its enchanting natural settings.

State highway No. 52 and Main District highway No. 3 and 1 connect the Junnar which provides excellent road network so that tourist can reach easily to the Junnar by metal road. MSRTC buses that operate on the Pune – Junnar routes, will take Shivneri. There is no state transport for the last 3 km, but local transport will reach to the foot hill of the Shivneri also, helipad facility available on Shivneri. There are a quite number of hotels, restaurants and lodges available for accommodation in Junnar. Other than several private hotels there is a PWD and Forest Dept. rest house available for accommodation in Junnar.

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Present Status

The present status of Shivneri as a tourist centre come under developing category. Shivneri has a great potential for tourism development. Archeological Department of India, Government of Maharashtra and MTDC give more attention to provide funds, donation and subsidy for infrastructure development on Shivneri forts. However serious attempts are needed to develop tourism in this region.

Major problems faced by tourists

The tourist opinions, complaints were collected during the field work. From Junnar to Shivneri fort there are no MSRTC buses, buses frequency is very less and buses are not in good condition, there is load shedding problem of electricity, hardly get pure quality drinking water and tourist guide on fort, accommodation charges in hotel quite expensive, parking, sewage and drainage system, toilets, communication, medical facility are not in well condition. etc. are major problem faced by tourist during visit of the Shivneri fort.

Important Tourist Centers in and around Shivneri

The Shivneri fort was the birth place of Maratha Empire Shri Chhatrapati Shivaji Maharaj. Shivneri has number of under ground caves. In the upper and lower scarps are two irregular lines of Buddhist caves all of them small and some more like dwellings of vultures than of monks. In the Shivneri fort most important tourist places are the birth place of Shivaji, statues of Shivaji and Matoshri Jijabai, the Ganga – Jamuna reservoir, and the Idgah at the central square of the fort and Shri Shivai temple also, newly created lawn and garden etc. A week would be ideal to cover these interesting tourist centers.

Remedies to overcome the problem – In the absence of basic facilities and amenities tourism activity at the resort cannot be undertaken. Therefore, there must be metal roads, drinking water, 24 hours electricity, frequency of mode of public transport, communication, sewage and underground drainage system, entertainment and recreation, market, health care facility etc. should be provided to tourists. In this way every attempt should be made to attract the tourist from within the country and other countries of the world.

CONCLUSION

Present study tries to provide an integrated plan for tourist places forts in the Pune district with some special case studies. If someone wants to know the forts along the Mumbai-Pune Expres way map can be displayed. Also encouraged and facilitated youth geographers to travel and foste national integration. As far as potential places are concerned, after field work it is observed that fe people only visited these forts who know about the places, but other have no any informatio about the places which should be published or advertised or marketing and the information shou be reached to the tourists and they can visit the places. Also take an account of domestic needs the Pune district by giving information such as cheap accommodation, easy way to transportation.

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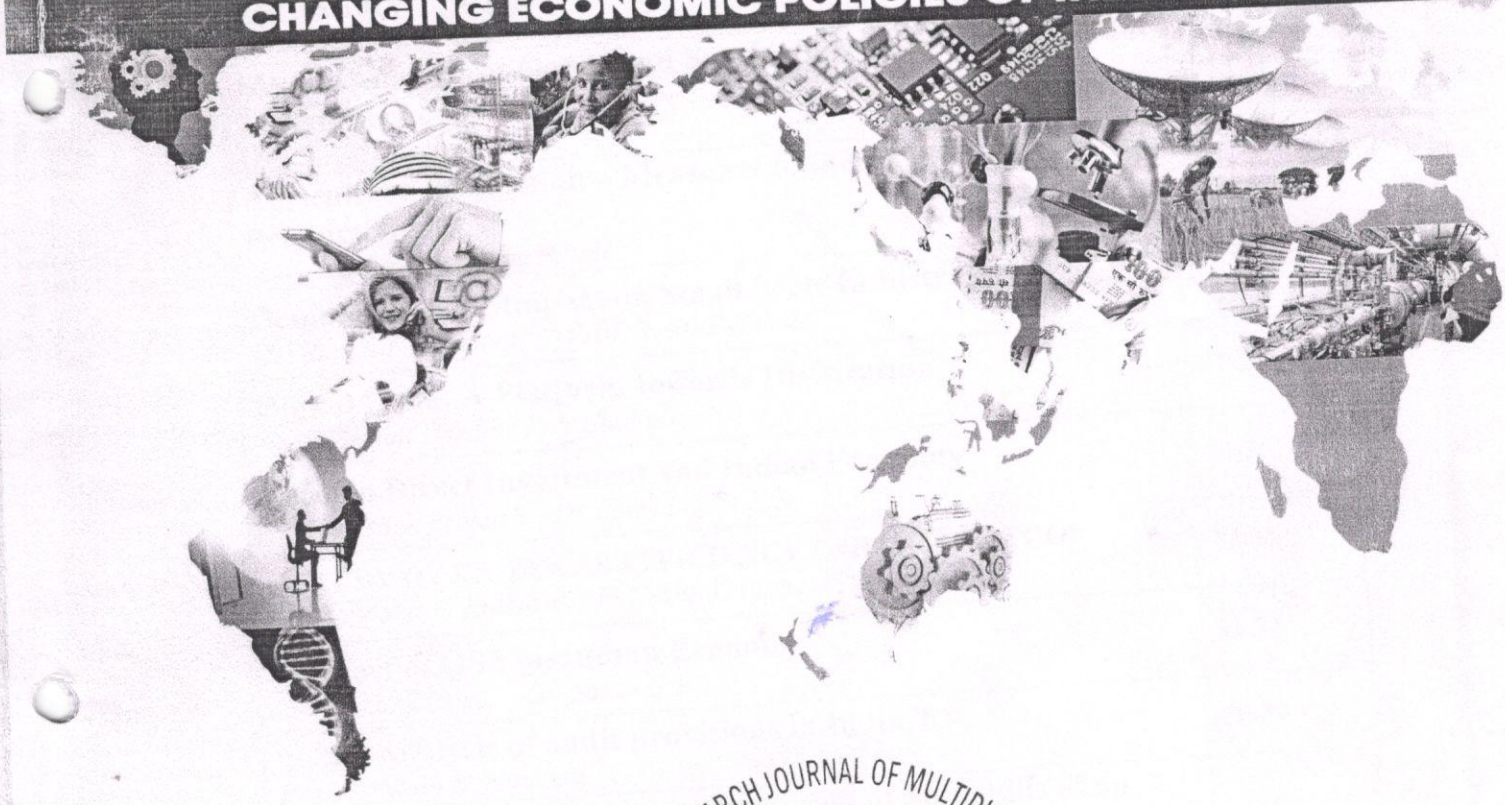

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Indian Agriculture Development And Recent Trends In Agriculture.

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Introduction:

India has been experiencing the increase in the production of food grains particularly after the introduction of new agricultural strategy (i.e., Green Revolution) in agricultural practices. Annual growth rate of 2.08 per cent was recorded during 1970s. Annual growth rate of 3.5 per cent in food grains in 1980s is the hallmark of the green revolution that enabled India to become self sufficient in food grains and even a marginal exporter. As per the latest estimate it is found that by 2010, the demand for food grains is likely to rise at the rate of 2.6 per cent. If the country can maintain 4 per cent growth rate in agricultural production then after meeting its domestic demand, the country can export the surplus amount of food grains to the foreign countries in which it has favorable position.

Agriculture is not only meeting the demand for food grains but also other needs of development. In recent years, agricultural sector has been diversified to produce commercial crops and horticultural crops viz., fruits, vegetables, spices, cashew, areca nut, coconut and floricultural products like flowers, orchids etc.. dairy and other animal husbandry products. The demand for these products has also been increasing. Liberalization of the economy has created ample scope for the development of agricultural sector both in terms of increased production and trade.

Education.

Now there are many agricultural universities and colleges in India. In this institutes develop new trends of agriculture. With the rapid advances in computers and communication, it has become increasingly difficult for anyone in the agricultural community to keep pace with technical changes impacting field production. From understanding the genetics of seed relative to an environment, evaluating the best fertilizers, selecting the right combination of pesticides, or just understanding the day-to-day logistics of a farm operation, education is paramount for success.

Floricultural:

Presently about 31,000 hectares of land spread over Karnataka, Tamil Nadu, Andhra Pradesh and West Bengal are under flower production. Since the inception of liberalization, commercial farming of floricultural activities has been increasing gradually. The demand for Indian cut flower is increasing continuously in the international market.

Horticultural:

The diversity of physiographic, climate and soil characteristics enables India to grow a large variety of horticultural crops which includes fruits, vegetables, spices, cashew-nut, coconut, cocoa, areca-nut, nuts and tuber crops, medicinal and aromatic plants etc. India is the largest producer of fruits, and second largest producer of vegetables. Total production of fruits 63.5 million tonnes in 2007-08. Total production of vegetables 125.9 million tonnes in 2007-08. India is the largest producer of cashew. Total production of cashew 6.0 lakh tonnes in 2003-04. Total value of exports of fruits, vegetables and pulses Rs. 5,650 crore in 2008-09. Thus horticultural exports of the country contribute nearly 25 per cent of the total agricultural exports.

Free Trade:

Liberalization has removed all restrictions on the movement of agricultural produce within the country. This has facilitated expansion of trade in agricultural products, especially of food grains.

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Agricultural Exports:

Agricultural exports are playing an important role in expanding the activities of agricultural secto along with generating increasing number of employment opportunities and also in diversifying agricultural operations. The Export Import Policy (Exim) 1992-97 has provided ample opportunities for increasing the volume of agricultural exports. The policy has permitted exports of agricultura goods like oilseeds, edible oil, sugarcane, pulses, coconut, etc. A number of Export Oriented Units (EOUs) in the floriculture sector has already been set up. To facilitate export of perishable products, subsidy on air freight is being provided for specified items. Another important emerging trend of agriculture under liberalization is the increasing volume of agricultural exports and its increasing prospects in near future under the WTO regime. India is favorably placed in respect of agricultural exports as the agricultural sector is subjected to low import content, low cost of labor, favorable climatic conditions, and low unit cost of inputs.

Developing Agriculture in Backward Areas:

In the post-Green Revolution period, application of new agricultural strategy, research and technology was very much restricted in the production of food grains, i.e. only wheat and rice. But under the liberalization wave, with the growing demand for agricultural exports, many new areas of agricultural operations have become favorable and lucrative. In the agriculturally backward areas, having no irrigation system, dry land farming has been initiated. The other activities like horticulture, floriculture, animal husbandry, fishery etc. have been encouraged. Application of modern improved techniques in these areas has resulted in the development of many backward areas which were previously subjected to wide spread poverty.

Food Processing:

Economic liberalization has made ample scope for the development and expansion of food processing industry in India. Fruits and vegetables being perishable in nature are facing a huge loss worth Rs. 3,000 crore every year. In order to prevent such loss, the National Horticulture Board is making necessary steps for providing infrastructure and for the packaging, storage and transportation of horticultural products. The production of processed fruits and vegetables are providing huge number of employment and improving agricultural productivity by raising the prospects of agricultural exports. The Government is also offering necessary incentives by exempting the industry from excise duty. In order to invite foreign capital into this industry the Government has permitted 51 per cent foreign equity partnership and also offered prompt approval of foreign technology transfer to the food processing industry of the country.

Market Feedback

Market feedback can be in two forms: quantity and quality. Market prices fluctuate based on the real or perceived quantities of produce available for purchase in the marketplace. It is the traditional supply and demand. If there is less produce for purchase, prices go up. If there is more produce, prices go down. Retailers have always been aware of the importance of quantity. However, quality is a little trickier to track. Like a fine wine, it is the combination of the choice of variety, soil, weather and practices. While many times, the quality of a crop is a function of weather, understanding the impact of seed, soil, and practices can give a producer an edge in the marketplace. More oil or protein in beans can translate into more rupees . Market feedback can help define the end goal for a set of production practices. If the goal is higher protein in a crop, then

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special attention would be paid to those materials and practices and environmental conditions that meet this goal. As discussed in an earlier topic, evaluative metrics would come in to play to ensure that day-to-day decisions follow a production plan that would realize high-protein yields. Savvy retailers have long realized that while the market is the end point in production, it is the starting point in planning. In a world of better informed buyers, market feedback needs to be front and center for everyone involved in production.

Developing New Biological Techniques:

During the period of green revolution, increasing application of chemical fertilizers and pesticides were encouraged extensively in order to meet the growing demand for food required to feed the rising population. Rising population, ever-increasing demand for food and unlimited exploitation, of natural resources have created a grave threat to the environment as well as to the agricultural sector. In order to save and protect the environment as well as the agricultural sector from any further damage, increasing use of biological technology for agricultural operation has been emphasised and more emphasis is being given to develop new biological technology.

Subsidies to Agricultural:

In India, the volume of subsidies granted to agriculture, in respect of fertilizer, irrigation and electricity charges etc. has been increasing. Aggregate subsidies provided by the Central Government and also state government. Out of total amount about 75 per cent is allotted in the area of fertilizer and food grains.

Growing Trend of Unemployment in Agricultural Sector and Its Solution:

Green revolution and increasing mechanization of agriculture have resulted fall in employment opportunities, resulting in a serious problem in the rural areas. Although many special employment programmes have been introduced to serve as a security net but increasing potentiality of the agricultural sector as emerged from the liberalisation wave should be exploited properly.

The growing trend in agricultural exports, increasing demand for horticultural and animal products in the export market has created ample opportunities and scope for employment of huge number of population. This allied sector being labour intensive can provide a lasting solution to the rural unemployment problem of the country.

Findings:

- Agriculture Education is developing the Indian agriculture sector.
- Food processing industry helping increase the economic condition of the farmers.
- Biological technology for agricultural operation has been emphasised and more emphasis is being given to develop new biological technology.
- Floricultural and Horticultural is the most important emerging and profitable industry in India.
- Study of Agriculture market and export of agriculture product is assisting development of agriculture.

Conclusion:

Agricultural sector is experiencing a growing trend in the volume of its investment during the post-liberalization period. Now in India privet sector investing in the agricultural sector with big budget like investing in agricultural product processing units and develop new ideas about agriculture. And public sector also investing in this sector and helping to the farmers with starting so many schemes

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like Kisan Credit Card for giving credits to farmers Croup insurance is also important schem Government also provide subsidy for electricity, seeds, fertilizer, drip irrigation, live stock and al provide fund for agriculture allied activities. Now a days in India rapidly growing industry Floricultural. Food processing industry also play most important role in developing agricult sector. Agriculture education assist to develop new technics in agriculture sector and devel Biological Techniques and study of market. New trends in agriculture useful to development agriculture sector.

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Accelerated publication

Optical fiber based humidity sensor using Ag decorated ZnO nanorods

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ABSTRACT

This paper describes the fabrication of fiber optic humidity sensor based on silver decorated ZnO nanostructures. The synthesized powders were characterised by X-ray diffraction, field emission scanning electron microscopy and transmission electron microscopy. The composite mixture of ZnO and Ag-ZnO were coated on plastic optical fiber by brush coating method. Povinyl alchol (PVA) was used as a temporary binder for the coating. The humidity sensing behavior of the fabricated sensors were studied by exposing it to different humidity levels ranging from 20 to 95%RH at room temperature. The optimised nano composite shows better responsivity and recovery time.

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1. Introduction

In recent years, the use of humidity sensors has significantly increased due to various applications in industries, meteorology, health science, civil engineering, solid state electronic devices etc. [1–4]. Therefore, the development of low cost humidity sensors with better performance is of prime importance. Over many years, extensive study of the relative humidity measurement has been done and there is a significant progress in the development of relative humidity sensors [2]. Commercial humidity sensors are mainly comprised of porous ceramics, polymer films etc. These sensors are based on the principle of change in electrical resistance as a function of relative humidity. Furthermore, optical fiber based chemical sensors have attracted increasing interest because of their intrinsic characteristics such as resistance to electrical noise, possibility of real time monitoring and remote sensing [5]. Nanomaterials have also been a subject of intense research in the recent years due to its excellent properties in the area of sensors. There are number of scientific papers are available on nanomaterial based humidity sensors. David et al. [6] have explored low-cost polymeric optical fiber humidity sensor. Cubic Ag dendritic nanostructure with ordered branches was investigated by Juncui et al. [7] for optical humidity sensor application. Optical fibers are the potential candidate for realizing sensing in optical domain because of its very high responsivity to external perturbation [8]. In the present study, plastic optical fibers (POFs) is taken into consideration because of its various advantages over glass fibers such as flexibility, resistant to damage, shorter bend radius, ease of handling, mechanical strength, disposability, easy mass production of components and system etc. [9]. Among different types of nanostructures, ZnO nanoparticles [10], ZnO nanorods [11], Ag-ZnO and Au-ZnO has showed promising properties in the field of sensors and polymers. Further these composites are considered to be a good candidate for practical applications because of its compatibility with ceramics and oxides. Along with this, generally polyacrylamide (PAM) and Polyvinylpyrrolidone (PVP) and poly-vinyl alcohol (PVA) have been used as a polymer matrix to improve the responsivity, operating range, and response time. Hence the aim of the present study is to fabricate the optical fiber relative humidity sensor based on Ag-ZnO composite for better responsivity and operational range. Here ZnO nanostructures were synthesized by solvothermal method and silver was decorated on ZnO nanostructures using photochemical deposition techniques. The phase purity and crystallanity of the prepared Ag-ZnO nanomaterial were investigated using XRD, TEM techniques and the humidity sensing properties of the coated composite nanostructures on optical fibers were studied.

2. Experimental

2.1. Preparation of composite paste

Firstly, appropriate amount (2.5 wt%) of PVA (polyvinyl alcohol) was dissolved in distilled water. This solution was then used as a temporary binder for making the composite paste formulation. A composite paste of ZnO and Ag-ZnO using PVA solution were prepared.

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2.2. Fabrication of optical humidity sensor

The Ag-ZnO based optical humidity sensor having 25 cm in length was fabricated by using plastic optical fibers (POFs). The core of plastic optical fiber having thickness of 980 μm is made of polymethyl methacrylate (PMMA). The cladding is made up of fluoride containing carbon polymer with thickness of 20 μm. To coat the optical fiber using the above prepared composite, initially the central portion i.e. the insulating layer of the optical fiber and thin layer of clad were carefully removed using isopropyl alcohol. The length of the central portion was varied viz. (2 to 12 mm). The central portion of the fiber was then manually coated with the above prepared Ag-ZnO paste using brush and then dried under IR lamp. The schematic of the fabricated sensor is shown in Fig. 1. This coated fiber was then bent to U shape with the bent radius of 8 mm. The ends of the optical fiber were connected to the transmitter and receiver. Power supply of + 5 V was used to power the transmitter and the detector. The experimental set up is shown in Fig. 2. For the sensing experimentations, the set up consisting electrical connections inside the glass dome having capacity of 6 *l* was used. The transmitted output light intensity was measured with respect to change in relative humidity. The change in relative humidity was measured with pre-calibrated standard HANNA Instrument (HI 9565) humidity meter (range: 20–95%RH, accuracy: ± 3%RH. The output voltage from the detector was measured using 4.5 digit multimeter (Model U1252A, Agilent).

3. Results and discussion

3.1. X-ray diffraction analysis

The phase purity and crystallanity of the prepared Ag-ZnO sample were investigated using the XRD technique and the diffractograms are shown in Fig. 3. The sharp and intense diffraction peaks confirmed the formation of highly crystalline ZnO. The diffraction peaks at 2θ = 31.7, 34.4, 36.2, 47.6, 56.7, 62.8 and 67.9° attributed to hkl planes (100), (002), (101), (102), (110) (103) and (112) respectively indicate the formation of hexagonal phase in all the prepared compositions. The XRD pattern of ZnO is well matches with the standard ICDD pattern no. 36-1451, this shows that the prepared ZnO is having hexagonal crystal structure. Additionally, in case of Ag-ZnO samples with 1 and 10 mol% of Ag, the reflection peaks observed at 2θ = 38.1, 44.2 and 64.4° corresponds to cubic metallic Ag. The XRD pattern Ag well matches with the reported ICDD pattern no. 36–04-483 respectively confirming formation of cubic metallic Silver. The presence of Ag and ZnO diffraction peaks in 1 and 10 mol% ZnO XRD pattern (Fig. 3) depicts the presence of Ag in prepared compositions. Also the intensity of Ag peak at 2θ = 38.1° is more in 10 mol% Ag-ZnO than that of 1 mol% Ag-ZnO. This difference in peak intensity also validates the presence of Ag having different amount i. e. 1 and 10 mol%.

3.2. Micro/nanostructure analysis

The synthesized ZnO and Ag-ZnO samples were analysed with FE-SEM and FETEM in order to study the micro and nanostructures. The shape and size of silver and ZnO can be studied using FE-SEM and FETEM analysis and the micrographs of pure ZnO and Ag-ZnO nanostructures are shown in Fig. 4. The FE-SEM revealed the formation of nano as well as sub-micron sized rod like morphology (Fig. 4a, b, c).The nano sized rods have length around 50 to 200 nm and diameter of 30 nm whereas the submicron sized rods are having length and diameter more than 2 and 0.2 μm respectively (Fig. 4b and c). FETEM images of ZnO, Ag decorated ZnO nanorods with 1 mol% Ag and 10 mol% Ag are depicted in Fig.4a',b',c'. The spherical shaped Ag particles are attached to the surface of ZnO nanorods. Overall the FESEM and TEM analysis depicts the presence of Ag nanoparticles on the surface of ZnO nanorods.

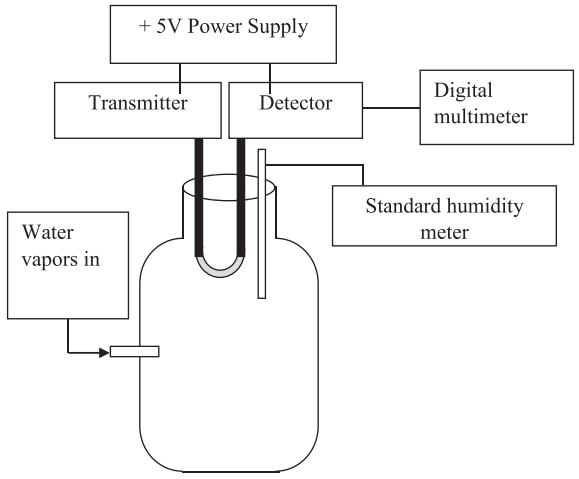

Fig. 2. Schematic of the humidity measurement set-up.

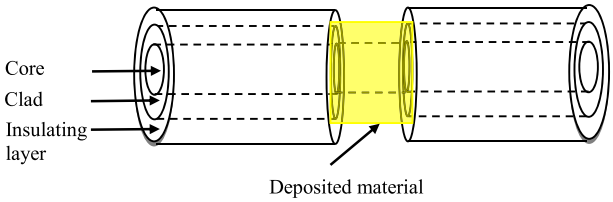

Fig. 1. Schematic of fabricated optical fiber humidity sensor.

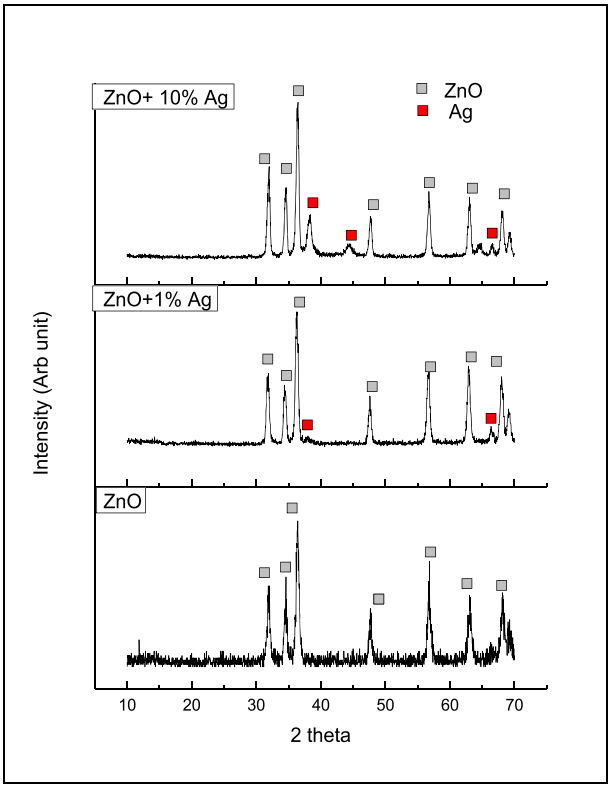

Fig. 3. X-ray diffractogram of the pure and Ag doped (1 and 10 mol%) ZnO powders.

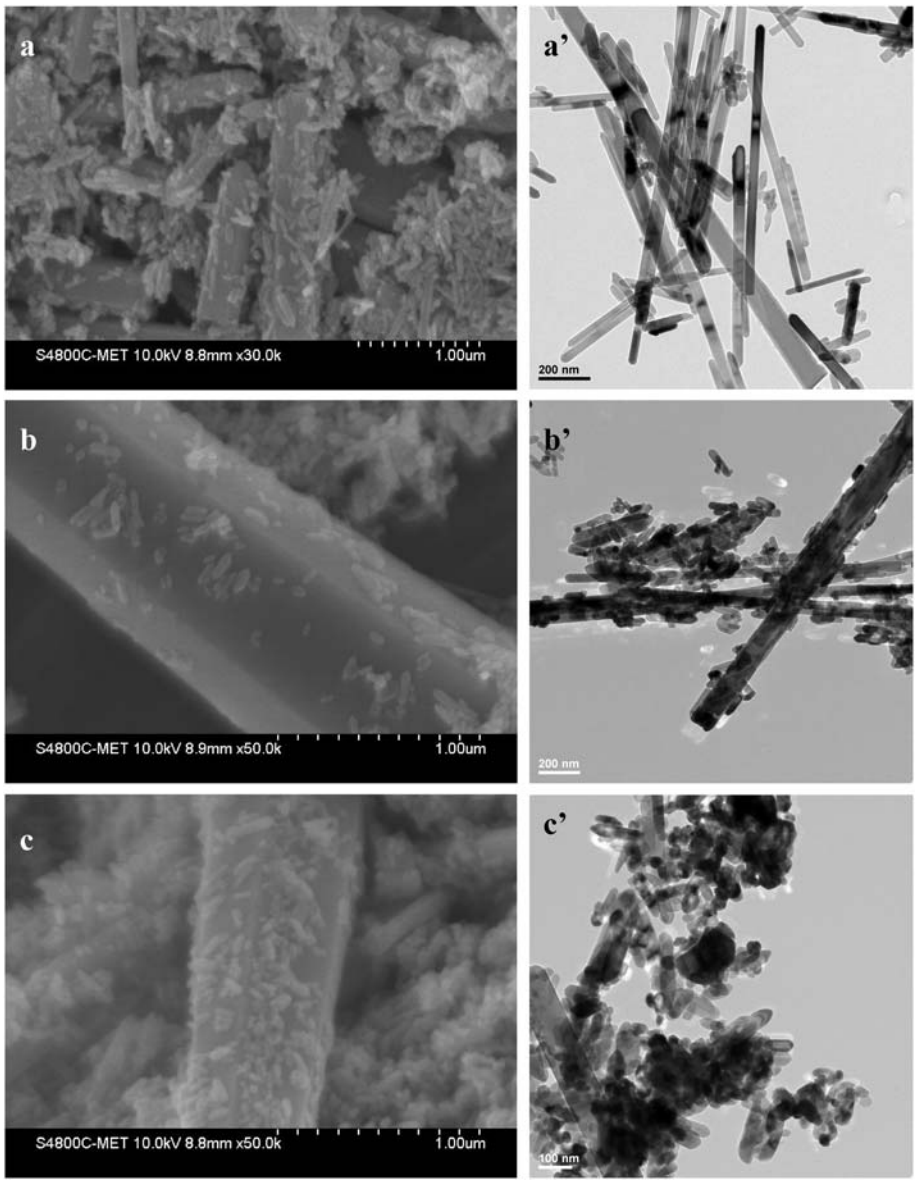

Fig. 4. Microstructure (FE-SEM, a, b, c) and nano structure (TEM, a', b', c') images of pure and Ag doped ZnO nano-composites where a, a') ZnO, b, b') 1%Ag-ZnO and c, c') 10% Ag-ZnO.

3.3. Humidity sensing measurement

3.3.1. Effect of variation of Ag-ZnO composition on the responsivity

Several experiments were carried out to study Ag-ZnO based optical humidity sensor. In the first experiment, various mole percentages of Ag-ZnO composites were coated on plastic optical fiber having clad length of 4 mm. The composite layer thickness was around 10 μm. Fig. 5a shows the graph of responsivity (% normalized output) versus relative humidity (%RH) for different Ag-ZnO composites. Here the output is measured in terms of voltage (typically in mV) and then the normalized output is calculated.

$$\%\ \text{normalized output} = \frac{\text{Observed output voltage at particular Humidity (\% RH)}}{\text{Maximum output voltage observed}} \text{X } 100$$

It is seen from the Fig. 5a that as the responsivity is dependent on the Ag doping in the ZnO. The 5 mol% Ag-ZnO nano composite showed maximum responsivity; the responsivity decreased for other compositions. However, Ag-ZnO composites are more sensitive to humidity than that of ZnO alone. This clearly indicates that Ag nanoparticles play an important role in enhancing the humidity sensing. As the 5 mol% Ag-ZnO nanocomposite showed optimum response, further experimentations were carried out for this optimized composition.

3.3.2. Effect of variation of clad length on the responsivity

Fig. 5b show the graph of responsivity (% normalized output) versus relative humidity (% RH) for different clad length of the optical fiber. It is seen from the Fig. 5b that the responsivity of the sensor increase with respect to the clad length up to 10 mm and beyond it starts decreasing. The highest responsivity was observed for 10 mm clad length. Hence clad length of 10 mm is considered as a best possible length for maximum confinement to the transmitting beam for this particular study. The decrease in responsivity for higher clad length may be due to the decrease in confined light through the fiber. This might be due to the absorption of transmitted light by cladding material. Some researchers have optimized the clad length for 10 mm for Co-polyaniline and 6 mm for Ag-polyaniline based sensors. The variation in the clad length must be due the different material properties, morphologies and their interactions [12,13]. The increase in responsivity with length of clad is

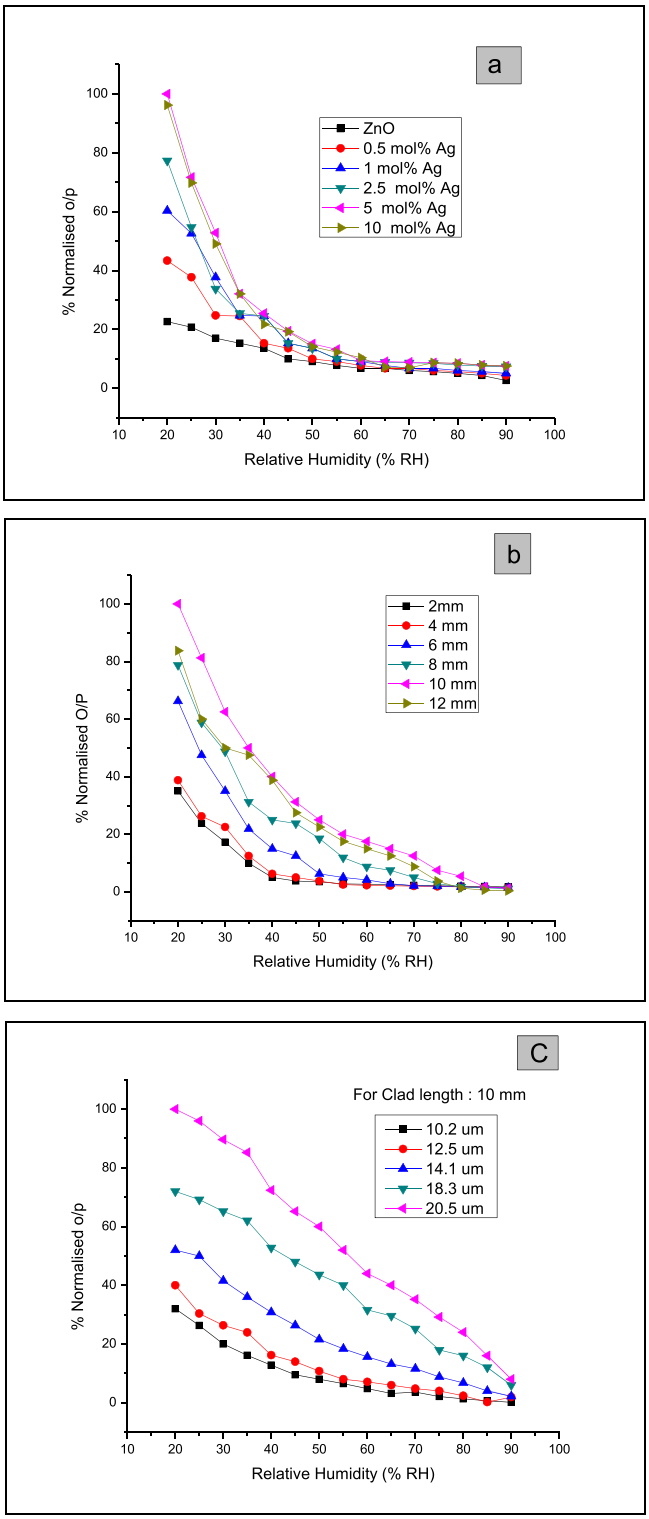

Fig. 5. (a, b, c): Responsivity (% normalized output) versus relative humidity for different Ag-ZnO composites (a), optical fiber clad length (b) and thickness of Ag-ZnO (c).

may be due to the increase in large interacting area. This leads to more adsorption of hydroxyl ion which results in changes in the optical properties resulting in higher responsivity.

3.3.3. Effect of variation of material thickness on the responsivity

The effect of material thickness on the optical fiber was studied for the optimized clad length of 10 mm. Fig. 5c. depicts the graph of responsivity (% normalized output) versus relative humidity (% RH) for different Ag-ZnO thickness over the optical fiber. It was observed from the Fig. 5c that as the relative humidity increases, the responsivity decreases irrespective of material thickness on the optical fiber. The maximum response was obtained for 20.5 μm of thickness. The refractive index may contribute here as it may get increase with respect to thickness leading to decrease in the transmission of light through the films. The thickness of 20.5 μm show maximum responsivity (25.2 mV/%RH) having a fairly linear response over the range of 20–90%RH.

3.3.4. Response and recovery time

The response/recovery time of the fabricated sensor was calculated by considering the time taken by the fabricated humidity sensors to attain 90% of the total output change. The response and recovery time of the sensor was observed to be 10 s (20–90% RH) and 1 min (90–20% RH) respectively. Therefore, we can say that the response of the optical fiber sensor to relative humidity is quite fast but the recovery is comparatively very slow.

3.3.5. Repeatability and reproducibility tests

In the present study, 1% uncertainty from cycle to cycle and uncertainty of about 2% from sample to sample was observed which indicate better repeatability and reproducibility.

3.3.6. Sensing mechanism

The sensing occurs due to the adsorption of water molecules on the surface of the sensing layer. The dissociation of water molecule can be considered as surface reaction which leads to the formation of surface oxides and hence this will effectively change the boundary conditions at cladding-guide interface, this results in increase in beam confinement in the guide. Hence this is responsible for increase in the output intensity. It was observed that the output intensity through the cladded guide was highest for low humidity however it decreases with increase in humidity levels. Hence the humidity phenomenon can be described as, at a low humidity when adsorption starts on the surface, a layer of hydroxyl groups is formed. The water molecules are chemisorbed through a dissociative mechanism by which two hydroxyls per water molecules are formed [13,14]. In intermediate RH range, mono layers of water molecules get adsorbed along sites available due to the thickness of the material on the fiber. At higher RH, water adsorption by the cladding becomes multilayer adsorption in the pores of the cladding and the water molecules will be penetrating deeper up to the cladding guide interface. The refractive index of the clad may get increase and therefore transmitted output is minimum and thus giving lowest responsivity.

4. Conclusion

Ag-ZnO nanocomposites were successfully coated on plastic optical cable which is useful for the construction of an optical sensor for determination of relative humidity. The fabricated sensor is sensitive in the range of 20–90% RH. Its performance is repetitive and the response time and recovery time is considerably good making this sensor useful for RH monitoring in many applications.

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Tourism Potential Suitable Forts Sites in Pune District

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ABSTRACT

In the recent years tourism has grown in India from local economic activity to a major global industry giving employment to a large number of peoples at various levels. Pune district is one of the India with a great potential for tourism. Thus, Pune is rich in physical, cultural, historical, archeological, heritage and religious sites. Even though there is a great potential for tourism in Pune district, the district lacks planning for tourism and supporting infrastructure. In this paper an attempt is made to study the GIS will be as a tool for site suitability for known as well as unknown places in the Pune district of Maharashtra. With considering gravity of this subject, the research has under taken Pune district. Moreover, such study may provide potential suitable sites to increase the tourist to be visited, to boost tourism in the Pune to its full potential.

INTRODUCTION

Tourism is considered as one of the world's largest industry. India is a developing nation. The geographical variations from north to south and east to west in India are favorable for tourism. Maharashtra has different geographical regions such as Konkan, Western Ghat and Plateau region i.e. Desh. These geographical differences produce lots of places of interest in the state.

The geographical environment provides a greater scope for tourism potential. For instance mountains, rivers, waterfalls, forests and wild life etc. act as center of tourist attraction. The potential for tourism development in any area largely depends on the availability of recreational resources such as mountain peaks, rivers, lakes, waterfalls, reservoirs, forts, historical monuments, an object of art fair or festival, also a person can be a tourist resource in addition to factor like climate, accessibility, attitude of local people, towards the nature and the extent of tourism development.

STUDY AREA

The study area, Pune district, usually termed as the cultural capital of Maharashtra. It is situated at 559 m ASL and lies between 17º 54' to 19º 24' N Latitude and 73º 33'to 75º 10'E Longitude. The total geographical area of the district is 15643sq.km. The district headquarters or the district place is Pune. The district consists of 14 tahasils. The area of district is surrounded by Thane district in the north and northwest, Raigarh district in the west, Satara district in south, Solapur district in the south and southeast and Ahmadnagar district to the east. (***Fig. 1)***

OBJECTIVES

Against the above background, the present work attempts to study the Tourist Information System for tourism development in the Pune district. The broad objectives of the proposed study are:

1) To collect the information about tourism facilities available in the study region.
2) To find out potential tourist forts sites and their suitability in the study area.

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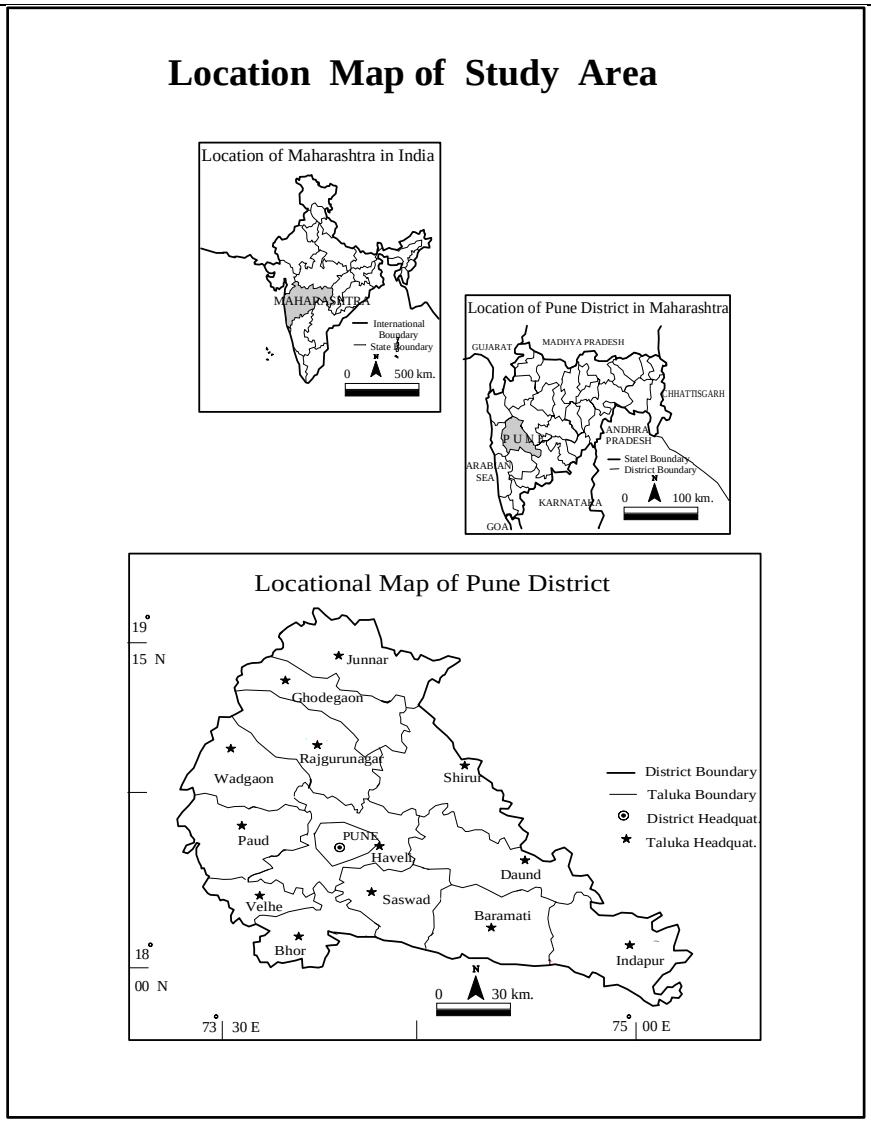

Fig. 1

METHODOLOGY AND DATABASE

In order to understand the potential suitable forts sites in Pune district, the methodology adopted for the present study is divided into three phases are namely pre-field work phase, field work phase and post field work phase.

In the first phase i.e. pre-field work phase literature review i.e. previous work carried out by other researchers are obtained from various journals, internet, visit to the MTDC resort to know about annual tourist flow, collection of survey of India toposheets, Atlas, Gazetteers, District Census Handbook, Tourist maps, etc. use for collection of information, District Resource map of Pune district published by Geological Society of India, Government published map of Pune district P.W.D. map, Digital Elevation Model (DEM) and other were completed with help of S.O.I. toposheets ***(Fig. 2)***.

In the second phase i.e. fieldwork phase extensive field surveys were undertaken, to existed forts. The questionnaire filled in this phase. During this field surveys tourist facilities regarding

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destination photographs, GPS reading altitude and the related information is noted which were also useful to site suitability study.

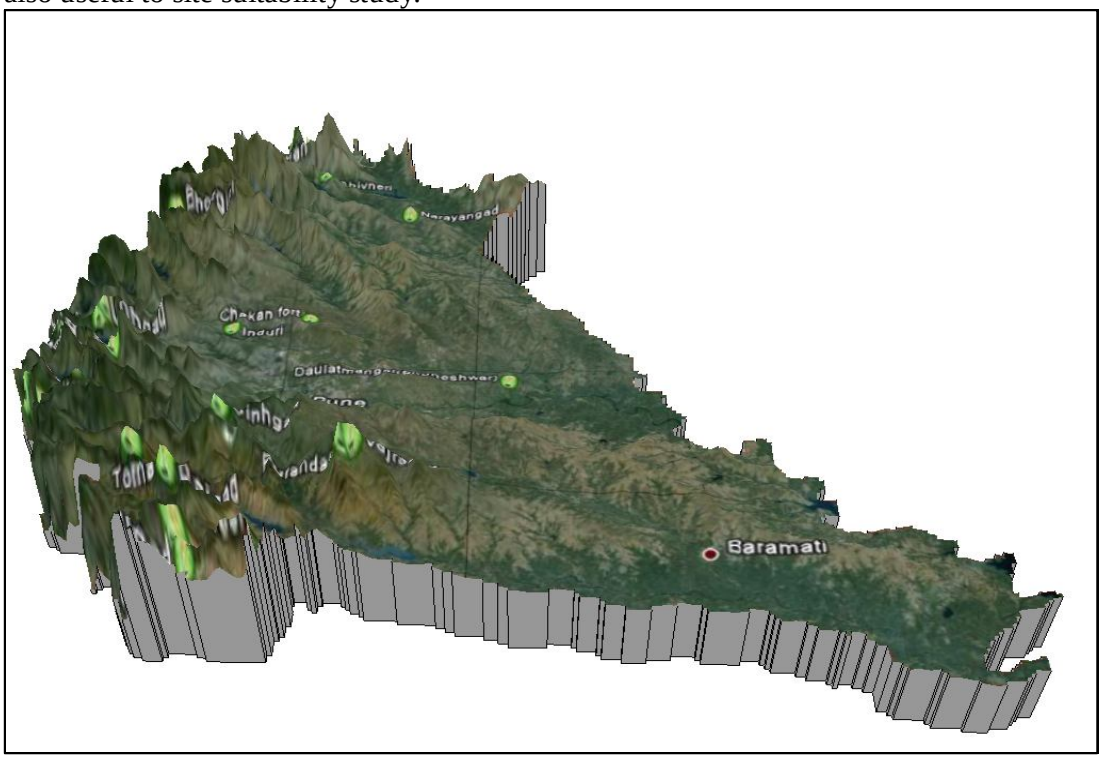

Fig.2

In the third phase i.e. Laboratory worked is carried out. Government published map of (PWD) Pune district is scanning, then digitization to generate thematic layer i.e. point layer- tourist places, tahasil headquarter, line layer- roads, railways, rivers and polygon layer- dams, reservoirs etc. and map were georeference same time. Integrating all above information and maps with help of GIS software various thematic layers were generated. Finally these thematic layers are analyzed to demarcate tourism potential zones and site suitability.

NEW POTENTIAL SUITABLE FORTS SITE

The term potential means something existing but not yet fully exploited. There are various criteria to selecting new potential suitable forts sites i.e. on the basis of phsiography, climate, and purpose of visit, on the basis of natural and cultural resources. The district has vast and rich tourism resource potential of different cultural background in all its 14 tahsils. We classified potential suitable forts sites on the basis of elevation (***Table 1***).

Table 1: Tourism potential fort sites in Pune district

Sr. No	Name of fort	Name of tahasil	Elevation Class (m)	Elevation (m)
1	Chakan	Khed	400-800	618
2	Rajmachi	Mulshi	400-800	692
3	Tung	Maval	800-1200	964
4	Shivaneri	Junnar	800-1200	998
5	Rajgad	Velhe	1200-1600	1307
6	Purandar	Purandar	1200-1600	1320

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Potential suitable forts sites are selected in this manner they represent the entire Pune and same problem found in similar type of tourist centers in throughout the district (***Fig. 3***). Potential suitable forts sites are very rich in natural and cultural resources, these tourism resources are not fully utilized because inadequate tourist facility, lack of information regarding this centers. New potential suitable forts sites can provide more scope for a generation of employment opportunities due to increases tourist facilities in terms of different socio economic and marketing indicators also bring money and reducing the regional disparities in Pune district. New potential suitable forts sites will be reducing the pressure on existed tourist centers and also reducing the migration of local peoples towards the Pune city. The development of tourism of any region may be defined as the creation provision or addition of facilities, amenities and services to meet the needs of the tourist. The facilities such as accommodation, transportation, roads, communication, entertainment and recreation, natural attraction, vegetation, natural attraction and other infrastructural facilities etc. constitute the basic parameter of suitable forts site. An attempt has been made to analyze 11 micro aspects for potential suitable forts sites in Pune district.

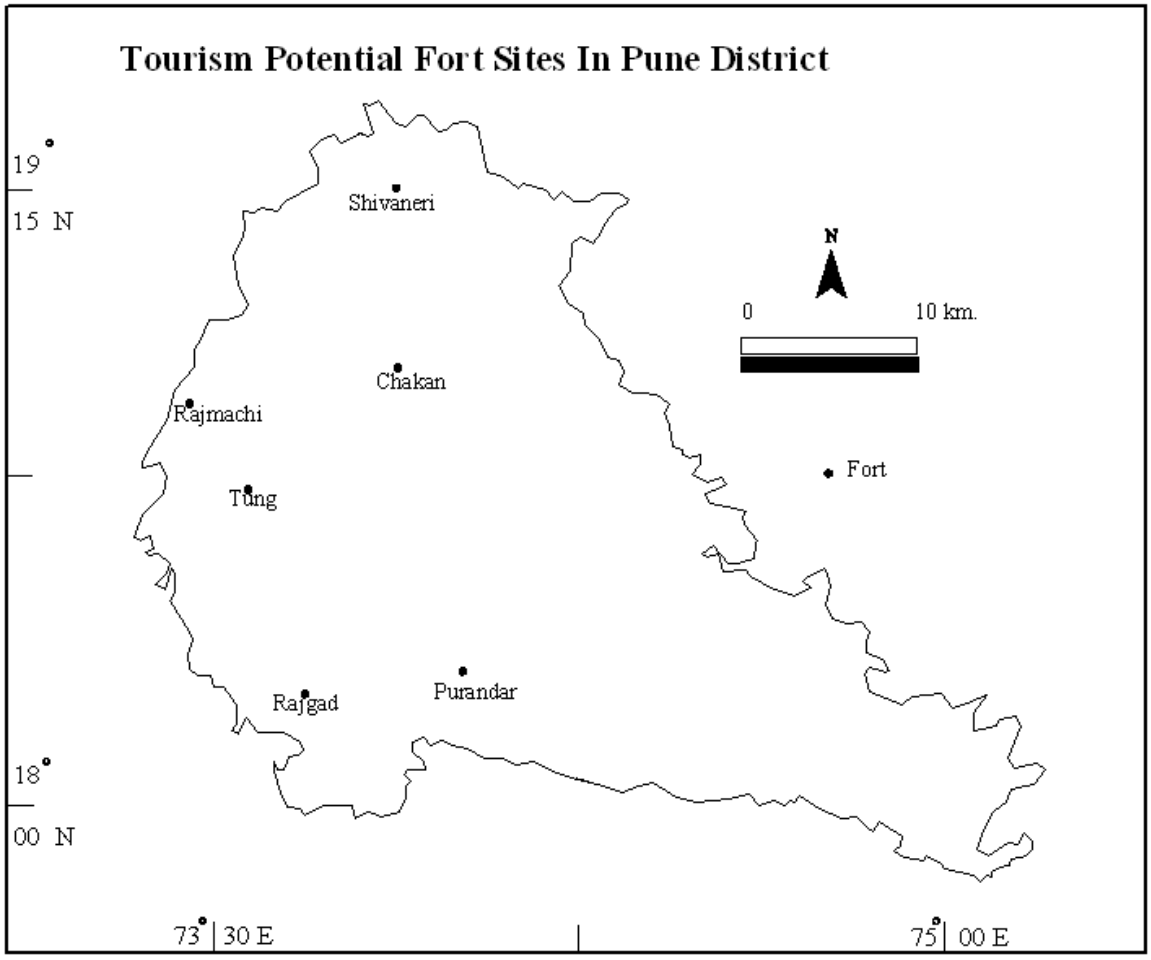

Fig. 3

MATRIX ANALYSIS FOR NEW POTENTIAL SUITABLE FORTS SITE

The potential suitable sites have been analyzed on the basis of above mention parameters so as to judge qualitative and quantitative aspects of tourist infrastructure at these sites. These are natural attraction, vegetation, roads, public transport, and accommodation,

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parking facilities, adventure tourism, recreation facility, drinking water, communication and medical facility. The matrix has been prepared based upon the weighted index method. The various parameters are given weightage on a 1 to 5 scale to find out overall tourist convenience at the potential suitable sites.

Table 2: Matrix analysis for tourism potential fort sites in Pune district

Suitable Site Parameter	Purandar	Chakan	Rajgad	Rajmachi	Tung	Shivaneri
Natural attraction						
Scenic attraction	5	1	5	5	5	4
pleasant weather	5	1	5	5	5	4
Vegetation						
Evergreen	-	-	-	5	-	-
Dry deciduous	4	-	4	-	4	
Shrub/bushes	-	1	-	-	-	3
Roads						
Metalled	-	5	-	-	-	5
Unmetalled	3	-	2	1	1	-
Public Transport	3	5	1	1	2	5
Accommodation	4	4	2	1	2	4
Adventure tourism	5	1	5	5	4	4
Recreation	3	3	3	2	1	3
Parking facility	4	3	3	3	2	5
Drinking water	1	3	4	1	1	5
Medical facility	1	4	1	1	2	3
Communication	4	4	3	1	1	3
Total weight	**42**	**35**	**38**	**31**	**30**	**48**

Source: Field survey 2014-16 **Scale:** 1(Low poor condition), 5(High condition)

CLASSIFICATION OF TOURISM POTENTIAL FORT SITES

The tourism potential fort sites have been analyzed on the basis of their total weight. They are classified such as highly suitable, moderately suitable, suitable, and least suitable. So, from the table 2 it is clear that only Purandar and Shivaneri scores high i.e. 42 and 48 respectively are highly suitable fort sites to be good tourism potential fort sites. Chakan and Rajgad score 35 and 38 respectively are moderately suitable fort sites. Rajmachi score is 31 as suitable fort site. On the other hand certain site like Tung score 30 is least suitable site on most counts. Most of the parameters can be improved immediately, without disturbing the environments of these forts to increase the tourism potential of these fort sites.

Table 3: Classification of Tourism potential fort Sites in Pune District

Sr. no.	Name of fort	Weight	Remark
1	Purandar	42	Highly suitable
2	Chakan	35	Moderately suitable
3	Rajgad	38	Moderately suitable
4	Rajmachi	31	Suitable
5	Tung	30	Least suitable
6	Shivaneri	48	Highly suitable

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CONCLUSION

It is observed that in the present spatial distribution and patterns of tourist places in Pune district, physical factors (topography, climate) play an important role. Present study tries to provide an integrated plan for tourist places in the Pune district with some special case studies. Most of the parameters can be improved immediately without disturbing the eco-system, to increase the tourist potential of these new tourist centers. There are certain proposals for planning these new potential suitable sites to development the infrastructural facility which will boost the local employment generation in this region e.g. Chakan Purandar, Shivaneri Rajgad, Tung and Rajmachi etc. To give attention towards man power development and training through such study can be done by this project.

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SWOT Analysis of Goods and Service Tax and It's Impact on Indian Economy"

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Abstract:

GST means Goods and Services Tax. Goods and Services Tax (GST) is a comprehensive tax levy on manufacture, sale and consumption of goods and services at a national level. One of the biggest taxation reforms in India the (GST) is all set to integrate State economies and boost overall growth. Previously, companies and businesses pay lot of indirect taxes such as VAT, service tax, sales tax, entertainment tax, octroi and luxury tax. After implementation of GST all these taxes are ceased to exist. There is only one tax, that too at the national level, monitored by the central government. GST is also different in the way it is levied — at the final point of consumption and not at the manufacturing stage. Previously, separate tax rates were applied to goods and services. Under GST, there is only one tax rate for both goods and services. The goods and services Tax is indeed a further significant improvement towards a comprehensive indirect tax reforms in the country. Integration of goods and services taxation would give India a world class tax system and improve tax collections. It would end distortions of differential treatments of manufacturing and service sector. GST is expected to create a business friendly environment, as price levels and hence inflation rates would come down overtime as a uniform tax rate is applied. It will also improve government's fiscal health as the tax collection system would become more transparent, making tax evasion difficult. An attempt is made in this paper to study SWOT Analysis, the concept of goods and service tax and its impact on Indian economy. The study also aims to know the advantages and challenges of GST in Indian scenario.

Keywords: Goods and Services Tax, Indian Economy, Central Government, State Government, SWOT, value added tax.

Introduction

GST means Goods and Services Tax. A very significant improvement over the local sales tax system is Goods and Services Tax (GST). GST, one of the biggest taxation reforms in India is all set to assimilate Economies of the State and boost up the overall economic growth More than 150 countries have implemented GST so far. However, the idea of GST in India was mooted by Vajpayee Government in 2000. GST was contemplated in 2004 by the Task Force on implementation of the Fiscal Responsibility and Budget Management Act, 2003, named Kelkar Committee. The Kelkar Committee was convinced that a dual GST system shall be able to tax almost all the goods and services and the Indian economy shall be able to have wider market of tax base, improve revenue collection through levying and collection of indirect tax and more pragmatic approach of efficient resource allocation. Under the Goods and Service Tax mechanism, every person is liable to pay tax on output and shall be entitled to enjoy credit on input tax paid and tax shall be only on the amount of value added. Accordingly, the constitutional amendment for the same was passed by the Lok Sabha on 6th may,2015. GST system was launched at a function in Central Hall of Parliament on 1st July ,2017 (Friday midnight). GST, which embodies the principle of "one nation, one tax, one market" is aimed at unifying the country's $2 trillion economy and 1.3 billion people into a common market. Under GST, goods and services fall under five tax categories: 0 %, 5 %, 12 %, 18 %and 28 %. For corporate, the elimination of multiple taxes will improve the ease of doing business. And for consumers, the biggest advantage would be in terms of a reduction

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in the overall tax burden on goods. "Inflation will come down, tax avoidance will be difficu India's GDP will be benefitted and extra resources will be used for welfare of poor and weake section," Finance Minister Arun Jaitley said at GST launch event in Parliament. The Lok Sabha ha finally Passed Thus, there would be only one tax, at the national level, and it will be monitored b Central Government of India. After the implementation of GST there is only one tax for every goo and services. Assimilation of taxation of goods and services would be a great move by the India Government and would also help them in tax collections. The expectations from GST is to create business-friendly environment, as cost price and henceforth, rate of inflation would fall over period of time as a uniform tax rate would be applicable. GST Bill and it is expected to have significant impact on every industry and every consumer.

Research Methodology

The Research paper is descriptive type and is based on empirical study. Secondary data coll from various books, National & international Journals, government reports, publications various websites which focused on various aspects of Goods and Service tax.

Objective of study:

- To highlight Impact of GST on Indian Economy
- To know the advantages and challenges of GST in Indian context.
- To understand SWOT analysis of GST

Importance of the Study:

1. The study will highlight the effect of GST on Indian Economy.
2. It will prove to be of great help to a common man to understand the concept the GST.
3. It will remove the morbid fear of GST from among the business community members.

Need for GST:

- The main reason behind introducing GST is to improve the economy of the nation.
- VAT rates and regulations differ from state to state. It has been observed that states ofte resort to slashing these rates for attracting investors. This results in loss of revenue for bo the Central as well as State government.
- On the other hand, GST brings in uniform tax laws across all the states spanning acro diverse industries. Here, the taxes would be divided between the Central and Sta government based on a pre-defined and pre-approved formula. In addition, it would becom much easier to offer services and goods uniformly across the nation, since there won't any additional state-levied tax.
- GST rollout missed several deadlines due to disagreement among many states over certa important issues on the new tax reform. However, GST is scheduled for a nation-wi rollout on July 1st, 2017

Features of GST

1. GST is one indirect tax for the entire nation, which will make India "one unified com market".
2. It will replace multiple taxes like VAT, CST, Excise Duty, Entry Tax, Octroi, LBT, Luxu Tax etc.
3. There are four types of GST namely:
   a) SGST – State GST, collected by the State Govt.
   b) CGST – Central GST, collected by the Central Govt.
   c) IGST – Integrated GST, collected by the Central Govt.
   d) UTGST – Union Territory GST, collected by the Union Territory

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4. Tax Payers with an aggregate turnover in a financial year up to [Rs. 20 Lakhs &Rs. 10 Lakhs for North Eastern Sates and Special Category States] would be exempted from tax.
5. GST slabs are pegged at 5%, 12%, 18% & 28%.

Impact of GST in India:

Positive Impact of GST in India:

- GST is a single taxation system that will reduce the number of indirect taxes. From now, a single taxation term would cover all of those indirect taxes.
- The prices of products and services would reduce; thus this system would prove to be beneficial for the people who are fed up of paying high prices.
- This would reduce the burden from the state and the central government. With the introduction of GST, all indirect taxes would come under a single roof.
- GST would not be charged at every point of sale like other indirect taxes so in this way, market would be developed.
- Corruption-free taxation system. GST would introduce corruption-free taxation system.
- Less tax compliance.
- Removes cascading effect of taxes.
- Manufacturing costs will be reduced, hence prices of consumer goods likely to come down.
- Due to reduced costs some products like cars, FMCG etc. will become cheaper.
- A unified tax regime will lead to less corruption which will indirectly affect the common man.

Negative Impact of GST in India:

1. The introduction of GST in the country will impact real estate market. This would increase new home buying price by 8% and reduce buyers" market by 12%.
2. GST is a mystifying term where double tax is charged in the name of a single tax.
3. Most of the dealers don't pay central excise tax and cheat the government by simply giving the VAT. But all of those dealers would now be forced to pay GST.
4. The short-term impact of GST is expected to be neutral-to negative for the broader economy.
5. Production processes are likely to take some time to align with the new framework as firms adjust to the input tax credit system and better manage working capital requirements.
6. For consumers, it will be a mixed bag as some goods become cheaper while others will be expensive.
7. Services will become expensive e.g. Telecom, banking, airline etc.
8. Being a new tax, it will take some time for the people to understand it's implications.
9. There are always some complications attached. It is a consumption based tax, so in case of services the place where service is provided needs to be determined.
10. If actual benefit is not passed to consumer and seller increases his profit margin, the prices of goods can also see a rising trend.

However, GST is a long term strategy and the positive impact shall be seen in the long run only. Let us hope GST proves to be a game changer in a positive way and proves to be beneficial to the common man.

Impact of GST on Indian Economy

The Goods and Service Tax (GST) bill is expected to have wide ranging ramifications for the complicated taxation system in the country. It is likely to improve the country's tax to GDP ratio

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and also inhibit inflation. However, the reform is likely to benefit the manufacturing sector but m make things difficult for the services sector. Though there are expectations that the GDP growth likely to go up by 1 to 2 %, the results can only be analyzed after the GST implementation. Wh the New Zealand economy had a higher GDP growth, it was lower in case of Canada, Australia an Thailand after the GST was implemented. The one per cent tax that has been proposed as a sop appease the States for compensating their loss of revenue from the interstate CST is likely to play spoil sport. It is probable that it may affect the GDP adversely. The congress is already oppos the 1 per cent tax. The GS Tax rate ranges from 0% to 28%. This tax rate is not likely to give a incremental tax revenue to the government. The rate will prove beneficial for the manufacturin sector where the tax rate is around 24% at present. The major manufacturing sectors that w benefit the most are FMCG, Auto and Cement. This is because they were previously reeling unde 24 to 38 per cent tax. The sector which is going to be adversely affected is the services secto Already there has been a hike from 12 to 14% from the 1st of June last year. Another 4 per cent increase will break their backs. The uniformity in the taxation rate is fine but it should not result disparity for the goods and services sectors. Nobody has thought of the implications it will have the services sector if the government moots a higher GS Tax rate like20% or 24%. The higher GS rate will definitely boost the tax to GDP ratio, while giving financial muscle to the government increasing the capital expenditure.

There is definitely a silver lining to the whole exercise. The unorganized sector which enjo the cost advantage equal to the taxation rate can be brought under the GST bill. This will bring a of unorganized players in the fields like electrical, paints, hardware etc.
under the tax net. It is easier said than done. It will take a lot of meticulous planning in t implementation of the GST reform for capturing the unorganized sector under its ambit. For one will widen the tax reach and secondly it will benefit the organized players who lose out revenue the unorganized sector at present. There are still a lot of unchartered territories which need to looked into through parliamentary discussions in the sessions. This will bring sanctity to t taxation system with out hurting any of the sectors adversely. To The Individuals and Compan with the collection of both the central and state tax is proposed to be made at the point of sale, bu components will be charged on the manufacturing costs and the individual will benefit fro lowered to increase in consumption thereby profiting companies

SWOT Analysis of GST

Strengths of Goods and Service Tax in India

1) It will be dropping out the cascading effects of tax on production and distribution of goo and services which will competitiveness and consequently, GDP will increase.
2) It will apply all goods and services except some exempted products
3) Tobacco is not exempted from the area of GST. It is treated as Sin goods and come und the taxation with central excise tax.
4) Natural gas, Aviation Turbine Fuel (ATF), High Speed Diesel (HSD), Crude oil, Pe products are exempted till the GSTC (Goods and Service Tax Council) discloses date their formation.
5) Alcohol, real estate, custom duty and electricity are exempted from GST. (Proposed artic 366 (12A).
6) GST would be dual taxation system. It would be charged intra-State by Central and St Governments. It would be called CGST (Central Goods and Service Tax) and SGST (St Goods and Service Tax).

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Weaknesses of GST System in India

1) The doorstep goal is very ground level for traders and service providers. It will raise appropriation of government ways and means which are costlier than government's revenue.
2) GST is a subsume of various States and Central taxes like excise duty, cess, service tax, countervailing duty etc., but many more are left which should be included like electricity, alcohol etc.
3) GST for States and Central (SGST, CGST) seems to be different, further it can be diversified on the basis of location, geographical structure etc.
4) The tax rate is depending upon availability of fund in States. The States has power to increase the rate according to their need.
5) This system is very fond of technology, but India is a developing country where people are not habitual of technology.

Opportunities of GST in India

1) The rates of tax are set at ground level which will help States and Unions to collect more revenue.
2) It will reduce the transaction costs and wastages of scare resources because at a one registration people can do transactions from States and Unions. So, it will connect the whole nation from a single click.
3) In indirect tax structure multiple taxes were charged from taxpayers. But GST will eliminate the taxes on chain of transactions.
4) GST is also known as "One Point Single Taxation System". This is a helping hand for businessman's, they can come to agreement on price modalities, supply chain etc.,
5) GST will reduce average tax burden of consumers. They will be certain about their taxes which will reduce evasion of taxes.
6) GST can provide the opportunity of Corruption Free Indian Revenue Services. The root of corruption found in political system. It will bring transparency in Indian political system.

Threats of GST in India

1) Inter-States supply of goods and services are considered as import and IGST will be applied(1%) in addition to custom duties.
2) The Central government promised for compensation to loss making States for a period of5 years. The compensation will be as; 100% for first 3 years, 75 % for 4th year and 50% for 5th year. So, it is possible that all States does not implement it in effective manner to get compensation.
3) GST is not friendly with banking sector. Because the cost of goods become cheaper after GST and it will promote export. Previously, 14%service tax was levied on baking transactions. GST will make these transactions costlier. Overland above, in most of countries banking sector is excluded from GST.
4) GSTC (Goods and Service Tax Council) will set the benchmark for resolving the dispute on recommendations of GSTC. It means GSTC will lay down the criteria for GSTC itself. It is against the principle of natural justice.
5) GST is not a guarantee in itself that it would not be influenced by political parties and politicians will not use it as a win-loss game.

Conclusion

Tax policies play an important role on the economy through their impact on both efficiencies and equity. A good tax system should keep in view issues of income distribution and, at the same time, also endeavor to generate tax revenues to support government expenditure on public services

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and infrastructure development. The ongoing tax reforms on moving to a goods and services ta would impact the national economy, International trade, firms and the consumers There has been good deal of criticism as well as appraisal of the proposed Goods and Services Tax regime. It considered to be a major improvement over the previous central excise duty at the national leve and the sales tax system at the state level, the new tax will be a further significant breakthrough a the next logical step towards a comprehensive indirect tax reform in the country. GST is not simp VAT plus service tax, but a major improvement over the previous system of VAT and disjointe services tax a justified step forward. A single rate would help maintain simplicity and transparenc by treating all goods and services as equal without giving special treatment to some 'special' good and/or services. This will reduce litigation on classification issues.

It is also expected that implementation of GST in the Indian framework will lead commercial benefits which were untouched by the VAT system and would essentially lead t economic development. Hence GST may usher in the possibility of a collective gain for industry trade, agriculture and common consumers as well as for the Central Government and the Sta Government. Sooner or later, the GST will surely knock the doors of India. And when that happe we as future torch bearers of the profession are required to be prepared and fully equipped with o knowledge regarding GST. Forewarned is forearmed. Thus, we must be ready to deal with GST a many other changes that are going to take place in India. Slowly, India shall move to join the wo wide standards in taxation, corporate laws and managerial practices and be among the leaders these fields. In short GST is at the infant stage in Indian economy. It will take some time experience its effects on Indian economy. GST mechanism is designed in such a way that it expected to generate good amount of revenue for both central and state government. Regardi corporate, businessmen and service providers it will be beneficial in long run. It will bri transparency in collection of indirect taxes benefiting both the Government and the people of Indi

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Types of Cyber Crimes and Cyber Law

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Abstract:
WHY CYBER CRIMES? Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of online banking; shopping through which bank accounts can be hacked and financial motive of the person committing fraud can be achieved. Terrorize create social instability in the country, by targetting specific youth to engage into unlawful activities and spoil the energetic resourceful force of the nation. India ranks 11th in cyber crimes in the world, The main reason is wide availability and use of computers and internet in India. Also wide user base results in increased crime rate. Many crimes get registered with the Police authorities, but almost 50% of the cyber crimes go unreported.

Keyword: Cyber Crime, Law, Protection, Information Technology

Introduction:

Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of we shop online. We work online. We play online. We live online. As our lives increasingly depend on digital services, the need to protect our information from being maliciously disrupted or misused is really important. This free online course will help you to understand online security and start to protect your digital life, whether at home or work. You will learn how to recognise the threats that could harm you online and the steps you can take to reduce the chances that they will happen to you. With cyber security often in the news today, the course will also frame your online safety in the context of the wider world, introducing you to different types of malware, including viruses and trojans, as well as concepts such as network security, cryptography, identity theft and risk management.

Objectives:

1) To find out how Crime is an illegal activity which leads to destruction?
2) To understand how Cyber crime is a serious emerging threat to society, entire nation and world and how to take steps to be safe.

Research Methodology:

Secondary data in the form of Books, Internet and Web sites are used to collect information on the topic also interview with Ms.Sweta Verma crime reporter of Maharashtra state.

Hypothesis:

1)Introduction of strict laws will help to control crimes.
2)Proper care by the individuals will definitely reduce the cyber crimes.

Cyber Crimes:

- Computer or Cyber Crime refers to a crime that involves a computer and network.
- Unauthorized access to computer systems.
- A Computer can be used to create nuisance and disturbance in society
- Pornography, Threatening emails, Sexual Harassment, Spam, Phishing, Hacking , Worms, Viruses etc are some examples of Cyber crimes.

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- Cyber Squatting, Cyber Stalking, Phishing are some more emerging crimes in today's world.

Protection of Cyber crimes:

- As rightly said prevention is better than cure, we must also take steps to prevent this crime from taking place.
- Various measures have been taken even by the governments of various countries to encounter threats arising out of cyber crime.
- Also technical help is offered to protect computers from being hacked and misused.

Technical Help Components:

- Keeping the computer up-to-date with latest patches and software versions.
- Choosing of strong passwords & keeping them safe.
- Protecting the data in the computer by use of software security like quick heal, avast etc.
- Make proper privacy settings for social media applications
- Do not visit untrusted websites or hyperlinks that look visually attractive but are usually formed to let the virus creep in once u click on it.
- Ignoring pop ups
- Keep different passwords on different websites and for different purposes (Shopping, banking different passwords)

The main provisions that govern cyber law are contained in Information Technology Act, 2000

- It covers the following aspects:
- Cyber crimes
- Electronic and digital signatures
- Intellectual Property
- Data protection and Privacy.
- Punishments for committing cyber crime
- Government authorities to monitor cyber crimes

Top 10 Steps To Help Stop Cybercrime

You've probably heard the adage "information is power," and that is certainly true when it comes to cyber crime. Access to your personal information is what gives hackers the power to tap into you accounts and steal your money or your identity. But the right information can also empower you to protect yourself from being caught up in the thriving industry that is cybercrime.

With that in mind, here is our Top 10 list of steps you can take to avoid becoming a victim of cybercrime.

1) Education - Hackers aren't the only ones who can gain power from information. By educating yourself about the types of scams that exist on the Internet and how to avert them, you are puttingyourself one step ahead of the cybercriminals.Since phishing is prevalent, read up on the latest phishing scams and learn how to recognize a phishing attempt. Remember, phishing is when hackers attempt to lure you into revealing personalinformation by pretending to be a legitimate organization or person. These scams often play off major new stories, so keep informed on the latest news-related scams.

2) Use a firewall - Firewalls monitor traffic between your computer or network and the Internet and serve as a great first line of defense when it comes to keeping intruders out. Make sure to use the firewall that comes with your security software. And if you have a home wireless network, enable the firewall that comes with your router.

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3) Click with caution - When you're checking your email or chatting over instant messenger (IM), be careful not to click on any links in messages from people you don't know. The link could take you to a fake website that asks for your private information, such as user names and passwords, or it could download malware onto your computer. Even if the message is from someone you know, be cautious. Some viruses replicate and spread through email, so look for information that indicates that themessage is legitimate.

4) Practice safe surfing - When navigating the web, you need to take precautions to avoid phony websites that ask for your personal information and pages that contain malware. Use a search engine to help you navigate to the correct web address since it will correct misspellings. That way, you won't wind up on a fake page at a commonly misspelled address. (Creating a phony site at an address similar to the real site is called "typosquatting," and it is a fairly common scam.) You may also want to use a product like McAfee® SiteAdvisor® software to help you navigate.

Site Advisor software is a free browser tool that tells you if a site is safe or not right in your search results, so you are warned before you click.

5) Practice safe shopping - In addition to practicing safe surfing, you also need to be careful where you shop online. Be cautious when shopping at a site that you've never visited before and do a little investigation before you enter your payment information. Look for a trustmark, such as McAfee SECURE™, to tell you if a site is safe.

And when you're on a payment page, look for the lock symbol in your browser, indicating that the site uses encryption, or scrambling, to keep your information safe. Click on the icon to make sure that the security certificate pertains to the site you are on. When it comes time to pay, use a credit card instead of a debit card. If the site turns out to be fraudulent your credit card issuer may reimburse you for the charges, but with a debit card your money is gone.Finally, evaluate the site's security and privacy policies in regards to your personal data.

6) Use comprehensive security software and keep your system updated - Because hackers have a wide variety of ways to access your system and information, you need comprehensive security software that can protect you from all angles. Software like McAfee® SecurityCenter, available preloadedon Dell™ PCs, can help protect you from malware, phishing, spyware, and other common andemerging threats.Just make sure that you keep your security software up to date by selecting the automatic update function on your security control panel. And don't forget to perform regular scans.You also want to update your operating system (OS) and browser with the latest security patches. Ifyou are a Microsoft Windows user, you can enable automatic updates to keep your OS safe.

7) Secure your wireless network - Hackers can access data while it's in transit on an unsecured wireless network. You can keep the hackers out by enabling the firewall on your router and changing the router's administrator password. Cybercriminals often know the default passwords and they can use them to hack into your network. You may also want to set up your router so it only allows access to people with passwords that are encrypted. Check your owner's manual for instructions on setting up encryption.

8) Use strong passwords - Although it may be easier for you to remember short passwords that reference your birthday, middle name, or pet's name, these kinds of passwords also make it easy for hackers. Strong passwords can go a long way in helping secure your information, so choose a password that is at least 10 characters long and consists of a

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combination of letters, numbers and special characters. Also consider changing your password periodically to reduce the likelihood of it being compromised.

9) Use common sense - Despite the warnings, cybercrime is increasing, fuelled by common mistakes people make such as responding to spam and downloading attachments from people they don't know. So, use common sense whenever you're on the Internet. Never post personal information online or share sensitive information such as your social security number and credit card number. Exercise caution when clicking on any links or downloading any programs.

10) Be suspicious - Even if you consider yourself cyber savvy, you still need to keep your guard up for any new tricks and be proactive about your safety. Backup your data regularly in case anything goes wrong, and monitor your accounts and credit reports to make sure that a hacker has not stolen your information or identity.

Cyber Laws:

Sections 65 to 74 are the penal provisions

- Imprisonment up to 10 years provided

Section 65 – Source CodeMost important asset of software companies

Imprisonment up to 3 years and / or fine up to Rs 2 lakh

- Knowingly or intentionally –Concealing- Destroying- Altering
- Knowingly or intentionally causing another to do so

Section 66 -Covers the following in relation to information:

- Unauthorised access-Downloading, -copying or extracting information
- Introducing viruses and contaminants (worms, trojans)-Damaging a computer-Disruption of a computer-Denial of access-Assisting in illegal access
- Tampering or manipulating computer-Destroys, deletes or alters information-Steals, conceals or alters source code

- Imprisonment up to 3 years and / or fine up to Rs 5 lakh
- Knowledge or intention must be proven

Section 66

Sending offensive messages through communication service-3 years and fine

Dishonestly receiving stolen computer resource or communication device-3 years and / or fine of 1 lakh

Cheating by personation -3 years and fine of 1 lakh

Violation of privacy -3 years and / or 2 lakhs

Cyber Terrorism -Life imprisonment

- **Section 66A** – Sending offensive messages through communication services
- **Section 66B** – Dishonestly receiving stolen computer resource or communication device
- **Section 66C** – Identity theft
- **Section 66D** – Cheating by personation by using computer resource

  Publishing or transmitting obscene material in electronic form -3 years and 5 lakh; 5 years and 10 lakh

Section 67A -Publishing or transmitting sexually explicit material in electronic form - 5 years and 10 lakh; 7 years and 10 lakh

Section 67B - Publishing or transmitting depicting children in sexually explicit material in electronic form -5 years and 10 lakh; 7 years and 10 lakh

Section 67C -preservation aSection 69B

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- power to authorise to monitor and collect traffic data or information through any computer resource for cyber security
- Section 72A -punishment for disclosure of information in breach of lawful contract
- Section 79 -exemption from liability of intermediary in certain cases

Section 85 -Offences by companies-Holds that a company and its directors can be held accountable for crimes

Types of cyber crime

Cybercrime is a type of crime done by the help of computer and internet. It is basically extension of traditional crime with the help of new technology. The nature of cybercrime is virtual because in this crime there is no need to involve manually, but effects are the same as traditional crime. Today the use of computer and internet are growing very fast. We use them for doing important works of our daily life. In fact we cannot live without computer and internet and so, the chances of being a victim of cyber crime is increasing fast. The cyber criminals target our information which we provide them accidentally while using computer and internet. There are so many types of cyber crimes which can harms a person.

1) Hacking Hacking is a type of cyber crime. In simple words Hacking is an act by which a person accesses a computer system or network without permission of the owner. The person doing the hacking is called Hackers. They have best knowledge and understanding of computer and computer program. They misuse their knowledge and commit the crime of hacking. Hackers are also called crackers. There are many types of hackers like White Hat Hackers, Black Hat Hackers, Grey Hat Hackers etc. Among all of them, White Hat Hackers are the persons who use their knowledge for good purpose and check the security of any system or software.

2) Online Identity Theft Online theft is also a major type of Cybercrime. Nowadays, people using the Internet frequently use their sensitive data like. Bank details, credit card details, etc. on the Internet and cyber criminals target these data and commit online theft. Cyber criminals also target copyrighted content on the Internet and download and distribute it. This is a one part of Online Theft on the other hand there is an advanced stage of online theft that is called Identity Theft. We all know that a normal internet user has many online account including many social networking accounts and they all have their username and password. Cybercriminals target that username and password and use the account behalf of original owner of the account. It damages the online presence and reputation of owner of account holder. It may also cause financial loss sometimes.

3) Denial-of-Service Attack In simple word Denial-of-Service referred the act by which a user of any website or service denied to use the service or website. In this type of cyber crime criminals target the web server of the websites and flow a large number of requests to that server. This causes the use of maximum bandwidth of the website, and it goes slow down or not available for some times

4) Phishing Phishing an act by which cyber criminals attempt to know the confidential data of any internet user. The Data may be the credit card number or username and password of any account. The main purpose of Phishing is to steal money or acquired other important data of any person, which causes financial loss.

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The act of Phishing done by sending e-mail or websites in which cyber criminals ask about your personal information or there is a link, and they tell click on it. After clicking on that link the person may be the victim of Phishing.

5) Spamming and Email Bombing Spam is a message also known as junk mail, send with a web link or business proposal. Clicking on this link or responding to business proposal send to a phishing website or install a malware in your computer. The sender of these emails are always unknown. You must aware to responding these type of spam mails because it tends towards some financial and data loss.
On the other hand in email bombing an abuser sending huge numbers of email to target address and due to this that email address or mail server crashed. It feels like Denial-of-service impact. It says that spamming is a variant of Email bombing.

6) Web Jacking The world Web Jacking comes from Hijacking. In this type of cybercrime the cybercriminals hacks the control of a website. They may able to change the content of that website. They use that website as like owner and the real owner of website has no more control on the website. Sometime attackers asks for ransom to the owner of the website

7) Data Diddling Data Diddling is unauthorised altering of data. When a person enter some data to his computer and output is different from input then he may victim of data diddling.It is done by a virus progarm that change the entered data.

8) Software Piracy Software Piracy is also a type of cybercrime and unfortunately most of Computer user are part of this crime. In this era of the Internet, you can easily download a movie or software via many websites or torrents. People often use a software without proper permission from the copyright holder of the software. They normally download the software and crack the code and use the software without buying that. This act is also a part of software
piracy.
The following type of work constitute a cyber crime of Software Piracy.
1.Crackingthekeyofanysoftware.
2.Usingunlicensedsoftwareinyourpersonalcomputer.
3.Usingsinglelicensedsoftwaretomultiplecomputer.
4. Distributing such type of software to other persons.

Conclusions (or) How Can You Stay Safe?

- Keep your operating system updated/patched. Set it to "auto update".
- Use anti-virus and anti-spyware software and keep them updated.
- Do not visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Secure your transactions. Look for the "lock" icon on the browser's status bar and be sure "https" appears in the website's address bar before making an online purchase. The "s" stands for "secure" and indicates that the communication with the webpage is encrypted.
- Be cautious about all communications you receive including those purported to be from "trusted entities"and be careful when clicking links contained within those messages.
- Do not respond to any unsolicited (spam) incoming e-mails.
- Do not open any attachments contained in suspicious emails.
- Do not respond to an email requesting personal information or that ask you to "verify your information" or to "confirm your user-id and password."
- Beware of emails that threaten any dire consequences should you not "verify your information".

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• Do not enter personal information in a pop-up screen. Providing such information may compromise your identity and increase the odds of identity theft.
• Have separate passwords for work related and non-work related accounts.

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"GST-Input credit and set off Mechanism in India."

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Mamasaheb Mohol Mahavidalaya, Puad Road, Pune-38.

"ABSTRACT"

"GST is called as one nation, one tax.This is a major indirect tax reforms after the independence of India. India is under developing country, therefore this type of reforms is the necessity of the time. Under GST Input tax credit and set off mechanism play a vital role. Under the old system of indirect taxation, some of the taxes cannot be set off. There was cascading effect.it was also creating pressure on the dealers' solved all the issues"

Introduction and Meaning: -

Due to Liberalisation, Privatisation and Globalization (LPG) policy, there are tremendous changes in the operation of Business in India. After demonetization of Indian currency by The Honourable Prime Minster, Shri Narendra Modiji, has made many changes under direct and indirect taxes. One major change in Indirect Taxes was the introduction of GST.

The single GST(goods and service taxes) replaced several former taxes and levies which included: central excise duty, services tax, additional customs duty, surcharges, state-level value added tax and Octroi. Other levies which were applicable on inter-state transportation of goods have also been done away with in GST regime. GST is levied on all transactions such as sale, transfer, purchase, barter, lease, or import of goods and/or services. India adopted a dual GST model, meaning that taxation is administered by both the Union and State Governments. Transactions made within a single state are levied with Central GST (CGST) by the Central Government and State GST (SGST) by the State governments. For inter-state transactions and imported goods or services, an Integrated GST (IGST) is levied by the Central Government. GST is a consumption-based tax; therefore, taxes are paid to the state where the goods or services are consumed not the state in which they were produced. Under the previous system, a state would only have to deal with a single government in order to collect tax revenue.

Input Tax Credit. -

Input tax means tax paid on purchase of goods and services. Input tax credit means credit of taxes paid on material and services procured. Input Tax Credit means reducing the taxes paid on inputs from taxes to be paid on output. When any supply of services or goods are supplied to a taxable person, the GST charged is known as Input Tax. The concept is not entirely new as it already existed under the pre-GST indirect taxes regime (service tax, VAT and excise duty). Now its scope has been widened under GST. Earlier, it was not possible to claim input tax credit for Central Sales Tax, Entry Tax, Luxury Tax and other taxes. In addition, manufacturers and service providers could not claim the Central Excise duty. During pre-GST era, cross-credit of VAT against service tax/excise or vice versa was not allowed. But under GST, since these taxes will be subsumed into one tax, there will not be restriction of setting off this input tax credit. The conditions to claim Input Tax Credit under GST is a very critical activity for every business to settle the tax liability. Input Tax Credit can't be applied to all type of inputs, each state or a country can have different rules and regulations. Input Tax Credit is also available to a dealer who has purchased good to resale. Tax Credit is the backbone of GST and for registered persons is a major matter of concern. This is majorly in line with the pre-GST regime. These rules are quite stringent and particular in their approach. Say for instance that you are a manufacturer. The tax to be paid on the final product is INR 1550. The purchase tax paid is INR 1300. The input credit you claim is INR 1300, and the final taxes you will pay is INR 250.

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Objectives: -

1) To know the provisions of GST.
2) Understand the impact of the provisions GST on Input Tax Credit.
3) To study the mechanism of credit.

Research Methodology: -

ITC can be availed by a registered taxable person in a specific manner and within a specified time frame. The table below shows the different situations wherein the inputs can be claimed for semi-finished goods or stock or finished goods.

Situation	ITC claims day for semi-furnished goods/stock/finished goods (held on immediate preceding day)
If a person has applied for registration or is liable to register or is granted registration	Day from when he is liable to pay taxes
When a person takes voluntary registration	Registration day
When a taxable registered person stops paying taxes in composition levy scheme	Day from when he is liable to pay tax normally u/s 7.

Input tax credit for the above-mentioned situations can be claimed only if it does not exceed one year from the tax invoice date of issue related to supply.For any other cases, ITC must be claimed:

- Before you file a valid return for the September month u/s 27 days after the end of financial year to which the invoice is related, or
- Before you file the annual return, as u/s 30 days, the due date to file the annual return is December 31 after the end of the financial year.

How to calculate Input Tax Credit?

Suppose you have a business. The service or product you sell attracts a tax of 18%. You use input services or goods during your business. The tax due from you (of 18%) can be adjusted to the taxes paid already by you on the purchase of such inputs. The manufacturers add taxes only for the value addition done and not on the total product value. Let's consider an example of a utensils manufacturer who manufactures utensils like spoons, plates, etc. Assume that the manufacturer had bought an INR 15000 worth raw steel to make a pressure cooker and INR 10000 worth other raw materials. Let's assume that the GST for steel is 18%. Also, assume that the GST he paid is 28% of other raw materials. Hence, the manufacturer has paid Rs. 28 00 on other raw materials and Rs. 2700 on raw steel which he used as inputs. So, the total input tax paid was INR 5500 by the manufacturer. Now, after considering the cost of manufacturing steel pressure cooker using the raw materials and including a decent profit, he decided to sell the pressure cooker to a distributor at INR 35000 + GST. Assume that the steel utensil attracts a GST of 18%. Now the tax on it will be INR 6300. So, the manufacturer will invoice the pressure cooker for INR 41300. Hence, the manufacturer is collecting INR 6300 as GST on sale from the distributor. The manufacturer had paid INR 5500 towards GST during the purchase of his input raw materials. Hence, out of INR 6300 of GST, the manufacturer can now claim a credit of INR 5500 which he already paid towards GST for inputs and deposit the difference of INR 800 with the government. This tax credit is available at all succeeding stages, retailers and distributors charge GST and can claim the Input Tax Credit.

How to claim Input Tax Credit (ITC)?

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The following conditions have to be met to be entitled to Input Tax Credit under the GST scheme:

1. One must be a registered taxable person.
2. One can claim Input Tax Credit only if the goods and services received is used for business purposes and furtherance of business.
3. Input Tax Credit can be claimed on exports/zero rated supplies and are taxable.
4. For a registered taxable person, if the constitution changes due to merger, sale or transfer of business, then the Input Tax Credit which is unused shall be transferred to the merged, sold or transferred business.
5. One can credit the Input Tax Credit in his Electronic Credit Ledger in a provisional manner on the common portal as prescribed in model GST law.
6. Supporting documents – debit note, tax invoice, supplementary invoice, are needed to claim the Input Tax Credit.
7. If there is an actual receipt of goods and services, an Input Tax Credit can be claimed.
8. The Input Tax should be paid through Electronic Credit/Cash ledger.
9. All GST returns u/s 27 such as GST-1, 2, 2A, 6, 6A, 7, 7A needs to be filed
10. During bulk receipt of goods, one can claim Input Tax Credit only once the final lot is received.

How Input Tax Works Under GST. Suppose Mr. A is a seller. He sells goods to Mr. B. The buyer Mr. B is now eligible to claim the purchase credit using his purchase invoices.

This is how it works:

1. A uploads all his tax invoices details as issued in GSTR-1.
2. The details uploaded by Mr. A is automatically populated or reflected in GSTR-2A. This same data will get reflected when Mr. B files the GSTR-2 returns which are nothing but the details of his purchase.
3. The details of the sale are then accepted and acknowledged for by Mr. B, and subsequently, the purchase tax is credited to Mr. B's 'Electronic Credit 'He can use this to adjust it later for future output tax liability and receive a refund.

How to set off Input tax credit.

Tax credit to be set off	Available Input Tax credit (on the order of utilization)		
IGST	IGST	CGST	SGST
CGST	IGST	CGST	
SGST	IGST	SGST	

Under what situations one CAN NOT claim Input Tax Credit (ITC)?

Input Tax Credit (ITC) is unavailable for claim u/s 16(9) under the following circumstances:

1. If goods and services are acquired for personal use.
2. In thecase of goods and services acquisition on acontract which may result in areduction of immovable property apart from plant & machinery.
3. If one has paid tax in GST composition scheme for goods and services received.
4. In case an immovable property is built apart from plant and machinery using the goods and services and this immovable property is not transferred.
5. In thecase where employees have used the goods and services for personal purposes.
6. When thecost of capital goods depreciation is claimed, then Input Tax Credit cannot be claimed.

What are the documents and forms required to claim Input Tax Credit?

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The input tax credit shall be availed by a registered person, including the InputService Distributor, on the basis of any of the following documents, namely: -
(a) an invoice issued by the supplier of goods or services or both in accordance withthe provisions of section 31;
(b) an invoice issued in accordance with the provisions of clause (f) of sub-section(3) of section 31, subject to payment of tax;
(c) a debit note issued by a supplier in accordance with the provisions of section 34;
(d) a bill of entry or any similar document prescribed under the Customs Act, 1962 orrules made thereunder for assessment of integrated tax on imports;
(e) an ISD invoice or ISD credit note or any document issued by an Input ServiceDistributor in accordance with the provisions of sub-rule (1) of rule invoice.7.
(2) Input tax credit shall be availed by a registered person only if all the applicableparticulars as prescribed in Chapters.
(3) No input tax credit shall be availed by a registered person in respect of any tax that has been paid in pursuance of any order where any demand has been confirmed on account of any fraud, wilful misstatement or suppression of facts.
The above documents prepared as per the GST invoice rules should be furnished while filing the GSTR-2 form. Failure to present these forms can lead to either rejection or resubmission of the request. For taxes paid on goods and services or both due to any fraud or due to order for the demand raised, suppression of facts or willful misstatement, Input Tax Credit cannot be claimed. Since input credit will be available to the seller at each stage, the input tax credit is expected to bring down the overall taxes charged on the product at present. So, if input credit mechanism works efficiently, final consumers may see cost reduction.

Conclusion: -

GST is a major tax reforms in India. There are more than 196 countries in world which levy GST. This tax will be beneficial to dealers as well as consumers. Input tax credit mechanism and set off provisions is helpful to all the dealers and manufacturers.

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Banking Finance through Self Help Groups (SHGs): A Tool For Socioeconomic Growth of Rural Area.

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Abstract :
Poverty is a term with which many developing countries are suffering. The financial requirement is one of the basic needs of the poorer section of the society for socio-economic development.
The present research paper is an attempt to study the role of Banking-Finance and Self-Help-Groups (SHGs) for the socio-economic development of poor people in rural area.

Methodology: A survey on the social, psychological and economic impact of SHGs of the selected respondents was conducted at both the rural district of Pune. For the purpose of the study both the primary and secondary data have been used. For collecting primary data 10 development blocks have been purposively selected. Again from each development block 10 SHGs and from each SHG, 5 members have been randomly selected to make the total respondents as 500 respondents.

Research limitations:
Since respondents have been in a tight work and the majority of the respondents' educational background is low creates some negligence in filling the questionnaire. Therefore, these conditions might affect the quality of the paper to some extents.

Practical limitations:
The result of the present study would help the Governmental, semi-governmental and non-governmental agencies in formulation of policies and strategies aiming at poverty alleviation, income generation and socio-economic up gradation through Banking finance and SHGs for the poor people living in the rural areas. It would also be an added to the existing literature and the researchers can use the results for further works.

Hypothesis:
The results of the study offer a beneficial source of information for the policy makers in formulation of policies and strategies for removal of poverty and development of socio-economic conditions in the rural areas.

Introduction:
The overall development of a nation is closely depends on the development of the rural economy. During the last few decades it has been seen that due to the vicious cycle of poverty these overall development cannot be achieved. Poverty is a term with which many developing countries are suffering. In India, most of the people lives in the rural areas are below the poverty line and finance to these indigenous peoples is considered as important issues for the Government of India.
There are still around 200 million people in rural areas that live below the poverty line and for whom banking access is still not a reality. The financial requirement is one of the basic needs of the poorer section of the society for socioeconomic development. Banking finance to Self Help

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Groups (SHGs) may be considered as a vital option for meeting the financial needs of those poorer sections of the society. Banking finance is the form of financial development that has its primary aim to alleviate the poverty. Governments, donors and NGOs around the world responded enthusiastically with plans and promised to work together towards the realization of these goals.

The present research paper is an attempt to study the role of Banking-Finance and Self-Help-Groups (SHGs) for the socio-economic development of poor people living in the rural area.

Concept of Self-Help-Groups (SHGs):

The SHG is an informal organization of persons from the homogeneous poor section of the society and it is controlled and managed by the members itself. It is an association of 10 to 20 local individual members who are financially weak and from the same socio-economic backgrounds. These groups start with saving and not with credit; the group then uses its savings to give loans to members to meet their emergency and other needs. The members decide on savings per members, maximum size of loans with and without guarantee.

The SHG is the platform or forum to the members to come together for emergency, disaster, social reasons, economic support to each other have ease of conversation, social interaction and economic interactions. The Self-Help Group (SHG) is a viable organized setup to disburse Banking credit to rural women for the purpose of making them enterprising for enabling them into various entrepreneurial activities.

Objectives of the study:

The main objective of the present study was to study the role of Banking finance through Self-Help-Groups (SHGs) for socio-economic development of the rural people . In order to achieve the main objective the present study was also carried out with the following specific objectives:

1. To study the socio-economic background of respondents.
2. To examine the Pre-SHG and Post-SHG status of SHG members.
3. To study the impact of SHGs on the respondents.
4. To study the benefits received by the respondents through various income generating activities.
5. To study the various problems faced by the SHG members in the rural area.

Methodology adopted for the study:

The paper was an attempt to make a study on the socio-economic development of the rural people through Banking finance and Self-Help-Groups in Rural area. For the purpose of the present study both the primary and secondary data have been used. The primary data were collected from field survey through filled in questionnaire and direct interview method.

The secondary data were collected from different journals, books, relevant documents, news papers and magazines, records of Non Governmental Organisations (NGOs), Institute of Co-operative Management (ICM) etc.

Ten SHGs were randomly selected from each of the sample development blocks. From each sample SHGs five members were randomly selected. Thus 500 respondents were selected for the purpose of the present study.

For analyzing the data, tools, like percentages, simple average, have been used.

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Results from the study:

Findings of the present investigation on the topic entitled 'Banking finance through Self Help Groups (SHGs): A tool for socio-economic development of Rural Pune were presented under the following heads.

A.1 Socio-economic characteristics of the respondents.
A.2 Pre-SHG and Post-SHG status of the respondents.
A.3 Social impact of SHG activities on the respondents.
A.4 Economic impact of SHG activities on the respondents.
A.5 Problem faced by the respondents in functioning of the SHGs.

A.1 Socio-Economic characteristics of the respondents:

The socio-economic characteristics of the respondents were analyses in Table A.1 as follows:

Sr.no	Categories	No.	Percentage(%)
1	**Age**		
	18 to 30 years	170	34
	31 to 50 years	320	64
	Above 50 years	10	2
	Total	500	100
2	**Education**		
	Illiterate	40	8
	Functionally Illiterate	130	26
	Primary	196	19.2
	Middle school	188	17.6
	High school	112	22.4
	Graduate	34	6.8
	Total	500	100
3	**Marital status**		
	Unmarried	32	6
	Married	378	75.6
	Widow	30	6
	Separated	60	12
	Total	500	100
4	**Caste**		
	SC	54	10.8
	ST	70	14
	OBC	264	52.8
	OPEN	112	22.4
	Total	500	100

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5	**Type of family**		
	Nuclear	428	85.6
	Joint	72	14.4
	Total	500	100
6	**Land holding**		
	Land less	278	55.6
	Land owners	222	44.4
	Total	500	100
7	**Family size**		
	Small family	362	72.4
	Big family	138	27.6
	Total	500	100
8	**Family Income**		
	Low Income	46	9.2
	Semi medium	150	30
	medium	146	29.2
	High income	158	31.6
	Total	500	100
9	**Social participation**		
	Low	352	70.4
	Medium	18	3.6
	high	130	26
	Total	500	100
10	**Mass media participation**		
	Low	226	45.2
	Medium	204	40.8
	high	70	14
	Total	500	100
11	**Trainings**		
	No training	72	14.4
	One training	140	28
	Two trainings	136	27.2
	Three and above trainings	152	30.4
	Total	500	100

(Ref: Field Survey.)

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From the above Table A.1.1 it has been observed that majority of the respondents i.e. 64.0 percent were middle aged, while 34.0 per cent were young and remaining i.e. 2.0 per cent were old aged.

The education level of the respondents showed that 26.0 per cent of them were functionally literate, 22.4 per cent had received high school education, 19.2 per cent of the respondents had education up to primary school, 17.6 per cent received middle school education, and 8.0 per cent were illiterate and only 6.8 per cent of them received college level education.

The marital status of respondents indicated that majority i.e. 75.6 percent of the respondents was married, 12.0 per cent were separated, 6.4 per cent of the respondents were unmarried and 6.0 per cent were reported as widows. On the other hand 85.6 percent of the respondents had nuclear family while 14.4 per cent had belonged to joint family. More than half of the respondent's families were land less (55.6%) and remaining 44.4 per cent were landowners.

Economic position of the family of the respondents indicated 9 that 31.6 per cent of them belonged to high income category, followed by respondents belonging to semi-medium income category (30.0%), medium income category (29.2%) and only 9.2 per cent of them belonged to low income category. It is revealed from the data presented in Table 6.1.(i) that nearly two-thirds (i.e. 74.0%) of the respondents had low and medium social participation while 26.0 per cent of respondents belonged to the high social participation category. Mass media participation of 45.2 per cent of respondents was low, followed by 40.8 per cent of the respondents belonging to medium mass media participation category and only 14.0 per cent had high mass media participation.

It has been also observed from the study that more than one-fourth of the respondents (i.e. 28.0%) had received one training, followed by 27.2 per cent who received two trainings, 30.4 per cent received three and above trainings and remaining 14.4 per cent did not receive any training on income generating activities.

A.2 Income status of the respondents in Pre-SHG and Post-SHG stage:

The SHG members involved in activities which yield income to them. The income of the respondents in pre-SHG and post-SHG stage is analyses in table A.2.1 as follows.

Income status of the respondents

Monthly income	**Pre SHG**	**Post SHG**
No income	77 (15.4)	Nil
Nil Up to 1000	145 (29.0)	170 (34.0)
1001-1500	195 (39.0)	187 (37.4)
1501-2000	83 (16.6)	110 (22.0)
Above 2000	Nil	33 (06.6)
total	500 (100)	500 (100)

(Ref: Field survey.)

It is inferred from the above Table A.2.1 that before joining SHG 15.4 percent of the respondents were no income and none of the respondent had income more than 2000/-. But after joining SHG there is no respondent without any income and 6.6 percent 10 of the respondents crossed their income level above 2000/-. 187 of the respondents out of 500 representing 37.4 percent have monthly income of 1001-1500 after joining the group.

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A.3 Social impact of SHG activities on the respondents:

Efforts were made to assess the social impact of the respondents during the Pre-SHG and Post-SHG stage and the data relating in this regard is presented in Table A.3.1 as under:

Social impact of the respondents

Social impact of the respondents	Pre-SHG stage	Post-SHG stage
Well Socially recognition	126 (25.2	328 (65.6)
Equally participated with husband in family decisions	146 (29.2)	268 (53.6)
Active participation in social services	50 (10.0)	168 (33.6)
Better contact (network) with outsiders	25 (05.0)	270 (54.0)
Immense in Literacy (e.g. able to read, sign etc.)	77 (15.4)	450 (90.0)
Active participation in organized actions/activities	26 (05.2)	314 (62.8)
Gained Self dependence	158 (31.6)	334 (66.8)
Better schooling of the children	138 (27.6)	356 (71.2)
Improved inter-personal relationships	186 (37.2)	386 (77.2)
Active Institutional participation	84 (16.8)	266 (53.2)
Awareness regarding new Govt. schemes	100 (20.0)	466 (93.2)
Better standard of living	82 (16.4)	212 (42.4)

(Ref: Field Survey)

On the issue of recognition respondents stated that after joining the group many people have come to know about them and their activity and show more interest in interacting with them. More than fifty percent i.e. 53.6 percent of the women respondents felt that they were equally take important decisions and issues connecting with their family with their husbands.

After joining the group 90 percent of the respondents have immense their literacy and with this literacy the respondents were able to provide better schooling and better health to their children. The study disclosed that the participation of the women respondents in social services like raising funds for girl's marriage, settling family disputes, encouraging people to 11 send their children to schools etc. have increased. After joining the groups, 66.8 percent and 77.2 percent of the respondents were felt self dependent and improved their inter-personal relationship.

The respondents were more aware of the new developmental schemes introduced by the government. A huge number respondent i.e. 93.2 percent had opined that they were aware about the various developmental programmes such as the LIC scheme for the poor, NREGA etc. Their standard of living had also increased from 16.4 percent to 42.4 percent after joining the group. They were now improved their houses, sanitation conditions etc. and better access to medical facilities after joining the group.

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A.4 Economic impact of SHG activities on the respondents:

An effort were also made to access the economic impact of the respondents through Banking finance and the data relating in this regard is presented and analysed in Table A.4.1 as under:

Economic impact of the respondents

Economic impact of the respondents	Economic impact Pre-SHG stage	Economic impact Post-SHG
Better access to the credit facility	62 (12.4)	418 (83.6)
Minimized family dependence to money lenders	466 (93.2)	148 (29.6)
Economically independent	64 (12.8)	216 (43.2)
Better access/control of financial resources & households	88 (17.6)	333 (66.6)
Improved the food consumption pattern	122 (24.4)	376 (75.2)
Increased savings	94 (18.8)	338 (67.6)
Minimized family indebtedness	354 (70.8)	168 (33.6)
Asset creation	72 (14.4)	262 (52.4)

(Ref: Field Survey)

It has been observed from the above Table 6.4.(i) that 83.6 per cent of the respondents were better access to the credit facilities after joining the group which was only 12.4 per cent before joining the group. Family dependence on moneylenders was also reduced from 93.2 percent to 29.6 percent after joining the group. After joining the group the number of respondents had also increased their savings from 18.8 percent to 67.6 percent. Economic 12 independence from the family members, relatives etc. was also found to be encouraging as 43.2 percent of the respondents were feeling economically independent. The results of the study indicate that 66.6 percent of the respondents were better control of their financial resources and households and with this financial control they were improved their food consumption pattern also. 52.4 percent of the respondents felt that they were able to create assets under various schemes of banking finance.

A.5 Problem faced by the respondents in functioning of the SHGs:

An effort was also made to identify the types of problems that were faced by the respondents in the study area. The data relating to this regard is presented and analysed in Table A.5.1 as follows:

Type of problems faced by the respondents

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Problem	Frequency	Percentage
Lack of training programmes	178	35.6
Improper utilization of funds	356	71.2
Improper accounts keeping	342	68.4
Formulation of group	206	41.2
Inequality in issuing loans	184	36.8
Repayment of loan	126	25.2
Establishing the activity	206	41.2
Running the groups	144	28.8
Excessive stress and tension in women	402	80.4
Lack of guidance and support from supporting agency	134	26.8
Misunderstanding among group members	286	57.2
Pressure from the family to go for loan	192	38.4
Poor output from the group activity	102	20.4
Marketing problem	96	19.2
High rate of interest	84	16.8
Non-cooperation of banks	92	18.4
Too many formalities	222	44.4
Lack of support from family members	128	25.6

(Ref: Field survey)

From the above Table A.5.1 it has been found that the majority of the respondents i.e. 80.4 percent had stress and tension because of the dual responsibility of the group as well as of home. By playing the dual role, one as a homemaker and the other in the group, they were facing problems in maintaining a balance between these two roles. Improper utilization of funds was also another problem faced by the respondents as 71.2 percent of the respondents had complained about that. Another problem faced by the SHG members (68.4 percent) was the improper recording of accounts. That was because of lack of training 14 programmes organized for the groups at regular intervals as there were 35.6 percent of the respondents had complained about that. 38.5 percent of the respondents said that their families pressurized them into taking loans for family needs and when the members were taking loans for consumption purposes rather than starting an economic activity, it affects the repayment of the loan. 26.8 percent of the respondents had problems with the promoting agencies, as they did not guide them properly. 36.8 percent of the respondents felt that there was an inequality in issuing the loans. The result also revealed that 20.4 percent of the respondents had a problem of poor output from the selected economic activity due to lack of raw materials, lack of required skill in the particular activity and problems relating to marketing of the output produced. They had good produce but did not have a proper market to sell it so that they can earn enough money. 18.4 percent of the respondents said that bank employees were not always cooperating; they were rude to the members. 16.8 percent of the respondents felt that some banks were charging higher interest rate than the usual rate for the SHG members. To many formalities were the main reasons for difficulties faced by the respondents in operation with the banks as 44.4 percent of the respondents were reported in this regards.

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Interpretation:

The major interpretations from the study were reported as under:

1. Nearly two-third (64.0%) of respondents belonged to middle age group where three-forth of the respondents (i.e. 75.6%) were married.
2. More than one-third (40.0%) of respondents were middle and high school passed.
3. More than half of the respondents (52.8%) belonged to backward caste.
4. Majority (85.6%) of respondents belonged to nuclear family.
5. More than half (55.6%) of respondents were landless.
6. 15 Nearly one-third (31.6%) of the respondents belonged to the high income category followed by semi-medium income category (30.0%).
7. Nearly three-fourth (70.4%) of the respondents belonged to low social participation category.
8. Regarding mass media participation, 45.2 per cent of the respondents belonged to low level of mass media participation.
9. After joining SHG there is no respondent without any income and 6.6 percent of the respondents crossed their income level above 2000/-.
10. 93.2 percent of the respondents were aware about the new govt. schemes
11. Around 90 percent were capable of being read, sign. etc after joining the group.
12. Majority of the respondents (83.6%) had economically benefited and better access to the credit facilities, followed by their better saving habits
13. (67.6%). Nearly three-fourth of the respondents (72.4%) were getting monetary benefits up to 1500 from income generating activity followed by medium monetary benefit which ranged between 1501 to 3000 (22.8%).
14. Majority of the respondents (95.6%) felt Improvement in their communication ability followed by increased confidence level
15. (83.6%), respect from the society (76.4%) and respect from the family member (67.2%) by taking up of income generating activity.
16. The major problem faced by the respondents was excessive stress and tension in women (80.4%) followed by improper utilization of fund (71.2%), improper accounts keeping (68.4%) etc.

Suggestions:

Based on the present study the following suggestions have been made for future line of work.

i) Special training programmes should be provided regarding the proper accounts keeping and accounting experts should be invited as a resource person so that the beneficiaries can enhance their accounting knowledge and maintain their cash book and other necessary books of accounts accurately.

ii) For better functioning of the groups women should be properly educated and periodical training at regular intervals may be made and also a study on the respective field may be conducted to outcome the findings.

iii) The study was conducted in only two rural district of Pune with reference to socioeconomic development through Banking finance, it is necessary to have studies in other areas also in order to generalize the findings.

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Conclusions:

1. Finance is an element which everyone needs. Regular and immediate finance can play an important role for development of socio-economic conditions of the people particularly the rural poor.
2. Banking finance is expected to play a significant role in poverty alleviation and rural development particularly the rural women.
3. The potential for growing Banking finance institutions in India is very high. Major cross-section can have been benefited if this sector will grow in its fastest pace.
4. From the analysis of data it can be concluded that numbers of members have started savings only after joining the groups while majority of the members have no savings in the pre-SHG era. After joining the groups most of the members solved their problems alone.

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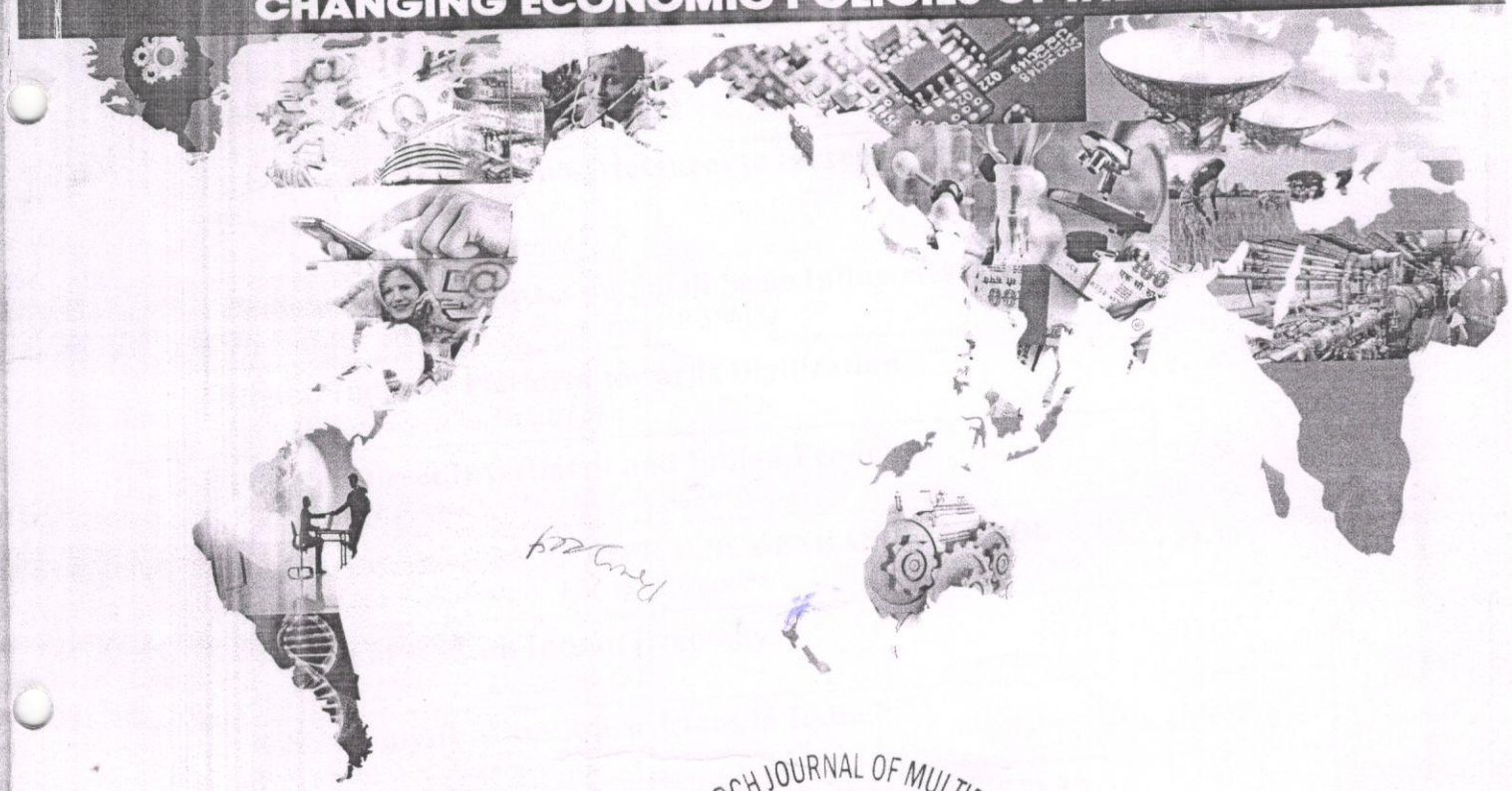
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT



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The Need and Objectives of GST Reform

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Abstract

The paper describes alternatives to the Dual GST already endorsed by the Empowered Committee, not because they are superior in any way to the Dual GST, but to allow a fuller discussion of the trade-offs involved in the choice among them. The last section provides a discussion of the issues that arise in the taxation of cross-border transactions, both inter-state and international. It is some of these aspects of the proposed GST that are the subject matter of this paper. We focus on the essential questions relating to the Dual GST design, and first discuss the need for, and the objectives of GST reform. An important question in this regard is the feasibility of, and the rules for, taxation of inter-state supplies of services.

Introduction

The basic objective of tax reform would be to address the problems of the current system discussed above. It should establish a tax system that is economically efficient and neutral in its application and simple to administer. The important objective of tax reform is simplification of tax administration and compliance, which is dependent on three factors. The first determining factor for simplicity is the tax design itself.

The second factor is the infrastructure for tax administration, including the design of tax forms, data requirement s, system of tax rulings and interpretations, and the procedures for registration, filing and processing of tax returns, tax payments and refunds, audits, and appeals. A modern tax administration focuses on providing services to taxpayers to facilitate compliance. It harnesses information technology to enhance the quality of services, and to ensure greater transparency in administration and enforcement.

The third factor in a federation such as India is the degree of harmonization among the taxes levied by the Centre and the States. The Empowered Committee has already indicated a preference for a dual GST, consisting of a Centre GST and a State GST. Under this model, harmonization of the Centre and State GSTs would be critical to keep the overall compliance burden low. Equally important is harmonization of GSTs across the states.

Ahmad and Stern (1991) analyze the optimal pattern of tax rates implied by a given degree of aversion to poverty and concern for the poor. At high levels of concern for the poor, one would reduce the tax on cereals (but not dairy products) and increase the taxes on non- food items (specified). Thus, a differentiated overall structure appears desirable for a country in which the government has consistently expressed a concern for the poor.

However, individual taxes should not be highly differentiated, as that complicates administration and makes it difficult to evaluate the overall effects of the tax design. This applies particularly to value-added type of taxes. In principle, a single rate (or at the most two-rate) VAT, together with subsidy and spending measures could achieve the desired distributional effects, for reasonable degrees of inequality aversion of policy makers. In particular, it is important from an administrative perspective that close substitutes should not be taxed at very different rates—to avoid leakages and distortions. Revenue considerations suggest that the tax base should be broad, and comprise all items in the consumer basket, including goods, services, as well as real property. As argued in Ahmad and Stern (1991), distributional or sectoral concerns have been at the heart of the excessive differentiation of the Indian tax system —but that the objectives are negated by the cascading effects

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of the taxes. While an optimal design of the consumption tax system, taking into account both production efficiency and distributional concerns, would not imply uniformity of the overall tax structure, the desired structure can be achieved by a combination of taxes and transfers.

Generally, the more rational and neutral the tax design, the simpler it would be to administer and encourage compliance. If the tax is levied on a broad base at a single rate, there would be few classification disputes and the tax-specific record keeping requirements for vendors would be minimal. The tax return for such a system can be as short as the size of a postcard. It would simplify enforcement, and encourage voluntary compliance. Multiple VAT rates become a source of complexity, and disputes, for example, over borderlines, adding to the costs of tax administration and compliance. It is for this reason that countries like New Zealand, Singapore, and Japan have chosen to apply the tax at a low and uniform rate, and address any concerns about vertical equity through other fiscal instruments, including spending programs targeted to lower-income households (Bagchi et al 1994)

Fiscal Autonomy and Harmonization

In Australia, the GST is a single national levy and all the GST revenues collected by the center are returned to the states. Indeed, such political-economy compromises have been adopted by China and Australia. Should the Centre and the States then have complete autonomy in levying and collecting the taxes within the parameters specified in the Constitution, or should they voluntarily or otherwise conform to certain common principles or constraints? Should they collectively agree to have their individual taxes consolidated into a single national tax, the revenues from which get shared in some agreed manner among the constituent units? Such a system would have much to commend itself from the perspectives of economic efficiency and the establishment of a common market within India. It goes without saying that the power to govern and to raise revenues go together. An important consideration in the design of reform options is the degree of fiscal autonomy of the Centre and the States. China moved to a centralized VAT with revenue sharing with the provinces — ensuring that provinces got as much revenues as under the prior arrangements, plus a share of the increment. The Constitution of India lays down a clear division of powers between the Centre and the States, including the power to levy taxes.

The Central Sales Tax (CST) in India provides a very useful for model for such harmonization. This was the case under the previous State sales tax system, under which inter-state tax rate wars became a race to the bottom. Harmonization should allow greater exploitation of the benefits of a common market. The CST is a state-level tax, applied to inter-state sales of goods, based on the origin principle. Rather, this is a framework that facilitates more efficient exercise of taxation powers, and all jurisdictions would be worse off without harmonization Even today, they all suffer because of lack of harmonization of information and technology architectures, as a result of which they are unable to share information on inter-state trade. It is a perfect example of absolute harmonization with the States enjoying the risks and rewards of ownership of the tax.

It is worth emphasizing that harmonization should not be viewed as constraining the fiscal autonomy of the Centre or the States. The tax law (including the base, rates, and the procedures) is enacted by Parliament, but the States collect and keep the tax.

Centre and State Taxation Powers

The Constitution divides taxation powers between the Centre and the States by sector (e.g. agriculture, manufacturing, and land and property) or type of taxes (e.g., luxury tax, tax on the sale or purchase of goods, and excise duty). The current division of taxation of powers under the Constitution is constraining for both the Centre and the States. Neither is able to design

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comprehensive and neutral tax on goods and services of the type found in modern tax systems. A notable feature of the current division is that the two levels of government have no area of exclusive jurisdiction, with the exception of stamp duties (Ahmad et al. 2008)

While such a review is beyond the scope of this paper, our discussion of alternative options in the next section proceeds with the assumption that suitable constitutional amendments would be made to enable the implementation of the chosen option. Thus, the current search for options for tax reform assumes a review of the existing Constitutional arrangements, which may well require a substantial realignment. For example, the dual GST would require giving the Centre and the States concurrent indirect taxation powers, subject to prohibition on extra-territorial taxation, i.e., that the incidence of tax be restricted to consumption within the territory of the taxing jurisdiction.

Dual GST

Even the more recent variant recognizes that there would be a set of inter-state services for which the place of destination would be difficult to determine. Both the Central Government and the Empowered Committee appear to favor this model. While full details of the model are still awaited, two variants have been identified in public discussions so far. The State GSTs would largely be confined to goods only, with minor changes from the current State VATs. Under the more recent variant (Rajaraman, et al. 1999),11 both goods and services would be subject to concurrent taxation by the Centre and the States. The initial variant, discussed in November, 2007, entailed both the Centre and the States levying concurrently the GSTon goods, but most of the services (except services of a local nature) remaining subject to the Centre GSTonly. The State tax on these services would be collected by the Centre, and then apportioned among the States in some manner. This variant is closer to the model recommended by the Kelkar Committee in 2002. (Kelkar et al. 2004)

The main difference between the two variants is in the treatment of services, reflecting apprehensions about the feasibility of defining the place of supply (i.e., destination) of inter-state services. The Central GST would thus apply to both goods and services, extending to the entire supply chain, including wholesale and retail trade. Under this model, the tax is levied concurrently by the Centre as well as the States.

National GST

Tax design and collection are controlled by the Centre, but the provinces have some flexibility to vary their tax rate. The revenues from the tax are shared among the participating provinces on the basis of consumer expenditure data for the participating provinces. In Austria, and Germany, the tax design is controlled by the Centre, but states collect the taxes. The States may also be apprehensive that the revenue sharing arrangements would over time become subject to social and political considerations, deviating from the benchmark distribution based on the place of final consumption. Indeed, some control over tax rates is a critical issue in achieving accountable sub-national government and hard budget constraints (Ambrosiano and Bordignon, 2006). However, the States may worry about the loss of control over the tax design and rates. There are several models for such a tax. The Rajaraman Report also did not favor this option for the fear that it would lead to too much centralization of taxation powers. In going to this model, the Centre had assure the provinces that they would continue to get what they did under the previous arrangement and that changes in revenue shares would be phased in over an extended period of 15 years.

Under the Canadian model of the Harmonized Sales Tax (HST), the tax is levied at a combined federal and provincial rate of 13 percent (5% federal rate, 8% provincial rate) in the three participating provinces. Australia is the most recent example of a national GST, which is levied and

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collected by the Centre, but the proceeds of which are allocated entirely to the States (Can Department of Finance,1987).

In China, the VAT law and administration is centralized, but the revenues are shared with provinces. Under this option, the two levels of government would combine their levies in the fo of a single national GST, with appropriate revenue sharing arrangements among them. The could be controlled and administered by the Centre, States, or a separate agency reporting to the In Mexico, the establishment of a VAT at the center replaced state sales taxes, but had to be part a political-economy compromise that assured the states an automatic share of the revenu generated from all federal taxes. A single national VAT has great appeal from the perspective establishment and promotion of a common market in India. This has led to incentive problems. some of the Länder have begun to use tax administration measures to achieve tax policy goals.

Conclusion

Opportunities for a fundamental reform present themselves only infrequently, and thus need to b pursued vigorously as and when they do become available. Achieving the correct choice is then political economy balancing act that takes into account the technical options and the differing need and constraints of the main partners. As the choices made today would not be reversible in the nea future, one needs a longer-term perspective. It can pave the way for modernization of ta administration - make it simpler and more transparent – and significant enhancement in voluntar compliance. The Empowered Committee describes the GST as "a further significant improvement the next logical step - towards a comprehensive indirect tax reforms in the country." Indeed, it ha the potential to be the single most important initiative in the fiscal history of India.

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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Review on Green computing to save environment and power management

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Abstract:.
Computers are used everywhere in human life hence computer consumes more electricity.Toxic, carbon dioxide produce by computer material. But use of computer is necessary in human life. Existence of Green Computing to overcome negative effect of computer to environment.Green computer solves the problem of power consumption of computer system. It also provides technique to minimize pollution by computer material. Moreover, thousands of computing devices are manufactured every day and the same amount of old computers is being thrown away loading up the e-wastes. So it is highly important to manage these computing devices in such a way that they last longer and even if they are disposed of, they shouldn't cause much harm to the nature. Green computing can take many forms in itself. Green technology focuses on reducing the environmental impact of industrial processes and innovative technologies caused by Earths growing population It has taken upon itself the goal to provide society's needs in ways that do not damage or reduce natural resources. It is mainly used to protect environment, optimize energy consumption and keeps Green environment. The main goal of green computing is that increasing energy efficiency and reducing the use of harmful materials. Green computing ultimately focuses on ways in reducing overall environmental impacts. It require the integration of Green computing Practices such as recycling, electronic waste removal power consumption, virtualization, improving cooling technology, and optimization of the requirements. The major power consumption components are processors and the main memory in the servers.This paper gives idea of saving energy & environment which helps to save money.

Keywords - Energy Efficiency, Electronic Waste, Green Computing, Power Consumption, and Recycling.

Introduction

In today's world computers are most important part of human life. Because of speed, storage capacity & programming ability computers are used in everywhere in human life. But more use of computer creates harm to environment.With increasing energy cost and growing environmental concerns, green computing is receiving more and more attention. It is because the pollution or effect of harmful rays in the environment has started to affect the health of the individuals directly.Green computing refers to the study of designing, engineering, and proper usage and disposal of computing devices in such a way that it reduces their impact on the environment. Green computing holds green infrastructure and refers to the efficient and effective handling of computers, servers and accessories such as, printers, monitors ,networking/communicationgadgets and storage devices with minimal or zero environmental impact by studying and adoptingglobal best practice in their design, manufacture, usage, and disposal. The goal of green computing is reduce the use of harmful material, maximize energy efficiency during the product's lifetime, and promote recyclability of obsolete product and factory waste.

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Technology Environment

Many of the technologies we use every day consume a lot more resources and power than they need to, and using and manufacturing them can create a mess. Here are a few of the ways that technology can harm the environment:

- **Consuming resources** - Non-renewable resources, including precious metals like gold, are used to make technology. Many others, such as coal, are consumed to generate the electricity to use technology. Even some renewable resources, like trees and water, are becoming contaminated or are used up faster than they can renew themselves because of technology.
- **Waste** - Manufacturing technology creates large amounts of waste, and used computers and electronics get thrown out when they break or become outdated. Called "techno trash," these electronics contain all sorts of harmful materials that are very unsafe for the environment. They need to be disposed of using special methods.
- **Health Hazards**- Using toxic materials that can harm our health can cause cancer, and technology addiction can lead to other health problems like obesity and carpal tunnel syndrome.

You can encourage manufacturers by choosing to buy more energy-efficient and less hazardous electronics and by supporting companies that make protecting the environment a priority. You can also do your own part to reduce environmental impact by not being wasteful and disposing of your electronics safely and properly.

Negative effects of E-waste

E-waste refers to thrown out electronic equipment like printers, Televisions, mobile phones, computers etc. which are harmful to our ecosystem if not disposed properly. Proper recycling and disposal of E-waste is important to safeguard our earth from Environmental pollution.

Electronics for consumers are being treated like disposable items more and more every day. One major factor causing this trend is that companies are endlessly marketing new technologies to us, which effectively render recent products as obsolete. . By 2005 the lifespan had shrunk down to less than two years. In 2016, that number shrunk even further with the introduction of more and more devices. Compounding the problem is the fact that we are disposing of electronic waste (e waste) improperly.

Effect of e-waste on Human Health

Electronic waste affects nearly every system in the human body because they contain a plethora of toxic components including **Mercury, Lead, Cadmium, Polybrominated Flame Retardants, Barium** and **Lithium**. Even the plastic casings of electronics products contain **Polyvinyl Chloride**. The health effects of these toxins on humans include birth defects, brain, heart, liver, kidney and skeletal system damage. They will also significantly affect the nervous and reproductive systems of the human body.

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Toxic Materials	Birth Defects	Brain Damage	Heart, Liver, Lung & Spleen Damage	Kidney Damage	Nervous/ Reproductive System Damage	Skeletal System Damage
Barium		X	X			
Cadmium	X		X	X	X	X
Lead	X	X		X	X	
Lithium	X	X	X	X	X	
Mercury	X	X	X	X		
Nickel	X		X	X	X	
Palladium	X	X	X	X		
Rhodium			X			
Silver	X	X	X	X	X	

Effects of E-waste on Environments in Third World Countries

E-waste adversely affects our developing nations. Instead of responsibly recycling our electronic devices, America sends our e-waste to these countries. when e-waste disposal is not subsidized, the pollutants from our electronic waste can end up in toys for our children that are sent back to us. Instead of exporting e-waste, or letting it rot in landfills, we can help our environment by returning our electrical products to stores and manufacturers, sending them to responsible recycling centers, selling them to people that will find them useful, or donating them to stores such as Goodwill donation center.

Poor E-Waste Management Effects Data Security through Improper Data Destruction

Proper recycling and disposal of electronics is not only important for the environment but it also has a big impact on data security as well. When e-waste is disposed of improperly and without the use of a company that specializes in proper data destruction, there is a severe risk of identity theft, data breaches and massive liability for the companies involved. Prior to disposing of IT Equipment improperly, always consider all aspects, including data security and liability in addition to the environmentwaste is not a problem . In fact it is only going to get worse. By 2017, the volume of our thrown away e-products throughout the world is expected to rise by

33 % from 2012, and we can expect the weight of this garbage to equal eight of the Great Pyramids of Egypt. The amount of e-waste that we produce, including computers, DVD players, cell phones and global positioning products, could rise by a whopping 500% over the next decade in countries such as India. It is crucial to know the effects of e-waste on the environment, and what we can do to stop it.

Before you recycle your **techno trash**, check out these tips:

Sanitize your Hard Drive

Before donating a machine, be sure to remove all of your files and data from it. Most people will just try to drag everything to the trash can or recycle bin, but this only partially erases the information! Cyber criminals can find this “deleted” information and use it however they want. To really protect yourself, you need to run a program that “sanitizes” your hard drive. These programs, which can be found online, work by replacing all your data with a jumble of useless nonsense. That way, your information is safe, and your good deed goes unpunished!

Consider Donating your Mobile Device

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There are actually a LOT of great things your old mobile devices can do for people. Whether that means helping soldiers overseas talk to their families or helping victims of domestic violence, they can be a lot more than clutter for your junk drawer.

Raise Some Funds

Because electronics contain precious metals including gold, silver andcopper,technotrashcan actually be worth a little money.

Reuse Those Ink Cartridges

Many locations that sell new printer ink cartridges will refill your old cartridge for a fraction of the cost. Each cartridge you throw away takes anywhere between 400 and 1,000 years to decompose, and on average, there are 11 cartridges thrown out every minute across the globe! Not all cartridges can be refilled, and even cartridges that you've filled in the past will eventually break down after continual use.

While some of the impact of computers and the Internet has unfortunately been negative, much of it has also been positive. Here's just a few of the ways that technology is helping to improve the environment:

- It helps us develop and produce new materials and technologies that are sustainable and do not harm the environment, so we can eventually stop using ones that do harm it.
- It allows for paperless communication like email and online bill paying to reduce the amount of trees cut down
- It allow us to monitor and study our environment to better understand how it works and the impact of our actions on it
- It allows us to have a worldwide virtual laboratory, so that experts from all fields can share their research, experience and ideas to come up with better, smarter solutions. Not only does this allow people far away from each other to work together, but it also reduces the environmental impact people would normally cause from traveling to meet with each other
- It helps us create smarter technologies that respond to how we use them and adjust themselves to reduce their environmental impact, such as lights that can sense when no one is in the room and automatically turn off.
- It allows companies to reduce shipping and manufacturing impact and to reach a broader audience

Green Computing

Green computing refers to the study of designing, engineering, and proper usage and disposal of computing devices in such a way that it reduces their impact on the environment.Now we will discuss green computing in detail.

Advantages and Disadvantages

Advantages:-

- Saving energy and recourses save money.
- Green computing includes changing government policy to encourage recycling and lowering energy used by individuals and business..
- Conserving resources means less energy is required to produce,use and dispose products therefore automatically lower energy cost.
- reduced health risk for computer workers and recyclers.
- Reduced environmental impact..

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Disadvantages:

- Green computing could actually be quit costly.
- Rapid technology change.
- .Green computing could actually be quit costly.

GREEN COMPUTING SAVE ENVIRONMENT

Green Computing save the environment from pollution by computer material .Different ways are provided in green computing for environmental benefit

- Recycle the computer material
- Minimize carbon Emission: The computer material generate gaseous such as methane(CH4), nitrous oxide (NO2) and fluorocarbons (CCl4).Temperature of earth is increasing because of this gases .In green computing companies are started manufacturing computer material which generate less amount of such gases.
- Reduce Paper wastage. In computer operation we use more papers for printout purpose which is wastage.

Here are some suggestions for reducing waste:

- Take less amount of printout to save paper or indirectly save trees. Try to use store much amount of data on storage devices.
- Recycle waste paper as many times as you can.
- It is necessary to plant trees to maintain environmental stability
- Reuse ink cartridge.

Sometimes people can get so excited about using a new technology that they overlook the negative impact on the environment. But, it's very important that we use technology in the smartest and most responsible manner, so that we are solving problems, not creating more for the future.

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e-CycleRecycling Old Tech - It's the Law

Takeaway: *Many people are accustomed to throwing out their old technology with the trash, but new laws are enforcing proper disposal of unwanted electronic devices.*

- More companies are making the effort to "go green" and are responsibly recycling their used and outdated electronic devices. However with the hazardous chemicals and confidential data contained inside of these devices, recycling e-Waste is more involved than taking your used mobile phones and tablets to a recycling center or trading them to reseller companies online.
- Now more than ever, it is essential for businesses to partner with a credible electronics recycler and ensure that their mobile phones and tablets, as well as the sensitive data stored inside, are recycled properly. Companies need to research their current asset recovery companies and their processes. Partnering with the wrong electronics recycler can be extremely hazardous not only for the environment but also for the business.
- Many organizations may think that they are acting responsibly when recycling with an electronic buyback company when in fact, their mobile devices could be causing severe damage to the environment. The EPA reports that 70-80% of "reputable" recyclers are sending e-Waste to remote villages in developing countries where the use of cheap and sometimes slave labor is used to reclaim the precious metals inside electronic devices.
- In addition to the impact e-Waste has on developing nations, the improper handling of electronic devices also poses a threat to the confidential business information stored on these devices. Many enterprises rely on corporate-liable smartphones and tablets for their day-to-day business and consequently mobile devices contain an abundance of private data. For these reasons, businesses must investigate their mobile recycling partners and trust that they will provide the utmost data security and deletion processes.

Green Computing Saves Power

One of the advantages of green computing to reduce the Power Consumption. Different technics are used to save power

- Keep computer in Standby mode when it is not in use and therefore it can be reduced the energy consumption by 70% to 80%.
- Activate "hibernate" or "deep sleep" mode can reduce the energy consumption by 96% as offering greater savings.

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- Desktop computer uses six times more energy than laptop as much as 80% less? When we consider about monitors, large Cathode Ray Tube (CRT) monitors and high resolution models use more energy than small ones. The Liquid Crystal Displays (LCDs) which are used in laptop computers are more energy efficient and also the use 10% - 20% of power.
- Power management devices are used in computing environment.
- GE's data centre is one of the first in the world to be awarded the Leadership in Energy and Environmental Design (LEED) Platinum Certification. The award is presented by the US Green Building Council for IT projects that go beyond standing codes, implement green technology, and create energy efficient buildings.
- These hot and cold aisle energy efficiency tips aim to help you reduce your energy consumption within the data centre. Take a look to see if you're using a cooling technique that is wasting energy rather than saving it.
- Software programs like Local Cooling can calculate how much electricity your computer uses and adjust the settings of your power options to help minimize it. Physical devices like the Earth Watts Power Supply can help increase the efficiency of your computer's power supply and keep the computer cooler, so the fan doesn't have to work as hard.

The various ways in which one can adopt green computing are as follows:

1. E-waste must never be mixed with the ordinary organic wastes as they become useless once they come in contact with such organic wastes. There are e-waste farms available where all these e-wastes must be disposed of. These e-wastes can then be reused or recycled depending upon the condition in which it is. In any case, this minimizes the stress on the nature and also reduces the piling up of e-wastes.
2. A more friendly approach of green computing is to implement the green design. All the computing devices must me designed in such a way that they pose minimal threat to the nature and their manufacturing doesn't cause much harm either. Designing energy-efficient computers, scanners, printers, projectors and other computing devices holds the key in green design aspect of the green computing.
3. The manufacturing units of the big and established companies and all the subsystems must contribute to minimizing the environmental impacts of the manufacturing processes.
4. Green use refers to a sensible approach towards minimizing the usage of the computing devices, controlling the rate of usage of output devices and having a good check of the machines so that they do not get disposed because of getting out of order.
5. More efficient power supply units must be manufactured. Most of the times it is seen that the systems give the same amount of power no matter how much work are being done. Even if a small task is being performed, a large amount of power is dissipated. Similarly, if the computing device is being operated for many tasks at the same time, still the same amount of energy is being dissipated. This is what causes a waste in power unit dissipation. Hence, efficient power unit manufacturing is the demand of the green computing tactics.
6. Put laptops in "sleep" mode when not in use. The EPA has estimated that this reduces their energy use by 60 to 70 percent –
7. E-cycle used computer equipment. Find a recycler in your area. Also, Staples, the office supply retailer, has now started a recycling program. They will accept any brands of used desktop and

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notebook computers, monitors, printers, fax machines and all-in-one devices with a fee of $10. Smaller items like keyboards, mice and speakers are free to drop off.

8. Buy the new "Smart Strip" power strip. The Smart Strip actually senses how much power your computer peripherals use. And when the Smart Strip senses that you've turned your computer off, it automatically shuts off your peripherals, too, preventing them from drawing an idle current, which is the current drawn even after equipment is shut off.
9. Even better, turn OFF computers and other equipment when not in use. Despite the debate over whether it's better for your computer to be left on or shut off, the fact is it's better for the environment to shut it off. Trust me, your computer can handle it just fine; in fact, computers were designed to be turned off and back on!

Conclusion:The advantage of Green Computing is that saving and conserving energy and resources saves money which will support Economy of the country. Green computing can lead to changing government policy to encourage recycling and lowering energy use by individuals and businesses but could actually be quite costly. Environmental and health risks can be minimized. Regular practices like turning off devices when not in use, or buying energy efficient products to begin with. This will enable the promotion and widespread implementation of green computing principles.Green Computing helps to save environment as well as power. It indirectly help to save money. We know that all companies are moving towards the green computing in order to improve the efficiency of resources they have and to reused the harmful pollutions creating by the companies. A lots of researchers are going in order to improve the quality of the green computing by developing the low power consuming software's and recycling the electronic wastes. If we want to really support the green computing its our individual responsibility to **GO Green.**

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"SPORTS PSYCHOLOGY: STATUS AND IMPORTANCE"

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Abstract

The importance of sports psychology is as academic discipline and applied practice has grown from last three decades. Sports psychology plays a very vital role in enhancing the performance of sportspersons. It deals with the various mental qualities such as concentration, confidence, emotional control and commitment etc., which are important for successful performance in sports and games. Personality, youth sport and coaching are common areas of study of sports psychology. Goal setting, self talk ,imagery and arousal regulations are major techniques used in sports psychology. This paper reviews a status and importance of sports psychology in today's perspective.

Key Words: Sports Psychology, Personality, Goal Setting, self talk, imagery and arousal regulation

Introduction:

Sport psychology has a relatively short past, and in recent years is it becoming far more accepted and utilized as a valuable competitive edge among athletes and coaches.

In 1897, an Indiana University psychologist, Dr. Norman Triplett, wrote what was considered the first scientific paper on sport psychology, on the social facilitation behavior of bicyclists.

In the early 1920's, the first sport psychology laboratory was created in Berlin, Germany, by Dr. Carl Diem. Soon after, sport psychology arrived in America when Dr. Coleman R. Griffith created the first sport psychology laboratory in the U.S., in the state of Illinois. Dr. Griffith also created and taught the first university level courses in sport psychology at the University of Illinois, in 1923. In addition, Dr. Griffith was the first sport psychologist ever hired by a professional sports team, the Chicago Cubs baseball team. For his pioneering efforts, he is considered the father of the science of sport psychology in the United States.

We can define psychology as the study of the human mind, emotions and behavior. Psychology is an academic and applied field. The American Psychological Association (APA) states that sport psychology is the "scientific study of the psychological factors that are associated with participation and performance in sport, exercise, and other types of physical activity." The most important certifying body in sport psychology, the Association for Applied Sport Psychology (AASP), states that they "promote the ethical practice, science, and advocacy of sport and exercise psychology". The first journal "The Journal of Sports Psychology" came out in 1979; and in 1985, several applied sport psychology practitioners, headed by John Silva, believed an organization was needed to focus on professional issues in sport psychology, and therefore formed the Association for the Advancement of Applied Sport Psychology (AAASP). In 2007, AAASP dropped "Advancement" from its name to become the Association for Applied Sport Psychology (AASP), as it is currently known

It can be said that sports psychology plays a very vital role in enhancing the performance of sportspersons. It deals with the various mental qualities such as concentration, confidence, emotional control and commitment etc., which are important for successful performance in sports

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and games. Applied sport and exercise psychology consists of instructing athletes, coaches, teams, exercisers, parents, fitness professionals, groups, and other performers on the psychological aspects of their sport or activity. The goal of applied practice is to optimize performance and enjoyment through the use of psychological skills and the use of psychometrics and psychological assessment.

It is pertinent to mention that the practice of applied sport psychology is not legally restricted to individuals who possess one type of certification or licensure. The subject of "what exactly constitutes applied sport psychology and who can practice it?" has been debated amongst sport psychology professionals, and as of 2011, still lacks formal legal resolution in the United States. For instance, some question the ability of professionals who possess only sport science or kinesiology training to practice "psychology" with clients, while others counter that clinical and counseling psychologists without training in sport science do not have the professional competency to work with athletes. However, this debate should not overshadow the reality that many professionals express the desire to work together to promote best practices among all practitioners, regardless of training or academic background.

There are different approaches that a sports psychologist can use while working with his clients. For example, the social-psychological approach focuses on the social environment and the individual's personality, and on how complex interactions between the two influence behavior. The psycho-physiological approach focuses on the processes of the brain and their influence on physical activity, and the cognitive-behavioral approach analyzes the ways in which individual thoughts determine behavior. Recently some studies have been influenced by an evolutionary psychology perspective.[45] This includes studies on testosterone changes in sports which at least for males are similar to those in status conflicts in non-human primates with testosterone levels increasing and decreasing as an individual's status changes. A decreased testosterone level may decrease dominant and competitive behaviors which when the status conflicts involved fighting may have been important for preventing physical injury to the loser as further competition is avoided. Testosterone levels also increase before sports competitions, in particular if the event is perceived as real challenge as compared to not being important. Testosterone may also be involved in the home advantage effect which has similarities to animal defense of their home territory. In some sports there is a marked overrepresentation of left-handedness which has similarities to left-handed likely having an advantage in close combat which may have evolutionary explanations.

Personality is major area in the research field of sports psychology. There is a relationship between personality and performance of a player. Mental toughness , self efficacy and arousal are the pillars of the sports personality. Mental toughness is a psychological edge that helps one perform at a high level consistently. Mentally tough athletes exhibit four characteristics: a strong self-belief (confidence) in their ability to perform well, an internal motivation to be successful, the ability to focus one's thoughts and feelings without distraction, and composure under pressure. Self-efficacy is a belief that one can successfully perform a specific task. In sport, self-efficacy has been conceptualized as sport-confidence. However, efficacy beliefs are specific to a certain task (e.g., I believe I can successfully make both free throws), whereas confidence is a more general feeling (e.g., I believe I will have a good game today). Arousal refers to one's physiological and cognitive activation. While many researchers have explored the relationship between arousal and performance, one unifying theory has not yet been developed. However, research does suggest perception of arousal (i.e., as either good or bad) is related to performance. Motivation can be

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defined broadly as the will to perform a given task. People who play or perform for internal reasons, such as enjoyment and satisfaction, are said to be intrinsically motivated, while people who play for external reasons, such as money or attention from others, are extrinsically motivated.

Sports psychology emphasize the use of psychological skills training e.g., goal setting, imagery, energy management, self-talk when working with players by educating and instructing them on how to use these skills effectively during performance situations. Goal setting is the process of systematically planning ways to achieve specific accomplishments within a certain amount of time. Research suggests that goals should be specific, measurable, difficult but attainable, time-based, written down, and a combination of short-term and long-term goals. A meta-analysis of goal setting in sport suggests that when compared to setting no goals or "do your best" goals, setting the above types of goals is an effective method for improving performance. According to Dr. Eva V. Monsma, short-term goals should be used to help achieve long-term goals. Dr. Monsma also states that it is important to "set goals in positive terms by focusing on behaviors that should be present rather than those that should be absent." Each long-term goal should also have a series of short-term goals that progress in difficulty. For instance, short-term goals should progress from those that are easy to achieve to those that are more challenging. Having challenging short-term goals will remove the repetitiveness of easy goals and will give one an edge when striving for their long-term goals. Another is self talk technique. Self-talk refers to the thoughts and words athletes and performers say to themselves, usually in their minds. Self-talk phrases (or cues) are used to direct attention towards a particular thing in order to improve focus or are used alongside other techniques to facilitate their effectiveness. For example, a softball player may think "release point" when at bat to direct her attention to the point where the pitcher releases the ball, while a golfer may say "smooth stroke" before putting to stay relaxed. Research suggests either positive or negative self-talk may improve performance, suggesting the effectiveness of self-talk phrases depends on how the phrase is interpreted by the individual. Relaxation is important for sportsman. Arousal regulation is refers to entering into and maintaining an optimal level of cognitive and physiological activation in order to maximize performance. The use of meditation and specifically, mindfulness, is a growing practice in the field of arousal recognition.

Conclusion: As an interdisciplinary subject, sports psychology draws on several different scientific fields, ranging from psychology to physiology to neuroscience. Major topics of study are the relationship between exercise and mental health (e.g., stress, affect, self-esteem), interventions that promote physical activity, exploring exercise patterns in different populations (e.g., the elderly, the obese), theories of behavior change, and problems associated with exercise (e.g., injury, eating disorders, exercise addiction). Recent evidence also suggests that besides mental health and well-being, sport practice can improve general cognitive abilities. When requiring sufficient cognitive demands, physical activity seems to be an optimal way to improve cognition, possibly more efficiently than cognitive training or physical exercise alone.

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"Women Entrepreneurship and Start-up: A SWOT Analysis of Opportunities and Challenges"

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Abstract:

Pandit Jawaharlal Nehru has quoted "When women move forward, the family moves, the village moves and then ultimately the Nation moves forward. "Women are one of the most relevant untapped resources if you talk about entrepreneurship. Female entrepreneurship is achieving importance and attention in light of the era of the importance of new business formation for economic growth and development. Entrepreneurship refers to the act of setting up a new business so as to take advantages from new opportunities. Entrepreneurs are accountable for shaping the economy and they help in creation of new jobs and new wealth by inventing new process, products and services. We all understand that economic development of the today's woman is crucial for economic development of any country specially a country like India. Start-up: An emerging entrepreneurial venture with fast growing business, developing and/or subsequently offering an innovative product, process or service can be termed as a startup venture. Startups are playing a very crucial role in the development of economies at a comparatively faster pace all around the world. The technological innovation along with process creativity as well as new product development have given rise to a huge number of startups coming up in the markets in recent times. Considering the ability of this fast growing trend, the Indian Government introduced a scheme named 'Startup India' its intention is to assist and encourage the young entrepreneurs in formation of startups in the country and outside as well. Startups provide a catalyst ground for the technological development to build a strong system for nurturing innovation that can drive sustainable development and generate substantial employment opportunities for taking the country ahead. The aim of the Paper is to study women entrepreneurship in sections: First section based on performance and role of women entrepreneurs and SWOT Analysis. Second section based on the aid and support provided by government nationally and internationally up gradation to women as Entrepreneurs.

Keywords: Entrepreneurship, women, Start-up initiative, Stand-up scheme, SWOT, economic development, challenges, opportunities of women Entrepreneurship,

Introduction:

Indian women's entrepreneurship needs to be studied separately for two main reasons. The first reason is that women's entrepreneurship has been recognized during the last decade as an important untapped source of economic growth. Women entrepreneurs have such a potential to create new jobs for themselves and others. They are also expert in fining different solutions to organization, management as well as various business problems to exploit the entrepreneurial opportunities. However, they still represent a minority of all entrepreneurs. Thus there exists a market failure discriminating against women's possibility to become entrepreneurs and their possibility to become successful entrepreneurs. The 'stand-up' and 'start-up' policy of Prime Minister of India, Narendra Modi will definitely give inspiration to the Indian women for start-up entrepreneurship. The purpose of the paper to make SWOT analysis of female

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entrepreneurship in developing countries and seeks to provide a detailed account of strength, weaknesses, opportunities and threats.

Objectives of the Study:

1. To study the strength, weaknesses, opportunities and threats of women entrepreneurship in India.
2. To study how the stand-up and start-up initiative would benefit women entrepreneurship.
3. To study the measures needed to improve the state of women entrepreneurship in India.

Research Methodology:

The study focuses on extensive study of Secondary data collected from various books, National & International Journals, published reports of RBI, NABARD, Census Surveys, SSI Reports, newspapers, publications from various websites which focused on various aspects of Women Entrepreneurship.

Successful Women Entrepreneurs in India of 21st Century:

- Akhila Srinivasan, Managing Director, Shriram Investments ltd.
- Chanda Kocchar, Executive Director, ICICI Bank
- Ekta Kapoor, Creative Director, Balaji Telefilms Ltd.
- Jyoti Naik, President, Lijjat Papad.
- Kiran Mazumdar Shaw, Chairman & Managing director, Biocon Ltd.
- LalitaD.Gupte, JMD, ICICI Bank.
- Naina Lal Kidwar, Deputy CEO, HBSE.
- Preetha Reddy, Managing Director, Apollo hospitals.
- Priya Paul, Chairman, Apeejay Park Hotels.
- RajshreePathy, Chairman, Rajshree Sugars & Chemicals ltd.
- Ranjana Kumar, Chairman, NABARD.

SWOT Analysis:

A parameter to examine the growth and performance of women entrepreneurs development in India.

A. Strengths:

- Ample idle money for venture through Government support and special schemes for women entrepreneurship like stand-up and Start-up and through Five-year plan.
- Women entrepreneur are innovative, confident and creative women. They have ability of achieving self economic independence individually or in teamwork. They can create employment opportunities for others through establishing, initiating and running the enterprise by keeping pace with her personal, family and social life.
- Women give preference for their work from their own residence. It is also find that difficulty in getting appropriate jobs and desire for social recognition encourage them for self–employment.

B. Weaknesses:

- Our educational system is very primitive and creating awareness about woman's capacities and their hidden powers to handle economic activities. Most of the women are found that they have not proper capacities and risk making ability.
- Lack of won fund, lack of prior experience, Illiteracy and old value of family, lack of mobility

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- Absence of proper support, cooperation and back-up for women by their own family members and the outside world people force them to drop the idea of excelling in the enterprise field.
- Women's family obligations also bar them from becoming successful entrepreneurs in both developed and developing nations.
- Achievement motivation of the women folk found less compared to male members.
- The greatest deterrent to women entrepreneurs is that they are women.

C. Opportunities:

- Women inculcate entrepreneurial values and involve greatly in business dealings.
- Business opportunities that are approaching for women entrepreneurs are eco–friendly technology, Bio-technology, IT enabled enterprises, event management, tourist industry, Telecommunication, Plastic materials, Mineral water, Herbal & health care, Food, fruits and vegetables processing.
- Women entrepreneurs can gain new opportunities in the rural areas such as papads and pickles, Ice cream, channel products, and readymade garments.

D. Threats:

- Women entrepreneurs have to face tough competition not only from industry but also from their male counterparts. Surviving this cut-throat competition and achieving the aim of producing quality product at competitive price is not an easy task for the women entrepreneurs.
- Fear of expansion and Lack of access to technology.
- Lack of will power self–confidence, optimistic attitude and strong mental outlook amongst women creates a fear from committing mistakes while doing their work.
- Credit discrimination and Non Cooperative officials.
- Insecure and poor infrastructure and Dealing with male laborers.
- Indian women give emphasis to family ties and relationships.

Steps Taken by the Indian Government for Women Empowerment:

The Prime Minister of India, NarendraModi on the 2016 Independence Day announced the —Start-up India initiative. This initiative aims at fostering entrepreneurship and promoting innovation for the growth of Start-ups. The objective of this initiative is that India must become a nation of job creators and its should not become a nation of job seekers. PM while announcing the Act said that each of the 1.25 lakh bank branches should fund at least one woman entrepreneur. The Stand- Up'India scheme, launched on 5April2017, ensures that women entrepreneurs have a fair chance of setting up their own businesses. The scheme facilitates loans from Rs10 lakh to Rs1 crore for women. The Prime Minister of India, Narendra Modi announced the Start-up India. Initiative to promote the entrepreneurship in India to a new level. All the incentives to boost the start-up businesses highlight the effort government is putting in to promote entrepreneurs. So, with this initiative India may rise in the list of most favorable nations for promoting start-ups, but when it comes to inclusion of women as entrepreneurs or ease of doing business, it's a long road ahead. Announcing the Act, the PM also said that each of the 1.25 lakh bank branches should fund at least one SCs or Adivasi and at least one woman entrepreneur. The specific mention of supporting women entrepreneurs is the much needed initiative for businesswomen that will certainly provide them an edge over their male counterparts. This initiative aims at fostering entrepreneurship and promoting innovation for the growth of Start-ups. The objective is that India must become a nation of job creators instead of

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being a nation of job seekers. Announcing the Act, the PM also said that each of the 1.25 lakh bank branches should fund at least one woman entrepreneur.

Stand-up scheme:-The Government of India is leaving no stone unturned to encourage entrepreneurship in the country and is making resources quite accessible to all those with a zeal to start their own businesses. To promote employment and entrepreneurship among women, the scheduled castes and scheduled tribes, the Government is planning to launch the _Stand Up India _scheme and the Cabinet approved Rs 8,000 crore funds for this scheme. The scheme will benefit at least 2.5 lakh borrowers. This campaign is different from the Start up India campaign. Start- Up India is for new entrepreneurs but Stand Up India is a proposal restricted only to scheduled caste, scheduled tribe and women entrepreneurs, finance minister Arun Jaitley told reporters after the Cabinet meeting. —While the Rs 3,000 crore MUDRA Credit Guarantee Fund (CGF) will act as hedge against default of Rs 50,000 to Rs 10 lakh loan extended to small entrepreneurs, the Rs 5,000 crore. Stand Up India CGF will stand guarantee for Rs 10 lakh to Rs 1 crore loans to be provided to least 2.5 lakh SC/ST and women.Under the Stand Up India scheme banks will give loans at the least applicable rate of interest and that every bank branch, including those in the private sector will give loans between Rs 10 lakh and 1 crore to at least one SC/ST and one woman entrepreneur under the scheme. This Scheme provides for:

- Refinance window through Small Industries Development Bank of India (SIDBI) with an initial amount of Rs. 10,000 Crore.
- Creation of a credit guarantee mechanism through the National Credit Guarantee Trustee Company (NCGTC)
- Handholding support for borrowers both at the pre loan stage and during operations. This would include increasing their familiarity with factoring services, registration with online platforms and e-market places as well as sessions on best practices and problem solving. The major focus of this scheme is on handholding support for both SC/ST and Women borrowers. The overall intent of the approval is to leverage the institutional credit structure to reach out to these under-served sectors of the population by facilitating bank loans repayable up to 7 years and between Rs. 10 Lakh to Rs. 100 Lakh for green field enterprises in the non- farm sector set up by such SC, ST and Women borrowers The loan under the scheme would be appropriately secured and backed by a credit guarantee through a credit guarantee scheme for which Department of Financial Services would be the settler and National Credit Guarantee Trustee Company Ltd. (NCGTC) would be the operating agency. According to the government, these are sectors of the population that are often underprivileged or under-served. Both these sectors are upcoming, and fast. The scheme helps them out by facilitating loans for non-farm sector entrepreneurship. The important latest five year plans and the provisions for women empowerment in these plans are discussed as follows;

Steps taken by Government during Ninth Five-Year Plan:

The Ninth Five Year Plan envisaged: a) Empowerment of women and socially disadvantaged groups such as Scheduled Castes, Scheduled Tribes and Other Backward Classes and Minorities as agents of socio-economic change and development. b) Promoting and developing people's participatory institutions like Panchayati Raj institutions, cooperatives and self-help groups. c) Strengthening efforts to build self-reliance. d) The convergence of services from different sectors. e) A women's component plan at the Central and State levels.

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- **Steps taken by Government during Tenth Five-Year Plan:**

The Tenth Five Year Plan was formulated to ensure requisite access of women to information, resources and services, and advance gender equality goals.

- **Steps taken by Government during Eleventh Five-Year Plan:**

The Eleventh Five Year Plan proposes to undertake special measures for gender empowerment and equity. The Ministry of Women and Child Development would make synergistic use of gender budget and gender mainstreaming process

- **Steps taken by Government during Twelfth Five-Year Plan:**

Twelfth plan year plan entitled as Faster, Sustainable and More Inclusive growth". In previous plans, there was not much more attention on women's cause. But it is widely believed that men enjoy all the power, position and privileges women were treated as second rate. 12th five year plan of the Government of India(2012-2017) had decided for the growth rate at 8.2% but NDC on27th December 2012 approved 8%growth rate for 12 the five year plan. The Planning Commission is pushing for special dispensation for single women, particularly those who are single by choice, under various government schemes in the 12thfive year plan. In addition to reserving a certain percentage of jobs for single women under centrally sponsored schemes, the plan has proposed promoting and strengthening federations of single women at the block and district level.

Conclusion:

In spite of a decade of healthy economic growth, India fares very poorly in the issue of women entrepreneurship. Stand-up initiative is a potent tool which can help promote thewomen entrepreneurship. Ensuring equitable access for women in Digital India initiative is also important to prevent their further marginalization. Women entrepreneurship is growing in India, and although the numbers of start-ups led by women entrepreneurs are still few, the trend is fast changing. Women on vast scale are now taking the thrust into entrepreneurship. They are breaking various barriers to lead enterprises. With India making news around the world with its start-up initiative, there's a great need to encourage and support more women to step out of their comfort zones, and be part of the positive change that the country is witnessing right now. Through the stand-up initiative, a long term proposal has been made to improve the potential of women entrepreneurs to fuel economic growth and help build stronger communities globally. It is expected that this programme will be an opportunity and entrepreneurial channel for motivated women to systematically work through their ideas and ultimately start their ventures. India is a developing country and having mixed economy, male dominated society and women are assumed to be economically as well as socially dependent on male members. A SWOT Analysis of opportunities and challenges of Women Entreprenures will definitely lead towards success of economy. Various factors like positive reinforcement and negative reinforcement influencing women entrepreneurs. Successful leading business women in India are ideal role model for our country. Women have the potential and determination to setup, uphold and supervise their own enterprise in a very systematic manner, appropriate support and encouragement from the society, family, government can make these women entrepreneur a part of mainstream of national economy and they can contribute to the economy progress of India.

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Pune District Education Association

Pune District Education Association's

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Two - Days International Conference On

" Entrepreneurship and Startups: Trends, Opportunities and challenges "

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Types of Cyber Crimes and Cyber Law

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Abstract:
WHY CYBER CRIMES? Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of online banking; shopping through which bank accounts can be hacked and financial motive of the person committing fraud can be achieved. Terrorize create social instability in the country, by targetting specific youth to engage into unlawful activities and spoil the energetic resourceful force of the nation. India ranks 11th in cyber crimes in the world, The main reason is wide availability and use of computers and internet in India. Also wide user base results in increased crime rate. Many crimes get registered with the Police authorities, but almost 50% of the cyber crimes go unreported.
Keyword: Cyber Crime, Law, Protection, Information Technology

Introduction:
Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of we shop online. We work online. We play online. We live online. As our lives increasingly depend on digital services, the need to protect our information from being maliciously disrupted or misused is really important. This free online course will help you to understand online security and start to protect your digital life, whether at home or work. You will learn how to recognise the threats that could harm you online and the steps you can take to reduce the chances that they will happen to you. With cyber security often in the news today, the course will also frame your online safety in the context of the wider world, introducing you to different types of malware, including viruses and trojans, as well as concepts such as network security, cryptography, identity theft and risk management.

Objectives:
1) To find out how Crime is an illegal activity which leads to destruction?
2) To understand how Cyber crime is a serious emerging threat to society, entire nation and world and how to take steps to be safe.

Research Methodology:
Secondary data in the form of Books, Internet and Web sites are used to collect information on the topic also interview with Ms.Sweta Verma crime reporter of Maharashtra state.

Hypothesis:
1)Introduction of strict laws will help to control crimes.
2)Proper care by the individuals will definitely reduce the cyber crimes.

Cyber Crimes:
- Computer or Cyber Crime refers to a crime that involves a computer and network.
- Unauthorized access to computer systems.
- A Computer can be used to create nuisance and disturbance in society
- Pornography, Threatening emails, Sexual Harassment, Spam, Phishing, Hacking , Worms, Viruses etc are some examples of Cyber crimes.

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- Cyber Squatting, Cyber Stalking, Phishing are some more emerging crimes in today's world.

Protection of Cyber crimes:

- As rightly said prevention is better than cure, we must also take steps to prevent this crime from taking place.
- Various measures have been taken even by the governments of various countries to encounter threats arising out of cyber crime.
- Also technical help is offered to protect computers from being hacked and misused.

Technical Help Components:

- Keeping the computer up-to-date with latest patches and software versions.
- Choosing of strong passwords & keeping them safe.
- Protecting the data in the computer by use of software security like quick heal, avast etc.
- Make proper privacy settings for social media applications
- Do not visit untrusted websites or hyperlinks that look visually attractive but are usually formed to let the virus creep in once u click on it.
- Ignoring pop ups
- Keep different passwords on different websites and for different purposes (Shopping, banking different passwords)

The main provisions that govern cyber law are contained in Information Technology Act, 2000

- It covers the following aspects:
- Cyber crimes
- Electronic and digital signatures
- Intellectual Property
- Data protection and Privacy.
- Punishments for committing cyber crime
- Government authorities to monitor cyber crimes

Top 10 Steps To Help Stop Cybercrime

You've probably heard the adage "information is power," and that is certainly true when it comes to cyber crime. Access to your personal information is what gives hackers the power to tap into you accounts and steal your money or your identity. But the right information can also empower you to protect yourself from being caught up in the thriving industry that is cybercrime.

With that in mind, here is our Top 10 list of steps you can take to avoid becoming a victim of cybercrime.

1) Education - Hackers aren't the only ones who can gain power from information. By educating yourself about the types of scams that exist on the Internet and how to avert them, you are puttingyourself one step ahead of the cybercriminals.Since phishing is prevalent, read up on the latest phishing scams and learn how to recognize a phishing attempt. Remember, phishing is when hackers attempt to lure you into revealing personalinformation by pretending to be a legitimate organization or person. These scams often play off major new stories, so keep informed on the latest news-related scams.

2) Use a firewall - Firewalls monitor traffic between your computer or network and the Internet and serve as a great first line of defense when it comes to keeping intruders out. Make sure to use the firewall that comes with your security software. And if you have a home wireless network, enable the firewall that comes with your router.

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3) Click with caution - When you're checking your email or chatting over instant messenger (IM), be careful not to click on any links in messages from people you don't know. The link could take you to a fake website that asks for your private information, such as user names and passwords, or it could download malware onto your computer. Even if the message is from someone you know, be cautious. Some viruses replicate and spread through email, so look for information that indicates that themessage is legitimate.

4) Practice safe surfing - When navigating the web, you need to take precautions to avoid phony websites that ask for your personal information and pages that contain malware. Use a search engine to help you navigate to the correct web address since it will correct misspellings. That way, you won't wind up on a fake page at a commonly misspelled address. (Creating a phony site at an address similar to the real site is called "typosquatting," and it is a fairly common scam.) You may also want to use a product like McAfee® SiteAdvisor® software to help you navigate.

Site Advisor software is a free browser tool that tells you if a site is safe or not right in your search results, so you are warned before you click.

5) Practice safe shopping - In addition to practicing safe surfing, you also need to be careful where you shop online. Be cautious when shopping at a site that you've never visited before and do a little investigation before you enter your payment information. Look for a trustmark, such as McAfee SECURE™, to tell you if a site is safe.

And when you're on a payment page, look for the lock symbol in your browser, indicating that the site uses encryption, or scrambling, to keep your information safe. Click on the icon to make sure that the security certificate pertains to the site you are on. When it comes time to pay, use a credit card instead of a debit card. If the site turns out to be fraudulent your credit card issuer may reimburse you for the charges, but with a debit card your money is gone.Finally, evaluate the site's security and privacy policies in regards to your personal data.

6) Use comprehensive security software and keep your system updated - Because hackers have a wide variety of ways to access your system and information, you need comprehensive security software that can protect you from all angles. Software like McAfee® SecurityCenter, available preloadedon Dell™ PCs, can help protect you from malware, phishing, spyware, and other common andemerging threats.Just make sure that you keep your security software up to date by selecting the automatic update function on your security control panel. And don't forget to perform regular scans.You also want to update your operating system (OS) and browser with the latest security patches. Ifyou are a Microsoft Windows user, you can enable automatic updates to keep your OS safe.

7) Secure your wireless network - Hackers can access data while it's in transit on an unsecured wireless network. You can keep the hackers out by enabling the firewall on your router and changing the router's administrator password. Cybercriminals often know the default passwords and they can use them to hack into your network. You may also want to set up your router so it only allows access to people with passwords that are encrypted. Check your owner's manual for instructions on setting up encryption.

8) Use strong passwords - Although it may be easier for you to remember short passwords that reference your birthday, middle name, or pet's name, these kinds of passwords also make it easy for hackers. Strong passwords can go a long way in helping secure your information, so choose a password that is at least 10 characters long and consists of a

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combination of letters, numbers and special characters. Also consider changing your password periodically to reduce the likelihood of it being compromised.

9) Use common sense - Despite the warnings, cybercrime is increasing, fuelled by common mistakes people make such as responding to spam and downloading attachments from people they don't know. So, use common sense whenever you're on the Internet. Never post personal information online or share sensitive information such as your social security number and credit card number. Exercise caution when clicking on any links or downloading any programs.

10) Be suspicious - Even if you consider yourself cyber savvy, you still need to keep your guard up for any new tricks and be proactive about your safety. Backup your data regularly in case anything goes wrong, and monitor your accounts and credit reports to make sure that a hacker has not stolen your information or identity.

Cyber Laws:

Sections 65 to 74 are the penal provisions

- Imprisonment up to 10 years provided

Section 65 – Source CodeMost important asset of software companies
Imprisonment up to 3 years and / or fine up to Rs 2 lakh

- Knowingly or intentionally –Concealing- Destroying- Altering
- Knowingly or intentionally causing another to do so

Section 66 -Covers the following in relation to information:

- Unauthorised access-Downloading, -copying or extracting information
- Introducing viruses and contaminants (worms, trojans)-Damaging a computer-Disruption of a computer-Denial of access-Assisting in illegal access
- Tampering or manipulating computer-Destroys, deletes or alters information-Steals, conceals or alters source code

- Imprisonment up to 3 years and / or fine up to Rs 5 lakh
- Knowledge or intention must be proven

Section 66

Sending offensive messages through communication service-3 years and fine
Dishonestly receiving stolen computer resource or communication device-3 years and / or fine of 1 lakh
Cheating by personation -3 years and fine of 1 lakh
Violation of privacy -3 years and / or 2 lakhs
Cyber Terrorism -Life imprisonment

- **Section 66A** – Sending offensive messages through communication services
- **Section 66B** – Dishonestly receiving stolen computer resource or communication device
- **Section 66C** – Identity theft
- **Section 66D** – Cheating by personation by using computer resource

Publishing or transmitting obscene material in electronic form -3 years and 5 lakh; 5 years and 10 lakh

Section 67A -Publishing or transmitting sexually explicit material in electronic form - 5 years and 10 lakh; 7 years and 10 lakh

Section 67B - Publishing or transmitting depicting children in sexually explicit material in electronic form -5 years and 10 lakh; 7 years and 10 lakh

Section 67C -preservation aSection 69B

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- power to authorise to monitor and collect traffic data or information through any computer resource for cyber security
- Section 72A -punishment for disclosure of information in breach of lawful contract
- Section 79 -exemption from liability of intermediary in certain cases

Section 85 -Offences by companies-Holds that a company and its directors can be held accountable for crimes

Types of cyber crime

Cybercrime is a type of crime done by the help of computer and internet. It is basically extension of traditional crime with the help of new technology. The nature of cybercrime is virtual because in this crime there is no need to involve manually, but effects are the same as traditional crime. Today the use of computer and internet are growing very fast. We use them for doing important works of our daily life. In fact we cannot live without computer and internet and so, the chances of being a victim of cyber crime is increasing fast. The cyber criminals target our information which we provide them accidentally while using computer and internet. There are so many types of cyber crimes which can harms a person.

1) Hacking Hacking is a type of cyber crime. In simple words Hacking is an act by which a person accesses a computer system or network without permission of the owner. The person doing the hacking is called Hackers. They have best knowledge and understanding of computer and computer program. They misuse their knowledge and commit the crime of hacking. Hackers are also called crackers. There are many types of hackers like White Hat Hackers, Black Hat Hackers, Grey Hat Hackers etc. Among all of them, White Hat Hackers are the persons who use their knowledge for good purpose and check the security of any system or software.

2) Online Identity Theft Online theft is also a major type of Cybercrime. Nowadays, people using the Internet frequently use their sensitive data like. Bank details, credit card details, etc. on the Internet and cyber criminals target these data and commit online theft. Cyber criminals also target copyrighted content on the Internet and download and distribute it. This is a one part of Online Theft on the other hand there is an advanced stage of online theft that is called Identity Theft. We all know that a normal internet user has many online account including many social networking accounts and they all have their username and password. Cybercriminals target that username and password and use the account behalf of original owner of the account. It damages the online presence and reputation of owner of account holder. It may also cause financial loss sometimes.

3) Denial-of-Service Attack In simple word Denial-of-Service referred the act by which a user of any website or service denied to use the service or website. In this type of cyber crime criminals target the web server of the websites and flow a large number of requests to that server. This causes the use of maximum bandwidth of the website, and it goes slow down or not available for some times

4) Phishing Phishing an act by which cyber criminals attempt to know the confidential data of any internet user. The Data may be the credit card number or username and password of any account. The main purpose of Phishing is to steal money or acquired other important data of any person, which causes financial loss.

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The act of Phishing done by sending e-mail or websites in which cyber criminals ask about your personal information or there is a link, and they tell click on it. After clicking on that link the person may be the victim of Phishing.

5) Spamming and Email Bombing Spam is a message also known as junk mail, send with a web link or business proposal. Clicking on this link or responding to business proposal send to a phishing website or install a malware in your computer. The sender of these emails are always unknown. You must aware to responding these type of spam mails because it tends towards some financial and data loss.
On the other hand in email bombing an abuser sending huge numbers of email to target address and due to this that email address or mail server crashed. It feels like Denial-of-service impact. It says that spamming is a variant of Email bombing.

6) Web Jacking The world Web Jacking comes from Hijacking. In this type of cybercrime the cybercriminals hacks the control of a website. They may able to change the content of that website. They use that website as like owner and the real owner of website has no more control on the website. Sometime attackers asks for ransom to the owner of the website

7) Data Diddling Data Diddling is unauthorised altering of data. When a person enter some data to his computer and output is different from input then he may victim of data diddling.It is done by a virus progarm that change the entered data.

8) Software Piracy Software Piracy is also a type of cybercrime and unfortunately most of Computer user are part of this crime. In this era of the Internet, you can easily download a movie or software via many websites or torrents. People often use a software without proper permission from the copyright holder of the software. They normally download the software and crack the code and use the software without buying that. This act is also a part of software piracy.

The following type of work constitute a cyber crime of Software Piracy.
1.Crackingthekeyofanysoftware.
2.Usingunlicensedsoftwareinyourpersonalcomputer.
3.Usingsinglelicensedsoftwaretomultiplecomputer.
4. Distributing such type of software to other persons.

Conclusions (or) How Can You Stay Safe?

- Keep your operating system updated/patched. Set it to "auto update".
- Use anti-virus and anti-spyware software and keep them updated.
- Do not visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Secure your transactions. Look for the "lock" icon on the browser's status bar and be sure "https" appears in the website's address bar before making an online purchase. The "s" stands for "secure" and indicates that the communication with the webpage is encrypted.
- Be cautious about all communications you receive including those purported to be from "trusted entities"and be careful when clicking links contained within those messages.
- Do not respond to any unsolicited (spam) incoming e-mails.
- Do not open any attachments contained in suspicious emails.
- Do not respond to an email requesting personal information or that ask you to "verify your information" or to "confirm your user-id and password."
- Beware of emails that threaten any dire consequences should you not "verify your information".

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- Do not enter personal information in a pop-up screen. Providing such information may compromise your identity and increase the odds of identity theft.
- Have separate passwords for work related and non-work related accounts.

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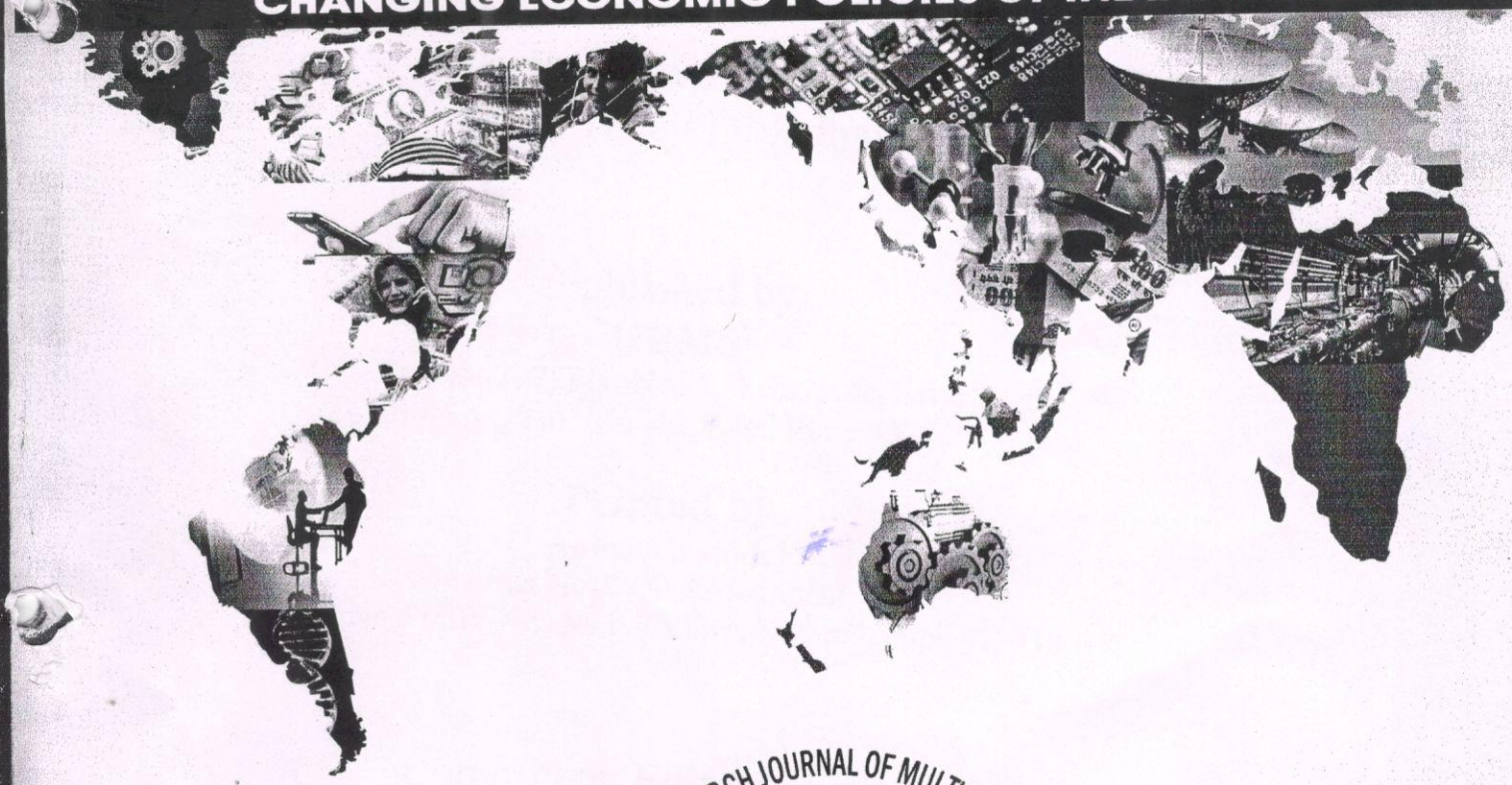
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT



INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT

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"GST-Analysis of audit provisions in India."

Prof. Prakash E. Humbad
Mamasaheb Mohol Mahavidalaya, Puad Road, Pune-38.

"ABSTRACT"

"GST is called as one nation, one tax.This is a major indirect tax reforms after the independe... India. India is under developing country;therefore, this type of reforms is the necessity of the ... Under GST there are many provisions like registration, payment of taxes, interest, penalty, ... tax credit, set off, appeal and audit. Under the old system of indirect taxation, some of the ... cannot be set off. There was cascading effect.it was also creating pressure on the dealers, GST ... solved all the issues. Audit is necessary part of legislation even though GST has more focus on ... assessment."

Introduction and Meaning: -

Due to Liberalisation, Privatisation and Globalization (LPG) policy, there are tremendous cha... in the operation of Business in India. After demonetization of Indian currency by The Honou... Prime Minster, Shri Narendra Modiji, has made many changes under direct and indirect taxes. ... major change in Indirect Taxes was the introduction of GST.

The single GST(goods and service taxes) replaced several former taxes and levies which inclu... central excise duty, services tax, additional customs duty, surcharges, state-level value added ... and Octroi. Other levies which were applicable on inter-state transportation of goods have also ... done away with in GST regime. GST is levied on all transactions such as sale, transfer, purcha... barter, lease, or import of goods and/or services. India adopted a dual GST model, meaning ... taxation is administered by both the Union and State Governments. Transactions made within ... single state are levied with Central GST (CGST) by the Central Government and State GST (SGST) ... by the State governments. For inter-state transactions and imported goods or services, an Integra... GST (IGST) is levied by the Central Government. GST is a consumption-based tax; therefore, ... are paid to the state where the goods or services are consumed not the state in which they ... produced. Under the previous system, a state would only have to deal with a single governmen... order to collect tax revenue.

GST Audit-

Section 2(14): "Audit" means:

the examination of records, returns and other documents maintained or furnished by the registe... person under this Act or rules made thereunder or under any other law for the time being in force ... verify, the correctness of turnover declared, taxes paid, refund claimed and input tax credit availe... and to assess his compliance with the provisions of this Act or the rules made thereunder.

Objectives: -

1) To know the provisions of GST.
2) Understand the impact of the audit provisions on GST.
3) To study the mechanism of audit.

Research Methodology: -

SEC 35- ACCOUNTS AND OTHER RECORDS

a) This Section mandates the upkeep and maintenance of records, at the place(s) of busines... electronic or other forms.

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b) Power is vested with the Commissioner for relaxation as well as for prescribing additional records for certain classes of taxable persons.
c) Furnishing of an audited statement of accounts and reconciliation statement is also contemplated for persons having turnover exceeding prescribed limit.
d) Failure to maintain records or accounts may entail payment of tax as determined by a proper officer in respect of unaccounted transactions.
e) Every owner or operator, of a place of storage, or every transporter whether such owner or operator or transporter is registered or not, shall maintain records and other relevant details as may be prescribed.

Some related Terms

- **Place of business -Section 2 (85) of The CGST Bill, 2017 defines "place of business" to** include -
  - a)a place from where the business is ordinarily carried on, and includes a warehouse, a godownor any other place where a taxable person stores his goods, provides or receives goods services or both; or
  - b)a place where a taxable person maintains his books of account; or

c)a place where a taxable person is engaged in business through an agent, by whatever name called;

Accounts and other records

- Every registered person shall keep and maintain, at his principal place of business, as mentioned in the certificate of registration, a true and correct account of—

(a) production or manufacture of goods;
(b) inward and outward supply of goods or services or both;
(c) stock of goods;
(d) input tax credit availed;
(e) output tax payable and paid; and
(f) such other particulars as may be prescribed:

Provided that where more than one place of business is specified in the certificate of registration, the accounts relating to each place of business shall be kept at such places of business:
Provided further that the registered person may keep and maintain such accounts and other particulars in electronic form in such manner as may be prescribed.

- Every owner or operator of warehouse or godownor any other place used for storage of goods and every transporter, irrespective of whether he is a registered person or not, shall maintain records of the consigner, consignee and other relevant details of the goods in such manner as may be prescribed.
- The Commissioner may notify a class of taxable persons to maintain additional accounts or documents for such purpose as may be specified therein.
- Where the Commissioner considers that any class of taxable person is not in a position to keep and maintain accounts in accordance with the provisions of this
- section, he may, for reasons to be recorded in writing, permit such class of taxable persons to maintain accounts in such manner as may be prescribed.

TYPES OF AUIDT

a) Audit by tax authorities.
b) Annual Audit by CA / CWA
c) SPECIAL AUDIT
d) CAG Audit

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a) Audit by tax authorities

Commissioner of CGST / SGST or any officer authorizedAudit of any registered person for a particular period, at particular frequency and in particular manner at the place of business of registered person or in their office;

- Notice to registered person at least 15 working days prior to audit [Form GST ADT-01];
- Audit to be completed within 3 months (can be extended further by 6 months by Commissioner);
- Registered person to provide the required information and facility;
- Result of audit to be intimated within 30 days [Form GST ADT-02] and further action will be taken.

b) Annual Audit by CA / CWA

According to Section 35(5) of the CGST Act:

Every registered person whose turnover during a financial year exceeds the prescribed limit (presently Two crore rupees) shall get his accounts audited by a Chartered Accountant ora Cost Accountantand shall submit a copy of the audited annual accountsalong with a reconciliation statement (reconciling the value of supplies declared in return with audited annual financial statements)Contents of the audit report and other particulars to be prescribedAudited Report and Audited annual Accounts to be submitted along with annual return on or before 31st December following the end of financial year.Form GSTR 9C.

c) SPECIAL AUDIT

If at any stage of scrutiny, inquiry, investigations or any other proceedings, the department is of the opinion that the value has not been correctly declared or credit availed is not with in the normal limits, department may order special audit by Chartered Accountant or Cost Accountant nominated by department.

The by Chartered Accountant or Cost Accountant shall within the period of 90 days submit a report of such audit duly signed and certified by him. Such period can be further extended by 90 days by the Assistant Commissioner on the basis of material and sufficient reason.

The registered person shall be given an opportunity of being heard in respect of any material gathered on the basis of special audit. Where the audit conducted results in detection of unpaid/short paid tax or wrong refund or wrong input tax credit availed then demand and recovery actions will be initiated.

d) CAG Audit

The Government or the authority specified by it, shall maintain proper record in relation to fund (for the welfare of the consumer) and prepare an annual statement of accounts in such form and manner as may be prescribed; in consultation with the Comptroller and Auditor-General of India. The Comptroller and Auditor-General of India shall have the power to inspect the accounts of such Government or authority by virtue of powers vested in it by other law.

Conclusion: -

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GST is a major tax reforms in India. There are more than 196 countries in world which levy GST. This tax will be beneficial to dealers as well as consumers. Audit provisions are suitable to every dealers and manufacturers.

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iii) *Books on GST.*
iv) *Newspaper articles and news.*
v) *ICAI publication- Journal*

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of MAMASAHEB MOHOL COLLEGE, PUNE - **College / University has attended**

the seminar as Resource Person / Paper Presenter / Participant / Member of the Organising Committee

on 16th and 17th February, 2018.

Title of the presentation : IMPACT OF RENAISSANCE ON INDIAN ENGLISH LITRETURE

(Dr. Sopan Shende)
Convener

(Dr. Ashok Chaskar)
Vice Principal

(Dr. Dilip Sheth)
Principal

Dr. Shrinivas Ippalpalli (English Dept.)
National Seminar - S.P. College Pune 16 & 17th Feb. 2018

Impact of Renaissance on Indian English Literature

Dr.Shrinivas Ippalpalli

The fact that Indian literatures are a product of a multilingual, multicultural and sociohistorical mélange cannot be overlooked. Today Indian literature reached at the apex of creation with the contribution of regional and national writers. This researcher would like to focus on the root and brief literary history of Indian writing in English and the genre – novel in Indo-Anglian literature up to the time of Mulk Raj Anand for better understanding of his novel. Here, it is essential to mention the brief history of Indian writing in English and the contributors of it. Along with the list of the contributors in Indian writing in English, the rise of the new form of literature- novel in India is also necessary to focus. For that researcher would like to divide the history of Indian writing in English into three parts, first to understand the beginning and exploration of Indian writing in English by major contributors, second for the rise and development of new literary genre (novel) in Indo-Anglian literature and third to understand Anand as a novelist. These three parts are foundation of my research work. On the basis of the understanding of the Indo-Anglian literature and the rise and development of novel in IndoAnglian literature, the major novels of Mulk Raj Anand can be judged properly. Indo-Anglian literature contributed to the common pool of world writing in English. It is a literature which is a combination of Indian 9 literature and Indian literature written in English. Indian English Literature refers to the body of work by writers in India who write in the English and whose native or co-native language could be one of the numerous languages of India. It is also associated with the works of members of the Indian Diaspora. It is frequently referred to as IndoAnglian literature. As a category, this production comes under the broader realm of postcolonial literature- the production from previously colonized countries such as India. Indian English literature has a relatively recent history; it is only one and a half centuries old. The first book written by an Indian in English was by Sake Dean Mahomet, titled Travels of Dean Mahomet; Mahomet's travel narrative was published in 1793 in England. In its early stages it was influenced by the Western art form of the novel. Early Indian writers used English unadulterated by Indian words to convey an experience which was essentially Indian. Indian writings in English are a product of the historical encounter between the two cultures—Indian and the western—for about one hundred and ninety years. It isn't that Indian people didn't experience the impact of a foreign culture. It did during the reigns of various foreign rulers. But the difference with the British rule lies in the nature of the economic system that had come into being in Europe after the Renaissance, described by Marx as capitalist system. Before the introduction of the British rule India had the feudal economic system, in accordance with which the vast population of the country, having various religious faiths and conforming to the caste system, tried to live their life, sometimes fatalistically and sometimes stoically. Above all, it was a closed society with a peculiar cultural racial intolerance. In fact, India had been awaiting a political and cultural change, which became necessary after the weakening and disintegration of the Mogul Empire. British rule in India, first of all, resulted in breaking the barrier of that closed

society. Then the greatest cultural impact came with the establishment of four universities and with the introduction of western educational system. The English language provided the natives with a way to the western literature and to the western culture, of course. English education created a class of native bourgeoisie, the majority of which turned to their mother tongue while giving birth to a native literature, applying the western aesthetic norms. But a few among them thought it appropriate to give expressions to their feelings and experiences in English. Thus, the peculiar body of Indo-Anglian literature was created—while its contents were to be Indian, its medium of expression was English. If we take a backward glance at the beginnings of IndoAnglian literature, the stalwart figure of Raja Rammohan Roy appears first. The renaissance in modern Indian literature begins with Raja Rammohan Roy. He had earned good command over English language by working with British officials. He had tried to give new thoughts, removed old dogma and typical rituals through Bramhosamaj. The Bramhosamaj encourages establishing harmony between men's accepted faith and their practical observations. Rammohan Roy worked for the betterment of women, freedom of press, English education, social justice and plight of Indian peasantry. He had good command over the English language and wrote prose and poetry in it. For his contribution in the pool of Indian writing in English, K.R.Srinivasa Iyengar writes; Rammohan Roy although he could be named as the first of the Indian masters of English prose, was great in so fields that be belong to Indian history more than to mere Indo-Anglian literary history. In this way he had contributed his writing and thoughts in the foundation of Indo-Anglian literature and prepared pathway for his successors and contemporaries like Henry Derozio, the Cavally Brothers, Kashiproshad Ghose, Hasan Ali, P. Rajagopual, Mohanlal, 12and Michel Madhusudan Dutt etc are considered first Indo-Anglian writers of verse and prose. The mid nineteenth century is the renaissance in India as that was the time of great literary and social revolutions. At that time legendary thinkers like Maharshi Debendranath Tagore, Kesub Chunder Sen, Dayanand Saraswati, the founder of the Arya Samaj have contributed for social reform, educational reform and religious reform which has given scope for renaissance in India. The first Indian English poet, Henry Louis Vivian Derozio (1809-1831) had nurtured English verse in India. He became a teacher of English literature at the Hindu College, Calcutta. A teacher as well as a poet, Derozio had expressed nature in his poetry like Keats. The flavor of Romanticism found in his poetry as he was highly influenced by Byron, Shelley, Keats, Scott and Moore. He died at the very early age due to cholera in 1831. This was the time when Hindu society in Bengal was undergoing considerable turmoil. In 1828, Raja Ram Mohan Roy established the Brahmo Samaj, which kept Hindu ideals but denied idolatry. This resulted in a backlash within orthodox Hindu society. It is in the perspective of these changes that Derozio was appointed at Hindu college, where he helped release the ideas for social change already in the air. His brilliant lectures presented closely-reasoned arguments based on his wide reading. He encouraged students to read Thomas Paine's Rights of Man and other free-thinking texts. Although Derozio himself was an atheist and had renounced Christianity, he encouraged questioning the orthodox Hindu customs and conventions on the basis of Judeo-Christian rationalism. He infused in his students the spirit of free expression, the yearning for knowledge

and a passion to live up to their identity, while questioning irrational religious and cultural practices. Derozio's intense zeal for teaching and his interactions with students created a sensation at Hindu College. His students came to be known as Derozians. He organised debates where ideas and social norms were freely debated. In 1828, he motivated them to form a literary and debating club called the Academic Association. In 1830, this club brought out a magazine named Parthenon. Apart from articles criticizing Hindu practices, the students wrote on women's emancipation and criticized many aspects of British rule. He also encouraged students into journalism, to spread these ideas into a society eager for change. He took great pleasure in his interactions with students, writing about them: 'Expanding like the petals of young flowers I watch the gentle opening of your minds…' Kashiprosad Ghose (1809-1837) is also counted as one of the founder pillars of indo-Anglian literature. His contribution in Indian English literature is as equal as Henry Derozio. His The Shair and Other Poems (1830), finds a place in literary history of India. Even he is considered as the first Indian to publish a regular volume of English verse. Ghose edited an English weekly The Hindu Intelligence. His poetry is counted as moralizing as good texture of originality and conventional descriptions. Michael Madhusudan Dutta (1824-1873), began writing while he was at Hindu College. He won several scholarships in college exams as well as a gold medal for an essay on women's education. While a student at Hindu College, his poems in Bengali and English were published in Jnananvesan, Bengal Spectator, Literary Gleamer, Calcutta Library Gazette, Literary Blossom and Comet. Lord Byron was Madhusudan's inspiration. Michael's exceptionally colourful personality and his unconventional, dramatic and in many ways tragic life have added to the magnetism and glamour of his name. Generous in friendship, romantic and passionate by temperament, he was fond of the good life. By dint of his genius, he removed the stagnation in Bengali literature both in style and content. He was the first to use blank verse in 1860 in the play Padmavati based on a Greek myth. His later poems silenced the critics and detractors, and permanently established the vogue of blank verse literature. Madhusudan's epic poem: Meghnad-Badh Kavya is considered as his all-time masterpiece till today. Written in blank verse, this epic was based on the Ramayana but inspired by Milton's Paradise Lost. Madhusudan transformed the villainous Ravana into a Hero. This grand heroictragic epic was written in nine cantos which is quite unique in the history of Bengali Poetry. Meghnad-Badh Kavya was Bengali literature's first original epic and gave Madhusudan the status of an Epic Poet. Much of his time abroad, especially in Versailles, was spent in abject poverty, as the money from his late father's estate on which he was relying did not come regularly. His Indian friends who had inspired him to cross the ocean had by now managed to forget the beggar Madhusudan altogether. He fell hopelessly into debts and appealed for help to the great personality, the scholar, social reformer, and activist Ishwarchandra Vidyasagar (this kind soul was known to all as Daya Sagar – the ocean of kindness, for his immense generosity). His extravagant life-style, fickleness in money matters, and reckless drinking to drown problems conspired to wreck his health and happiness, and likewise the health and happiness of his second partner Henrietta, who had also succumbed to alcoholism during her days of poverty in Versailles. He was a man of real, though somewhat erratic, genius, and a

courageous innovator of forms and types which altered the whole course of Bengali literature and added new dimensions to it. To his adventurous spirit, Bengali Literature owes its first blank verse and the sonnet, its first modern comedy and tragedy, and its first epic. Dutt was particularly inspired by both the life and work of the English Romantic poet Lord Byron. The life of Dutt closely parallels to the life of Lord Byron in many respects. Like Byron, Dutt was a spirited bohemian and like Byron, Dutt was a Romantic, albeit being born on the other side of the world, and as a recipient subject of the British imperialist enterprise. Madhusudan was a gifted linguist and polyglot. Besides Indian languages like Bengali, Sanskrit and Tamil, he was well versed in classical languages like Greek and Latin. He also had a fluent understanding of modern European languages like Italian and French and could read and write the last two with perfect grace and ease. Bengal was epicenter for renaissance as it has given literary scholars who gave fame to mother India at globe. Among them, Toru Dutt is the first poetess in Indo-Anglian literature. She had English education and had a rich and respectable ancestry. Her family was rich and highly educated. Her father Govind Chunder Dutt was a good linguist and a civilized man with literary eye. The Dutt family moved to Cambridge in 1871 where she had attended lectures. In 1875, she had translated French writing in to English with the title A Sheaf Gleamed in French Fields. She had learned Sanskrit and translated Ramayana, Mahabharata and Sakuntala into English verse. She had attained command over Sanskrit language and transformed her interest from French to Sanskrit and translated so many Indian mythological works into English. Another contributor of literature from Bengal, as is the land of arts, is Romesh Chunder Dutt (1848-1909). He was Toru Dutt's cousin and forwarded her writing at height. He had passed Indian civil service Examination in 1869 and served at various capacities in India. He had also devoted much time for literary creation in Bengali and English. Romesh Dutt had written novels in Bengali and translated two of these novels in to English named – The Lack of palms (1902) and The Slave Girl of Agra (1909). He had narrated historical surveys in a large range like – A History of Civilization in Ancient India, later Hindu Civilization, India in the Victorian Age, The Economic History of British India and A brief History of Ancient and Modern Bengal. Apart from this, hisgreatest achievement was the Bengali translation of Rig Veda. His translation in to Englishverse from Ramayana, Mahabharata, Rig Veda, The Upanishads, Buddhist literatures, Kalidasa's Kumarasambhava and Bharavi's Kiratarjuniya – is most creditable contribution. Iyengar writes the turn from Toru Dutt to Romesh Chunder Dutt as; To turn from Aru and Taru Dutt to Romsh Chunder Dutt is like passing from the bud and the flower to the ripened fruit; from Erato and Melpomene to Clio and Calliope; from Ushas, rosy- fingered and short-lived, to the toiling Sun on the ascendant; from infinite promise to impressive achievement. Another sparkling star of Indian literature is Manmohan Ghose (1869- 1924).

Conclusion

He was an elder brother of Sri Aurobindo. He had English education at Manchester and Oxford. His first poem collection – Primavera (1890) was appreciated by literary scholars and classmate at Oxford. Like Derizio, Manmohan Ghose became professor of English at the

Presidency College, Calcutta. In 1898, he published collection of poems – Love Songs and Elegies and also wrote five act playPerseus the Deliverer. His wonderful sense of the beauty of English words and 19rhythm made him notable literary craftsman in eyes of English scholars of England. His poetry was considered much intellectual thoughts and rhythm in his poetry is outstanding feature.

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Dr. Shrinivas Ippalpalli (English Dept.)
State Level Seminar. – A.T. College Bhor 24th Feb. 2018

Pragmatic Perspective in Teaching Language and Literature

Dr.Shrinivas Ippalpalli

Speech act theory is one of the useful and effective tools in interpreting the literary discourse especially fictional discourse. The fact of the matter is that a novelist while writing his or her novel tends to use language suitable to the characters moving in the socio-cultural milieu. Therefore, studying the utterances of the characters using the principles of pragmatics in general and the speech act theory in particular is a novel way of discovering a new meaning and eventually arriving at an authentic interpretation. The present research is aimed at studying the selected modern Indian English novels taking into consideration the typology of speech acts as advocated by J. R. Searle. Modern Indian English novels are replete with conversations, which need to be studied from the point of view of certain principles. The Indian Novel in English offers the reader insight into the social, economic and cultural aspects including the interpersonal relationship between the interlocutors.

Modern writers like Arundhati Roy, Rohinton Mistry, Chetan Bhagat, Kiran Desai and Aravind Adiga have carved their niche on the literary map of Modern Indian writing in English. These are the novelists of the third generation of the writers writing in Indian English giving a new dimension to the existing body of literature in Indian writing in English. The language used by these writers is unique and reflects the elements of modernity and the process of globalization.

The speech act analysis of the selected five Indian English novels brings a new dimension to the study of pragmatics and literature. This study helps in

analyzing the novels from a linguistic perspective. The major implication of this study is to recognize the importance of speech act theory to facilitate innovative thinking skills and to develop interpretative mind of the reader. The speech act analysis does help in the pragmatic interpretation of fictional discourse in general and the Indian English novels in particular. The speech act theory is a very powerful instrument to study the fictional discourse. It is useful for students and teachers in interpreting and contextualizing the novels. The modern novels are full of utterances and conversations. If we treat utterances as speech acts and apply the speech act theory for analysis, we can easily interpret and understand a novel in a better way. Every author wants to convey his/her intentions through the characters and their utterances. Therefore, if we are able to analyze the utterances, we can get the hidden motives or the authorial intentions cleared. The speech act theory facilitates the exploration into the overall context of the novel.

Literature teaching can be made more exciting, if teachers equipped with a pragmatic knowledge of the fictional world, take the students through the novels and help them explore hidden ideas with the help of pragmatic principles. Teachers can teach students to overcome the difficulties of interpretation showing them how implicatures are arrived at. They can enable the students to explore the intended communicative goals which are achieved through the utterances.

An in-depth analysis of the speech acts from the five novels will help sharpen the perception and understanding of the novels. Hence, the teaching of fiction will be more interesting and it will reveal new dimensions of meaning. Teachers can teach their students to interpret the utterances in a fictional discourse. The study of theories and principles of pragmatics provides an authentic way to arrive at the appreciation of the fictional discourse. Pragmatic approach arouses a keen interest in the teachers and students as well.

Conclusion

The present study is devoted to the analysis of the significant speech acts selected from the five Indian English novels. The focus is on investigating the significant role of the utterances by categorizing them into five major speech acts as per Searle's typology. The major part of this study is mainly devoted to the speech act analysis of the five selected Indian English novels. However, other principles of pragmatics such as adjacency pairs, turn taking, presupposition, politeness principle and cooperative principle which can be employed for the thorough understanding of the novels of the Indian English novelists.

By using speech act analysis, an attempt was made to demonstrate the huge potentials in discovering the hidden beauty of fiction as a work of art in general and finer aspects of utterances in particular. The same analysis could be applied to other literary genres such as the drama, poetry, and short story.

॥ प्रज्वलितो ज्ञानमयः प्रदीपः ॥

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Head, Dept.of English

Dr. Prasanna G. Deshmukh
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NATIONAL CYBER SECURITY POLICY: IT'S PRECISE REVIEW

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Abstract

National Cyber Security Policy has been implemented in 2013, here in this paper the researcher has taken the review of the policy how the policy is helpful to the citizens of India and the how the policy will help for the business and e-commerce. Until and unless the users are secure the people of the country will come forward for the use of the cyber space for the day to day activity as well as the business point of view. Where Cyberspace is a complex environment consisting of interactions between people, software and services, supported by worldwide distribution of information and communication technology (ICT) devices and networks. Having the numerous benefits brought about by technological advancements, the cyberspace today is a common pool used by citizens, businesses, critical information infrastructure, military and governments in a manner that makes it difficult to draw clear boundaries among these different groups. The cyberspace is expected to be more complex in the foreseeable future, with many fold increase in networks and devices connected to it.

Key words / Abbreviations: *ICT – Information and Communication Technology, IT – Information Technology, PPP – Public Private Partnership, CISCO -Chief Information Security Officer, CERT-Computer Emergency Response Team, NCIIPC - National Critical Information Infrastructure Protection Centre, ICAN - Internet Co-operation for Assigned Names*

1. Introduction

Information Technology (IT) is one of the critical sectors that rides on and resides in cyberspace. It has emerged as one of the most significant growth catalysts for the Indian economy. In addition to fuelling India's economy, this sector is also positively influencing the lives of its people through direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity among others. The sector has played a significant role in transforming India's image to that of a global player in providing world-class technology solutions and IT business services.In the light of the growth of IT sector in the country, ambitious plans for rapid social transformation & inclusive growth and India's prominent role in the IT global market, providing right kind of focus for creating *secure computing environment and adequate trust & confidence in electronic transactions*, software, services, devices and networks, has become one of the compelling priorities for the country. Such a focus enables creation of a suitable cyber security eco-system in the country, in tune with globally networked environment.Cyberspace is vulnerable to a wide variety of incidents, whether intentional or accidental, manmade or natural, can take place. Cyber

attacks that target the infrastructure or underlying economic well-being of a nation state can effectively reduce available state resources and undermine confidence in their supporting structures. A cyber related incident of national significance may take any form: an organized cyber attack, an uncontrolled exploit such as computer virus or worms or any malicious software code, a national disaster with significant cyber consequences or other related incidents capable of causing extensive damage to the information infrastructure or key assets. Some of the examples of cyber threats to individuals, businesses and government are identity theft, phishing, social engineering, cyber terrorism, compound threats targeting mobile devices and smart phone, compromised digital certificates, advanced persistent threats, denial of service, supply chain attacks, data leakage, etc. There are various ongoing activities and programs of the Government to address the cyber security challenges which have significantly contributed to the creation of a platform that is now capable of supporting and sustaining the efforts in securing the cyber space. Due to the dynamic nature of cyberspace, there is now a need for these actions to be unified.The cyber security policy is an evolving task and it caters to the whole spectrum of ICT users and providers including home users and small, medium and large enterprises and Government & non-Government entities. It enables the individual sectors and organizations in designing appropriate cyber security policies to suit their needs. The policy provides an overview of what it takes to effectively protect information, information systems & networks and also gives an insight into the Government's approach and strategy for protection of cyber space in the country. It also outlines some pointers to enable collaborative working of all key players in public & private to safeguard country's information and information systems.

2. Aims

The main aim of Cyber Security Policy is to protect information and information infrastructure in cyberspace, build capabilities to prevent and respond to cyber threats, reduce vulnerabilities and minimize damage from cyber incidents through a combination of institutional structures, people, processes, technology and cooperation. To enhance the protection and resilience of Nation's critical information infrastructure by operating a 24x7 National Critical Information Infrastructure Protection Centre (NCIIPC) and mandating security practices related to the design, acquisition, development, use and operation of information resources.To create a secure cyber ecosystem in the country, generate adequate trust & confidence in IT systems and transactions in cyberspace and thereby enhance adoption of IT in all sectors of the economy. To strengthen the Regulatory framework for ensuring a Secure Cyberspace ecosystem. To enhance and create National level 24 x 7 mechanisms for obtaining strategic information regarding threats to ICT infrastructure, creating scenarios for response, resolution and crisis management through effective predictive, preventive, protective, response and recovery actions. To create an assurance framework for design of security policies and for promotion and enabling actions for compliance to global security standards and best practices by way of conformity assessment (product, process, technology & people). To enable effective prevention, investigation and prosecution of cyber crime and enhancement of law enforcement capabilities through

appropriate legislative intervention. To create a culture of cyber security and privacy enabling responsible user behavior & actions through an effective communication and promotion strategy. To develop effective public private partnerships and collaborative engagements through technical and operational cooperation and contribution for enhancing the security of cyberspace. To create a workforce of 500,000 professionals skilled in cyber security in the next 5 years through capacity building, skill development and training.

3. Knowingaboutindia's Cyber Security Policy

Following the rising number of cyber threats, the Indian government has gotten serious about securing the cyber space of the country. Earlier in 2013, the government had released the National Cyber Security Policy (NSCP) of India. Soon after that it released guidelines by the National Critical Information Infrastructure Protection Centre of the National Technical Research Organization (NTRO), the country's elite technical intelligence agency.

The Cyber Security Policy provides a strong vision to secure the critical infrastructure of the country. The policy was essential to prevent and reduce cyber attacks on public as well as private infrastructure. The policy also intends to circumvent any resultant economic instability arising due to cyber attacks. While the authorities agree that the real challenge lies in making this policy operational

Things one should know about India's National Cyber Security Policy 2013:

- Set up a 24×7 National Critical Information Infrastructure Protection Centre (NCIIPC) for protecting critical infrastructure of the country.
- Create a taskforce of 5,00,000 cyber security professionals in next five years.
- Provide fiscal schemes and benefits to businesses for adoption of standard security practices.
- Designate CERT- Computer Emergency Response Team as the national nodal agency to co-ordinate cyber security related matters and have the local (state) CERT bodies to co-ordinate at the respective levels.
- All organizations to designate a CISO-Chief Information Security Office and allot a security budget.
- Use of Open Standards for Cyber Security.
- Develop a dynamic legal framework to address cyber security challenges (Note: The National Cyber Security Policy 2013 does not have any mention of the IT Act 2000)
- Encourage wider use of Public Key Infrastructure (PKI) for government services.
- Engage IT professionals / organizations to assist e-Governance initiatives, establish Centers of Excellence, cyber security concept labs for awareness and skill development through PPP - a common theme across all initiatives mentioned in this policy.
- Apart from the common theme of PPP across the cyber security initiatives, the policy frequently mentions of developing an infrastructure for evaluating and certifying trustworthy ICT security products.

4. Cyber Security an Important Element of Foreignpolicy: Need of Hour

With Internet governance likely to see an increased role for governments in coming years and with cyber security becoming central to the prosperity of nations, cyber diplomacy has emerged as a key focus area of foreign policy around the globe, eminent speakers at an international cyber conference Cyber 360 degrees said here on Tuesday.

The centrality of a cyber security pact in talks between US President Barack Obamaand Chinese Xi Jinping this week and Indian Prime Minister Narendra Modi's own dedication of a sizable chunk of his time in the US for interaction with Internet companies were cited as examples of the emergence of cyber diplomacy at the forefront of foreign policy issues at the conference.

"The internet governance model that has been in existence over the past few decades is showing signs of change. Because the Internet developed in the US, it is natural that US companies have monopoly over the technical architecture. Governments have until now had little role in the running of the internet. But with the Internet Co-operation for Assigned Names (ICAN) now undergoing transformation, there may be some broad basing of internet governance model," India's deputy national security advisor Arvind Gupta said at the conference organized by the Synergia Foundation.

"During the last decade the internet has grown tremendously. Today over 3 billion people have access to internet. In the next 10 years the growth is likely to come from developing countries. The developing world will be a looking at a stake in the governance of the internet," he said.

The interest shown by US companies in the Digital India initiative of the Indian government in the course of Prime Minister Narendra Modi's visit to the US is an indicator of the importance of the Internet in the future scheme of things, the deputy NSA said. The emergence of cyber security as a key area of concern for countries means that it could be used for domination strategies, he said.

"We are seeing trends where trade may be used as an instrument of pressure on cyber diplomacy. The tendency to use export import regimes to restrict the flow of cyber security technologies and products is a concern. This is particularly a threat for emerging countries," Gupta said.

"Cyber security has become an important element of foreign policy due to its relevance to national security, public safety and economic development. Developing international agreements on how states should behave in cyberspace and how to achieve a stable and open Internet will become increasingly important for India as well," the deputy NSA pointed out.

"The challenge before the government is to ensure that the Internet infrastructure being put in place is stable and secure. For that the government will also have to be sensitive to not just the national security concern but also the needs and sensitivities of the business," Gupta said.

He said India has initiated dialogues on cyber security with the US, UK, Germany, the EU, France, South Korea, Russia, Japan and Australia where views have been exchanged on national cyber security policies, sharing of critical information, capacity building research and development and other issues. "Cyber diplomacy is a growing

area. It requires an intricate knowledge of technology, law, politics etc. The Indian government is focusing on this," he said.

Former Swedish Prime Minister Carl Bildt pointed out that the importance of cyber security in foreign policy had been highlighted by the fact that cyber attacks were a central subject in talks during formal meetings between the US and Chinese presidents recently.

Former Indian National Security Advisor Shivashankar Menon said that cyber space had not disrupted the existing world order but had played a significant role in magnifying existing trends.

"It has become a fresh domain of contention between states. It is true of land, seas, skies and outer space all of which we have successfully militarized. Exactly the same thing is happening in cyber space. You see it when cyber attacks become one of the main subjects of a Xi-Obama summit and then you realize that cyber has come into its own," Menon said.

This shows that the National Cyber Security Policy has to be taken in very serious way, if we want to prosper as a economic power in the world. Because now a day's many transactions, business, commerce is preferred by majority as through the internet and if our Security policies are not up to the mark then it will affect badly on the performance of the nations even though we are having the capacity to do.

5. Developing Effective PPP - Public Private Partnership

To facilitate collaboration and cooperation among stakeholder entities including private sector, in the area of cyber security in general and protection of critical information infrastructure in particular for actions related to cyber threats, vulnerabilities, breaches, potential protective measures, and adoption of best practices. To create models for collaborations and engagement with all relevant stakeholders. To create a think tank for cyber security policy inputs, discussion and deliberations.

6. Missing Points

Some key points from the draft version missing in the final policy:

- Initiative to establish a countrywide secure intranet for connecting strategic installations with CERT for emergency response and coordination.
- The draft policy had objectively set out actions for ensuring security by Service Providers, Corporate and SOHO.
- Of the 12 stakeholders identified in the draft, only four are mentioned in the policy.

7. Conclusion

The above paper express that India has to take Cyber Security Policy seriously and the whatever the reports given by the experts that are mentioned above like NSA Arvind Gupta and Former NSA Shivshankar Menon as well as dialog with USA, UK, Japan and European Nations will have to apply wisely to strengthen the power of the Cyber Security. So that fear in the minds of the user will disappear and India will emerge the power in the World of e-commerce. Missing points which are mentioned above, needs to be considered once again.

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EMERGING TRENDS IN HACKERS AND THREATS: IT'S REVIEW

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Abstract

Nowadays hacking is the most common practice in the computer expert in order to try and destroy network infrastructure. In this paper, I have mentioned three different types of hacking i.e.- White hat,Black hat,Gray hat.

This research paper discusses the issue of cyber crime in detail, including the types, methods and effects of cyber crimes on a network. As, all this adversely affects the efficiency of information security of any kind of security that exists and is used in information systems. Since hackers and other offenders in the virtual world are trying to get the most reliable secret information at minimal cost through viruses and other forms of malicious soft-wares, then the problem of information security - the desire to confuse the attacker: Service information security provides him with incorrect information; the protection of computer information is trying to maximally isolate the database from outside tampering.

In other words, the Internet is a large computer network, or a chain of computers that are connected together. This connectivity allows individuals to connect to countless other computers to gather and transmit information, messages, and data.

Threats - A potential cause of an incident, that may result in harm of systems and organization

***Keywords**: Security, Network Security, Computer, Privacy, Cyber Crimes, UI.*

Introduction

The increasingly growth of internet has given an entrance passage to many things : e-commerce , email , social networking , online shopping & information distribution. As the technology advances it has its dark side; hackers. Govt. organization , private citizen & many companies of the world wants to be the part of this revolution. Being afraid of hackers as they could break into the web-server & create nuisance. To counter attack them ethical hacker's are used in the Govt. organization, companies etc. This paper describes the skills, attitude & how they helps the customer with the increasingly growth rate of internet network security has been a measure concern of Govt.& private organization. As different organization wants to take advantage of the internet but fail to do so, because of the possibility of being hacked. To minimize the risk of being hacked by the hackers the organizations realized the best possible ways to introduced the independent computer security professionals to make their way out. In computer security the ethical hackers employ's some tools & techniques that would neither damaged the system nor still information from it. Instead they would evaluate ways to

secure then system & report back the owner with the threat they had found & how to cure them.

Hackers

Computer hackers are unauthorized users who break into computer systems in order to steal, change or destroy information, often by installing dangerous malware without your knowledge or consent.

Find computer hackers

Anyone who uses a computer connected to the Internet is responsible to the threats that computer hackers pose. Computer hackers can also try to access your computer and confidential information directly if you are not protected with a firewall.

Computer hackers

Hacker will quietly transmit your personal and financial information without your knowledge.

They may:steal your money from the Bank account using your usernames and passwords

- Open credit card and bank accounts in your name
- Use your credit card for online purchase.
- Request new account Personal Identification Numbers (PINs) or additional credit cards
- Add themselves or an alias that they control as an authorized user so it's easier to use your credit
- Use and abuse your Social Security number
- Sale your information to other parties who will use it for illegal purposes

Common hacking techniques

1) **Keylogger**

Keylogger is a simple software that records the key sequence and strokes of your keyboard into a log file on your machine. These log files might even contain your personal email IDs and passwords. Also known as keyboard capturing, it can be either software or hardware. While software-based keyloggers target the programs installed on a computer and hardware devices like keyboards, electromagnetic devices,Smartphone sensors, etc.

Keylogger is one of the main reasons why online banking sites give you an option to use their virtual keyboards. So, user have to take extra precaution while handling the devices in public setup.

2) **Denial of Service**

A Denial of Service attack is a hacking technique to take down a site or server by flooding that site or server with a lot of traffic. The server is unable to process all the requests in the real time and finally crashes down. This popular technique, the attacker floods the targeted machine with lots of requests to overcome the resources, which, in turn, restrict the actual requests from being fulfilled. Many bonnets or zombie computers get flooded your system with request packets.

3) **Waterhole attacks**

hackers target the easily accessed physical location to attack the victim. That point could be a coffee shop, a cafeteria, etc.Once hackers are aware of your timings,

using this type of hacking, they might create a fake Wi-Fi access point which modifies your most visited website to redirect them to you to get your personal information. As this attack collects information on a user from a specific place.So, to detect the attacker is even harder.

4) **Fake WAP**

Even just for fun, a hacker can use software to fake a wireless access point. This WAP connects to the official public place. Once you get connected the fake WAP, a hacker can access your data, just like in the above case.

3) **Phishing**

Phishing is a hacking technique using which a hacker replicates the most-accessed sites and traps the victim by sending that spoofed link. Once the victim tries to login or enters some data, the hacker gets that private information of the target victim using the trojan running on the fake site. Phishing via Gmail account was the attack route taken by hackers who targeted the numerous Hollywood female celebrities.

4) **Virus, Trojan etc.**

Virus or trojans are malicious software programs which get installed into the victim's system and keep sending the victims data to the hacker. They can also lock your files, serve fraud advertisement, divert traffic, sniff your data, or spread on all the computer connected to your network.

5) **ClickJacking Attacks**

ClickJacking is also known by a different name, UI Redress. In this attack, the hacker hides the actual UI where the victim is supposed to click. This behavior is very common in app download, movie streaming, and torrent websites. While they mostly employ this technique to earn advertising dollars, others can use it to steal your personal information.

6) **Cookie theft**

The cookies of a browser keep our personal data such as browsing history, username, and passwords for different sites that we access. Once the hacker gets the access to your cookie, he can even authenticate himself as you on a browser. A popular method to carry out this attack is to encourage a user's IP packets to pass through attacker's machine.

This attack is easy to carry out if the user is not using SSL (https) to complete the session. On the websites where you enter your password and banking details, it's of highest importance for them to make their connections encrypted.

7) **Bait and switch**

Using bait and switch hacking technique, an attacker can buy advertising spaces on the websites. Later, when a user clicks on the advertisement, he might get directed to a page that's infected with malware. This way, they can further install malware or adware on your computer. The advertisement and download links shown in this technique are very attractive and users are expected to end up clicking on the same.

Types of Hackers

1. **White Hat** – Also known as ethical hackers(Computer expertise), White Hat hackers are the good guys in the hacker world. They'll help you to remove a virus.

2. **Black Hat** – Also known as crackers, these are the men and women you hear about in the news. They find banks or other companies with weak security and steal money or credit card information. The surprising truth about their methods of attack is that they often use common hacking practices they learned early on.
3. **Gray Hat** – Nothing is ever just black or white; the same is true in the world of hacking. Gray Hat hackers don't steal money or information. They don't help people for good (but, they could if they wanted to). These hackers comprise most of the hacking world.

Protect computer from hackers

Below are the preventive steps to protect your computer from hackers:

- Continually check the accuracy of personal accounts and deal with any discrepancies right away
- Limit the personal information you post on a personal Web pages
- Keep personal and financial information out of online conversations
- Use a 2-way firewall
- Update your operating system regularly
- Increase your browser security settings
- Avoid questionable Web sites
- Only download software from sites you trust. Carefully evaluate free software and file-sharing applications before downloading them.
- Practice safe email protocol:
- Don't open messages from unknown senders
- Immediately delete messages you suspect to be spam
- Make sure that you have the best security software products installed on your PC:
- Use antivirus protection

Threats - A potential cause of an incident, that may result in harm of systems and organization

Threat classification

Microsoft has proposed a threat classification called STRIDE

- Spoofing of user identity
- Tampering
- Repudiation
- Information disclosure (privacy breach or Data leak)
- Denial of Service (D.o.S.)
- Elevation of privilege

Some of the threats are listed below

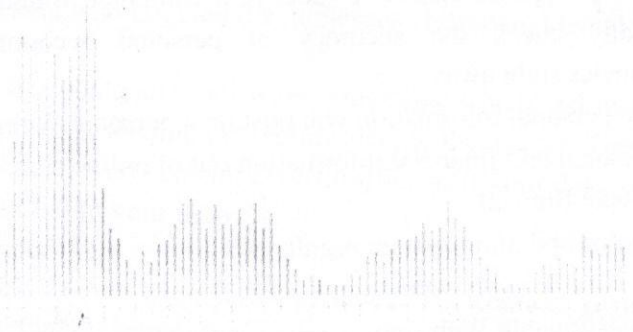
1) WannaCry
2) Petya

The WannaCry and Petya malware are in the worldwide businesses, governments, and non-profit institutions in mid-2017, using Windows leaked to the public by hacking group SHADOW BROKERS.While software vendors (such as Web browser providers) attempting to harden their products,to eliminate entire classes of vulnerabilities, and reduce windows opportunity for threat actors.

1) **The WannaCry ransomware attack**

On may Friday the 13th, PCs around the world, including those belonging to hospitals and government agencies, were hit by the WannaCry ransomware, causing chaos. until now we have seen more than 250,000 detections in 116 countries. What this means is that more than 250,000 users had **encountered** the ransomware but were protected as **blocked** the ransomware from infecting PCs. Through our Avast(It only produces false positives and doesn't see any trojan horses.)

By Friday afternoon it seems more than 50,000 detections of the ransomwarewithin the Avast user base. Shortly after Friday, around midnight, the number of detections grew to more than 100,000.



The top 10 targeted countries, according to data, are (in order): Russia, Ukraine, Taiwan, India, Brazil, Thailand, Romania, Philippines, Armenia, and Pakistan. More than half of the attacks on our entire user base were blocked in Russia.

Removing Wanna Cry

Removing WannaCry from a PC is not difficult, antivirus software should be able to remove the ransomware by quarantining the malicious files, but this does not solve the problem – the files will remain encrypted.

2) **Petya** is a family of encrypting ransomware which is first discovered in 2016. The malware targets Microsoft Windows-based systems, infecting the master boot record to encrypts a hard drive's file system table and prevents Windows from booting.

It subsequently demands that the user make a payment in Bitcoin in order to regain access to the system.

Conclusion

Although the term "hacker" is in widespread use, the sense in which it is employed is generally incorrect. Popular media and entertainment providers have long used it to describe anyone who tampers with a system, particularly in connection to criminal activity. This journalistic misuse of the name upset many "traditional" hackers, who responded to the vilification of their good name by offering a new term for these individuals: "crackers." Crackers are vandals and thieves whose sole purpose is unauthorized "cracking" into secure systems for personal gain.5 This darker side of hacking has three main motivations with varying degrees of harm. The most benign cracks are attempts to gain unauthorized access in order to satisfy a personal motive such as curiosity or pride. More malicious cracking seeks to gain unauthorized access in order to tamper with or destroy information. The goal of the most serious and professional crackers is unauthorized access to systems or computer services in order to steal data for criminal purposes. Systems commonly under attack are universities, government agencies, such as the Department of Defence and NASA, and large corporations such as electric utilities and airlines. Many crackers are professional criminals involved in corporate or government espionage and have links to organized crime. A relative newcomer to the "hacker" field, script kiddies are another break-off group mistakenly called hackers by the media. A lower form of crackers, script kiddies are not particularly knowledgeable about computer and networking details. Instead, they download readymade tools to seek out weaknesses on systems accessible via the Internet. They do not target specific information or a specific company but rather scan for opportunities to disrupt and vandalize systems. Most "hackers" and "hacking" events reported on by the popular press are actually of this type.

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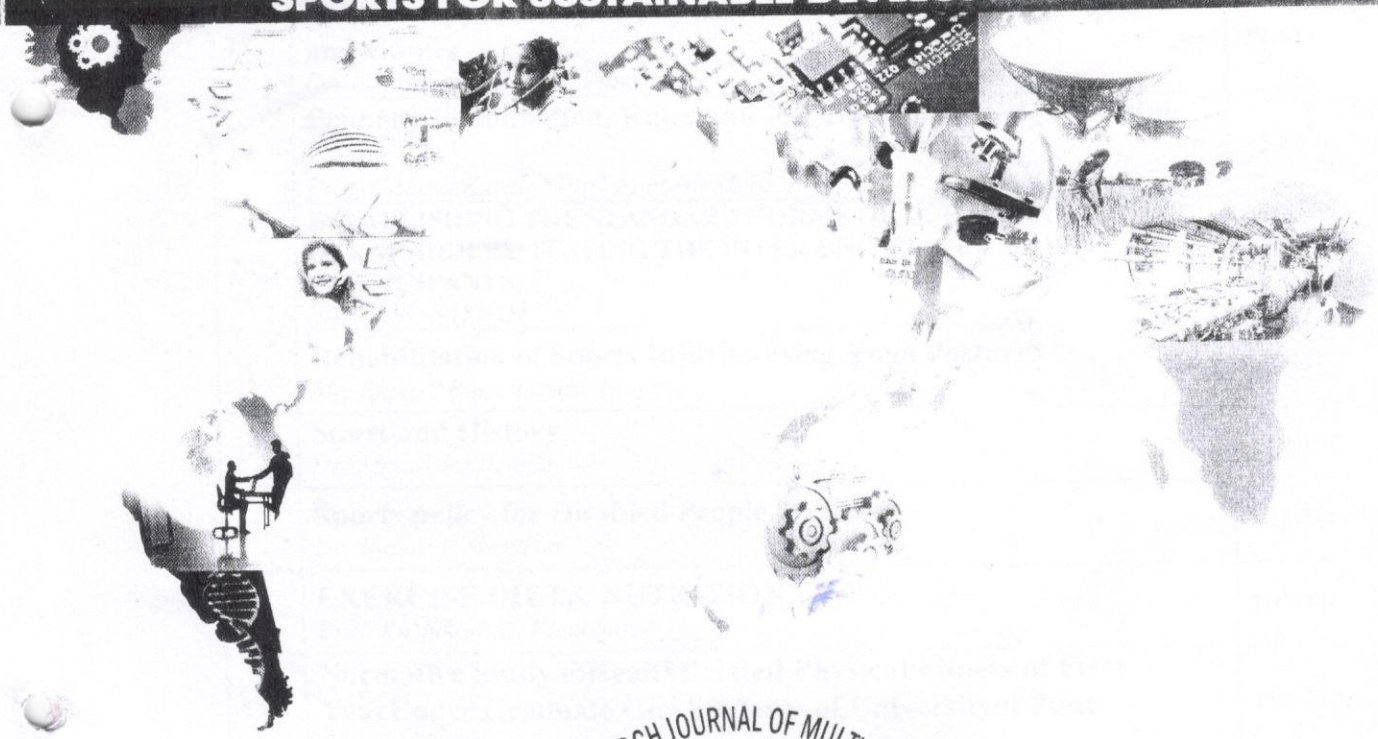
SPECIAL ISSUE ON SPORTS FOR SUSTAINABLE DEVELOPMENT IN INDIA



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Primary Introduction, Rules and Regulations of Weight Lifting Game

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Introduction:

Weightlifting, also called Olympic-style weightlifting, or Olympic weightlifting, is an athletic discipline in the modern Olympic programme in which the athlete attempts a maximum-weight single lift of a barbell loaded with weight plates.

The two competition lifts in order are the snatch and the clean and jerk. Each weightlifter receives three attempts in each, and the combined total of the highest two successful lifts determines the overall result within a bodyweight category. Bodyweight categories are different for male and female competitors. A lifter who fails to complete at least one successful snatch and one successful clean and jerk also fails to total, and therefore receives an "incomplete" entry for the competition. The clean and press was once a competition lift, but was discontinued due to difficulties in judging proper form.

In comparison with other strength sports, which test limit strength (with or without lifting aids), weightlifting tests aspects of human ballistic limits (explosive strength); the lifts are therefore executed faster—and with more mobility and a greater range of motion during their execution—than other strength movements. Properly executed, the snatch and the clean and jerk are both dynamic and explosive while appearing graceful, especially when viewed from a recording at a slowed speed.

While there are relatively few competitive Olympic weightlifters, the lifts performed in the sport of weightlifting, and in particular their component lifts (e.g. squats, deadlifts, cleans), are commonly used by elite athletes in other sports to train for both explosive and functional strength.

The Weights:

The Bar itself is a standard. Women and under use a 15Kg bar which is a slightly smaller diameter than the standard 20Kg bar used by all men.

The Barbell is loaded with **Disks (Plates)** of various weights. A combination of the international standard of 25 (Red), 20 (Blue), 15 (Yellow), 10 (Green), 5 (White), 2.5 (Red), 2 (Blue), 1 (Green), 0.5 (White) Kilogram disks to set the barbell at a certain weight, are used.

The barbell will be loaded with the minimum number of disks required to total the required weight.

In addition, **collars** must be used to tighten on the ends of the barbell to keep the weight disks attached. The standard collars are 2.5 Kg each.

Rules & Regulations

Each lifter is given three attempts at each of the Snatch and the Clean and Jerk.

First, all lifters in a session will complete all three attempts at the Snatch. Then, after a 10 minutes break, all lifters will take three attempts at the Clean and Jerk.

The Total of the Best Snatch and the Best Clean and Jerk determine medal or trophy placement.

Each lifter competes with other lifters in their own weight class but in most sessions, a few weight classes are mixed. In Open events, both Weight Classes and Age Classes are often mixed.

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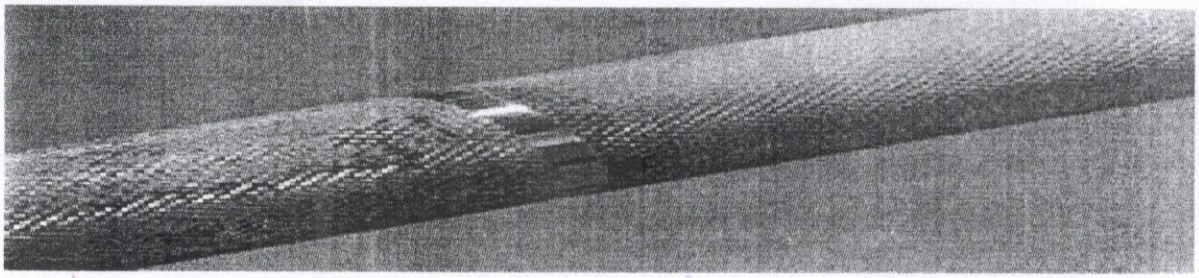
Youth lifters are under 17 years old, Junior Lifters are under 20 years old, Seniors are Open and Masters are over 35.

The weight on the barbell only goes up! All lifters who are attempting a certain weight complete their attempts before the other lifters attempt higher weights.

Three Judges watch for incorrect features of the lift to separate a "Good" lift from a "Bad Lift". Here are the basic items judges look for:

1) No part of the lifter (except the bottom of the feet) shall touch the platform.
2) The Lifter cannot "press out" the barbell. Press out is when the elbows are bent and the lifter uses strength of the arms to lock out the elbows.
3) The lift must be all in one continuous movement - no stopping and restarting.
4) The elbows must not touch thighs or knees during the Clean. This is dangerous and can cause serious injury.
5) The Lifter must hold the bar steady and be motionless between the Clean and the Jerk.
6) The Lifter must hold the bar steady and motionless in all parts of the body overhead with feet inline with the plane of the trunk until the judges give the down signal
7) The Lifter must guide the bar down at least below shoulder level when the lift is complete. Dropping from overhead is dangerous and an incorrect movement.
8) The Lifter must remain on the platform during the execution of the lift.

Barbell



Knurling on an Olympic barbell

Olympic weightlifting uses a steel bar (also known as a barbell) with larger-diameter rotating sleeves on either end, holding rubber-coated weight plates of different weights. This sleeve rotation is important for the Olympic lifts, particularly the snatch and clean movements, because it drastically reduces the rotational inertia of the bar. Without sleeve rotation, the Olympic lifter faces more challenging lifts and a greater risk of injury.

A men's Olympic barbell weighs 20 kg (44 lbs) with a shaft diameter of 28 mm and a length of 2200 mm, whereas a women's Olympic barbell weighs 15 kg (33 lbs) and has a shaft diameter of 25 mm with a length of 2010 mm. The distance between the sleeves, however, is the same for the men's and the women's bars at 1310 mm. The grip texture of the bar is called the knurling, and is distributed differently between the men's and women's bars: the men's has knurling in the centre but the women's does not. The Olympic barbells used in competition are certified by the IWF.

Bumper plates

The weight plates, typically referred to as "bumper plates" because of their rubber coated design, weigh between 10 kg and 25 kg in 5 kg increments. Smaller metal plates from 0.5 kg to 5 kg called

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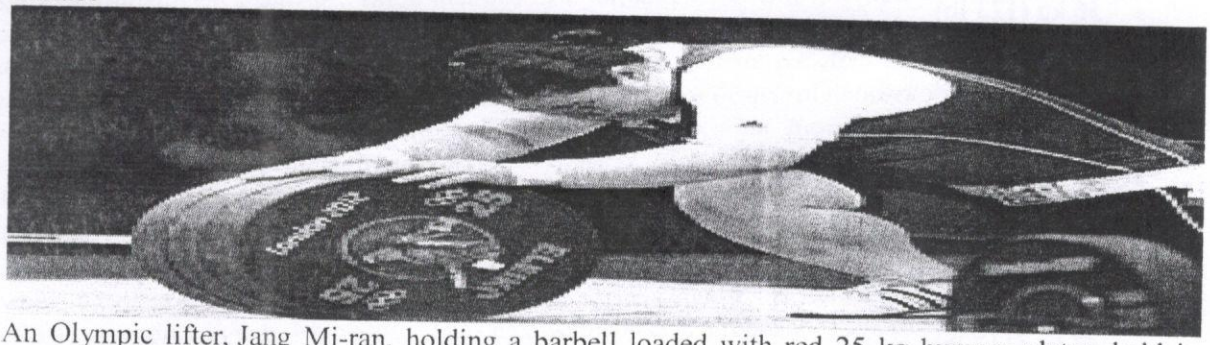
change or fractional plates are used to for smaller weight totals. The bumper plates are coated with rubber to allow the weights to be dropped from various heights—either after a successful lift or during an unsuccessful one. Olympic bumper plates conform to international standards for colouring. That is, 10 kg is green, 15 kg is yellow, 20 kg is blue, and 25 kg is red.

Competition iron plates

In addition to the rubber bumpers, smaller competition iron plates can be used to add weight in small increments to the bar. The colour designations for these iron plates are as follows: 1 kg is green, 1.5 kg is yellow, 2 kg is blue, 2.5 kg is red, 5 kg and 0.5 kg are white. It is useful to note the colour assignment of these iron plates is consistent with the heavier bumper plates (i.e. 1 kg and 10 kg are green, 1.5 kg and 15 kg are yellow, etc.).

Collars



An Olympic lifter, Jang Mi-ran, holding a barbell loaded with red 25 kg bumper plates, held in place with a collar. Note the lifter's taped wrists and thumbs, her weightlifting shoes, and her weightlifting belt.

Weight plates are secured to the bar using collars on each sleeve that weigh exactly 2.5 kg each.

Singlet

Lifters typically wear a one-piece, close-fitting leotard often called a singlet. The wearing of a T-shirt underneath the singlet is optional.

Belt

A weightlifting belt of 120 mm maximum width may also be worn to provide lower back support.

Chalk

Chalk is regularly used by Olympic lifters, generally prior to each attempt at a lift. Lifters rub their hands with the chalk to promote dryness and prevent the bar moving in their hands. In addition to the hands, chalk can be applied to the neck, usually above the collarbone, which is a key point of contact for the bar during a clean and jerk.

Tape

Olympic lifters frequently use tape to cover the areas of their bodies exposed to friction while completing Olympic lifts. Tape is most commonly found on the Olympic lifter's thumb. A taped thumb not only lessens the risk of calluses, it reduces the pain associated with the hook grip.

Olympic lifters also tape their wrists, preventing exaggerated and uncomfortable joint movement during lifts. For particularly heavy overhead lifts, a taped wrist enables the lifter to regulate wrist extension and delimit the translation of the radius and ulna distal heads. However, while taped wrists can prevent wrist and forearm injuries in the short-term, excessive use can lead to weakened connective tissue in the area, increasing the risk of pain and injury.

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Shoes

Perhaps the type of shoes worn by Olympic weightlifters is their most distinctive piece of equipment. Weightlifting shoes are typically designed with a raised heel of 0.5" to 1.5" and one or two metatarsal straps that tighten across the instep of the shoe. The raised heel helps the lifter maintain an upright torso while catching the bar and also allows for a deeper squat under the bar. The soles of the shoes are also quite rigid, helping to resist compression while under heavy loads. The shoes are designed for maximum stability while remaining flexible in the "toebox". This allows the lifter to come up on the toes and to catch the weight on the ball of the back foot during the "jerk" movement of the lift.

Weight classes

Athletes compete in a division determined by their body mass. There have been eight male divisions and eight female divisions since 2017.

Men's weight classes:

- 56 kg (123 lb)
- 62 kg (137 lb)
- 69 kg (152 lb)
- 77 kg (170 lb)
- 85 kg (187 lb)
- 94 kg (207 lb)
- 105 kg (231 lb)
- 105 kg and over (231 lb+)

Women's weight classes:

- 48 kg (106 lb)
- 53 kg (117 lb)
- 58 kg (128 lb)
- 63 kg (139 lb)
- 69 kg (152 lb)
- 75 kg (165 lb)
- 90 kg (198 lb)
- 90 kg and over (198 lb+)

Basic skill

The **Snatch** is a single movement where the lifter holds the bar in a wide grip, lifts the weight off the ground overhead in one movement, then stands upright holding the bar overhead.

The **Clean and Jerk** is a two-part movement. First, the lifter holds the barbell in a shoulder width grip, then pulls the weight up to the shoulders and then stands up with the barbell balanced on the shoulders.

Once settled, the lifter will snap the bar overhead and stand upright again with the barbell in control overhead.

Once the lifter is in control, the judges will give the "Down" signal and the lifter will lower the bar.

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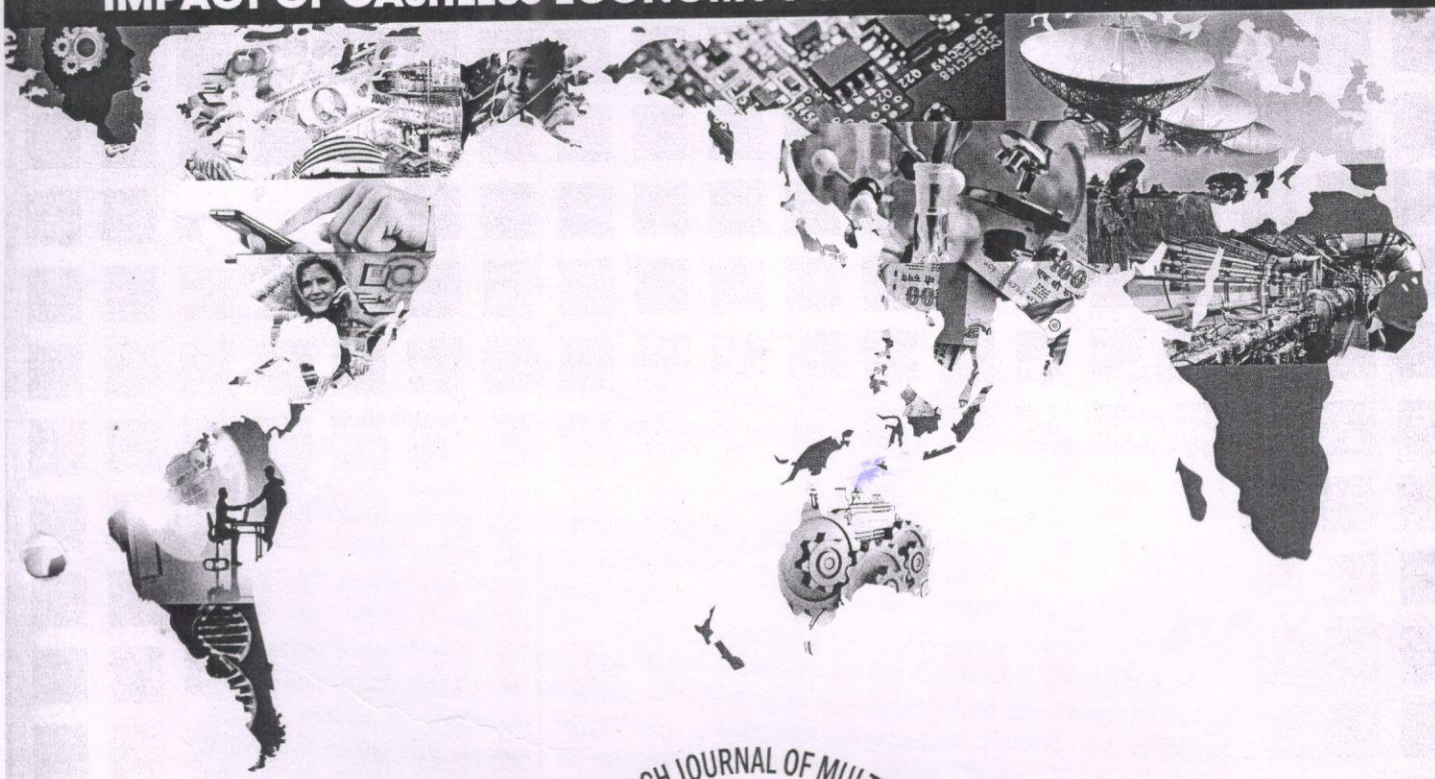
SPECIAL ISSUE ON
IMPACT OF CASHLESS ECONOMY : CHALLENGES AND OPPORTUNITIES



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CASHLESS ECONOMY: CHALLENGES AND OPPORTUNITIES

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Abstract

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. The paper under study tries to throw light on the rising trend of digital transactions in India being carried out in various cashless modes over the last few years but simultaneously being ourselves making alert of the negative impact of going cashless thereby showing downside of digital India. As the people of India are showing amazing response towards move of digitalization, it is the big indicator of prosperous future for India to be cashless India. So the need of an hour is to spot the weaknesses involved in cashless transactions and work out on them to achieve the vision of Prime Minister Modi's Digital India.

Keywords: Card-Swipe, Cashless, E-Banking, Mobile Banking, and Pos.

Introduction

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. The paper under study tries to throw light on the rising trend of digital transactions in India being carried out in various cashless modes over the last few years but simultaneously being ourselves making alert of the negative impact of going cashless thereby showing downside of digital India. As the people of India are showing amazing response towards move of digitalization, it is the big indicator of prosperous future for India to be cashless India. So the need of an hour is to spot the weaknesses involved in cashless transactions and work out on them to achieve the vision of Prime Minister Modi's Digital India

Objectives of study

1. To find out benefits in going cashless.
2. To chalk out the major challenges in making India cashless.
3. To access growth of India on the path of being cashless in terms of digital transactions such as POS, Credit & Debit cards and payment banks etc.

"We want to have one mission and target: Take the nation forward – Digitally and economically" Shri Narendra Modi Prime Minister, Mr. Narendra Modi launched the Programme "Digital India" with a vision to transform India into a digitally empowered nation and creating a cashless, paperless economy. As per the current status of India, only 7% to 8% of all the payments are taking place electronically. On Nov 8, 2016, a historical date, he talked about making India a cashless economy and on Nov 27 during an election rally in Uttar Pradesh, he again motivated the people of India to become familiar with cashless transactions.

On the same day, during his radio Programme "Mann ki Baat", he said: "Learn how this digital economy works. Learn the different ways you can use your bank accounts and internet banking. Learn how to effectively use the apps of various banks on your phones. Learn how to run your business without cash. Learn about card payments and other electronic modes of payment. Look at the malls and see how they function. A cashless economy is secure, it is clean. You have a leadership role to play in taking India towards an increasingly digital economy".

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Meaning Of Cashless Economy And Where India Stands?

A Cashless Economy is an economy in which all types of transactions are carried out through digital means. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. At present, India is far behind to other economies with regard to cashless transactions. The ratio of cash to gross domestic product in India is one of the highest in the world-12.42% in 2014 as compared with 9.47% in China or 4% in Brazil. Another report by Boston Consulting Group (BCG) and Google India mentioned that last year around 75% of transactions in India was cash based while it was 20-25% in developed nations such as US, Japan, France, Germany etc.Another statistics have revealed that India has 76.47 billion currency notes in circulation in 2012-13 as compared with 34.5 billion in the U.S. Moreover, various other studies have shown that people prefer to make payments in cash in malls even when they carry credit cards with them.But, the step taken on Nov 8, 2016 of demonetization has pushed digital and e- transaction to the forefront in India due to depletion in cash. Now, e-banking, e-wallets and other transaction apps are becoming more prevalent.

Benefits Of Going Cashless To The Economy

Going cashless has helped in creating a positive impact on society as the paper based methodology in financial transactions has been reduced thereby economy in operations, time and cost. Various benefits of going cashless can be listed out as under:It will help in curbing the generation of black money. The cashless economy has attacked the parallel economy. People who hoard money under their bed, people who launder money bypassing banking channels, terrorist who need money to finance their terror will find difficulty in cashless economy.

It will help in reducing instances of tax avoidance. All the transactions can be monitored and hence traced back to an individual. Income tax officials can easily trace out the transactions and it will become difficult for individuals to evade taxes. Ultimately, it will help in increasing revenue of the government from taxes and more productive activities can be carried out in the economy.

It will lead to reduction in real estate prices because of curbs on black money as most of it is invested in real estate which ultimately inflates the prices of real estate markets.RBI spent Rs.27 billion in financial year 2015 on currency issuance and management. This could be avoided if India becomes a cashless economy.

Cashless economy will boost consumption as people would not be attracted towards keeping money in banks. More consumption will lead to more production, more employment opportunities & hence, income of people will increase.

Practical Implementation for Moving On Path of Going Cashless (In Context Of India) :

For making India cashless, these are the various modes available in form of digital transactions which are being Considerably implemented and which clearly indicate that cashless transactions are being actively used by people in India. These can be highlighted as under:

1. Payment Banks: Payment bank is a new model of banks introduced by RBI. Payment can issue services like ATM Cards, mobile banking, net banking, and debit cards etc. These payment banks offer amazing competition to traditional banks in terms of services. Two such prominent licensees are Airtel (founded in 1995, in 2016reaching at revenue of $14.5 billion) and PayTM (founded in 2010 and valued at $1 billion presently)
2. Electronic Fund Transfer Systems: Two popular methods RTGS and NEFT are increasingly used by people at a large scale for making funds transfer from one bank to another leading to less time and economy in operations.4.3 Mobile Wallets: Option to open a zero KYC or a full

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KYC wallet along with your mobile number and the application to be downloaded to your smart phone.

3. Internet Banking: For this type of digital service to take benefit of, the individual must hold a bank account and opt for the online service same.
4. Banking Cards: Banking cards are available by the bank by providing the KYC (know you customer) Information to the bank. Applying for a card and getting a pin for the same. Credit and Debit cards are plastic cards that are used as method of payment.
5. Banks Pre-Paid Cards: For this service, a bank account is there with wallet or a pre-paid card and a smart phone to generate the MPIIN.
6. Point of Sale: A handheld device with the biometric reader along with a merchant bank account and internet connectivity. POS machines facilitate acceptance of payment from customers by swiping of their debit/credit/prepaid cards on POS terminals. Number of POS terminals in India has increased from 5 Lakh in year 2010 to 14.62 Lakh in year 2016. Growth of POS Terminals in India (Bank wise) (Table 1)Bank Number of POS terminals(in lakh)State Bank of India 3.29 ,HDFC 2.88, Axis Bank 2.7,ICICI 2.02
7. Mobile Banking: A bank account is required along with a mobile phone application of the bank and internet connectivity to take benefit of this digital service. Mobile banking concept is gaining its momentum over the years.As shown in graph below, value of transactions using mobile banking increased is maximum than in other digital platforms such as POS, PPI etc.

Negative Impact Of Going Cashless

As we know every good has its bad side also, surely aura of cashless transactions is spreading all over India converting India into Digital India, simultaneously the more and more use of internet is giving rise to various negative effects also. Following can be highlighted as the negative effects of going cashless with reference to India.

Increase in Cyber Crimes: Due to the increasing rate of online frauds, the risk of hacking will also increase as more people will be on the digital mode. More and more use of internet is giving boost to cyber crimes at an increasing pace as can be seen below: Rate of Cyber Crimes in India (Under IT Act)(Table 2)Year Registered Cases Persons Arrested

- 2011 1791 1184
- 2012 2876 1522
- 2013 4356 2098
- 2014 7201 4246
- 2015 8045 5102

Increased chances of trapping: Performing digital transactions using public networks can be more prone to traps on mobile devices and thereby giving opportunity to hackers to access account related sensitive information. Frauds through digital transactions: A report by ASSOCHAM-EY on study titled "Strategic Nation measures to combat cyber crimes" highlights 46% Complaints of credit/debit cards frauds, 18 % on account of hacking of email ids and 21% complaints on account of cheating through mobiles. (Source: www.newsnation.in) In October 2016, 3.2 million card details were stolen in malware related security areas. These cards belonged to customers of SBI, HDFC, ICICI, Axis Bank and were used at ATMs. Stolen debit cards were used in china. No legal decision has been taken and the case is still under investigation.

Challenges in Making India A Cashless Economy

There are a number of obstacles in making India a cashless economy. Some of them are as under:-
A large part of the population, approx. 50% of Indians is not covered under any banking system. According to 2015, report by PriceWaterhouse Coopers, India's unbanked population was at 233

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million. Though bank accounts have been opened through Jan Dhan Yojana, most of them are lying unoperational. Unless, people start operating bank accounts, cashless economy is not possible.

The digital mode is a big hurdle for the tech-unfriendly people. Since, India has a low penetration of 34.8% as per Internet live stats and only 26.3% of all mobile phone users have a smart phone, therefore, it is difficult to go digital.

The low literacy rates in rural India & lack of infrastructure like internet access and power make things extremely difficult for people to adopt cashless economy.

In India, there are approx. 350 million internet users. The internet penetration rate is just 27% which is very low in comparison to countries like Nigeria, Kenya & Indonesia etc. It has to be at least 67% which is global median.

Only 17% of Indians use smart phones which is very less and only 15% of Indians have internet on their smart phones.

The internet loading speed is very low. The average page load time is 5.5 seconds in India in comparison to 2.6 seconds in China.

POS machines (Point of sales) are must for any cashless transactions. A study was conducted by Macquarie Research and it was posted on website of National Payments Corporation of India, in which it has been highlighted that India still far behind in terms of Number of POS machines which is 2 per 1000 debit cards as compared to other countries like in Brazil 14.8, China 12.5, Russia is 6.1, U.S 13.1 and in Australia is 33.2 per 1000 debit cards.(Source: www.indianexpress.com)

Since, India is dominated by small retailers; therefore they don't have enough resources to invest in electronic payment infrastructure.

Most card and cash users have the perception that they will be charged more if they use cards. Moreover, nonusers of credit cards are not aware of the benefits of credit cards.

Steps Taken By RBI And Government To Discourage Use Of Cash

Government is also promoting mobile wallets. Mobile wallet allows users to instantly send money, pay bill, and recharge mobiles, book movie tickets, and send physical and e-gifts both online and offline. Recently, the RBI had issued certain guidelines that allow the users to increase their limit to Rs 1, 00,000 based on certain KYC verification. Various incentives offered by government to promote digitalization in India to make India "Digital India" by focusing on cashless modes are: On digital transactions up to rupees 2000, Service Tax of 15% waived off Digital purchase of fuel through credit cards, mobile wallets or e-wallets, discount of 0.75% Free accident insurance worth rupess 10 lakh on account of online ticket buyers On purchase of new LIC policies online via its site, 8% discount is offered. Government has also launched UPI (PDF) (Unified Payment Interface), payment system that can be used for

Government has introduced various technologies like BHIM (Bharat Interface for Money) app to transact between each other as well as with other merchants. BHIM App currently has 17 million downloads in less than 3 months since its launch. And government is considerably promoting their digital cashless technologies other than BHIM such as UPI & Aadhar Enabled Payment Systems. As per National Payments Corporation of India, payment transactions through Aadhar enabled Payment Systems have raised 12 times over 6 months from April 2016 to October 2016 which is highlighting that traditional bank themselves are moving towards e-wallet services on mobiles at a faster pace.

In addition to govt or RBI, Companies are also participating in combating of cyber crimes because of increasing trend of cashless or digital transactions.Microsoft opened full scale cyber security

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Center called Cyber security Engagement center (CSEC) in India.This centre, located in Delhi, functions as a satellite to company's Redmond Digital Crime Unit (DCU).This centre monitors how viruses are spreading, from where cyber attacks are originating and helping customers to tap pool of security specialists.

Measures To Be Taken For Stepping Towards Cashless India

Basic cyber hygiene must be taken care of such as non-sharing of passwords with others, non-saving of passwords on public networks and Better access to control techniques with strong authentication measures should be implemented by mobile e-wallet companies. Open Bank accounts and ensure they are operationalized.

Abolishment of government fees on credit card transactions; reduction of interchange fee on card transactions; increase in taxes on ATM withdrawals.

Tax rebates for consumers and for merchants who adopt electronic payments.

Need is to scale up the capabilities of POS machines for faster rollouts in country.

Making Electronic payment infrastructure completely safe and secure so that incidents of Cyber crimes could be minimized and people develop faith in electronic payment system.

The Reserve Bank of India too will have to come to terms with a few issues, from figuring out what digital payments across borders means for its capital controls to how the new modes of payment affect key monetary variables such as the velocity of money.

RBI will also have to shed some of its conservatism, part of which is because it has often seen itself as the protector of banking interests rather than overall financial development.

Conclusion

The future of the Cashless India looks pretty promising as the response of the country people towards this move of the government and the support towards it is a clear indication that the government's move is likely to succeed. The transparency in the economy will increase through the e-commerce transactions and the digital payment gateways which will increase the GDP of the economy. This will increase the creditability of the country and make a rise in investments. This step of cashless is truly going to create ripples of big success and it will help to attain vision of Prime Minister Modi's vision of "Digital India".

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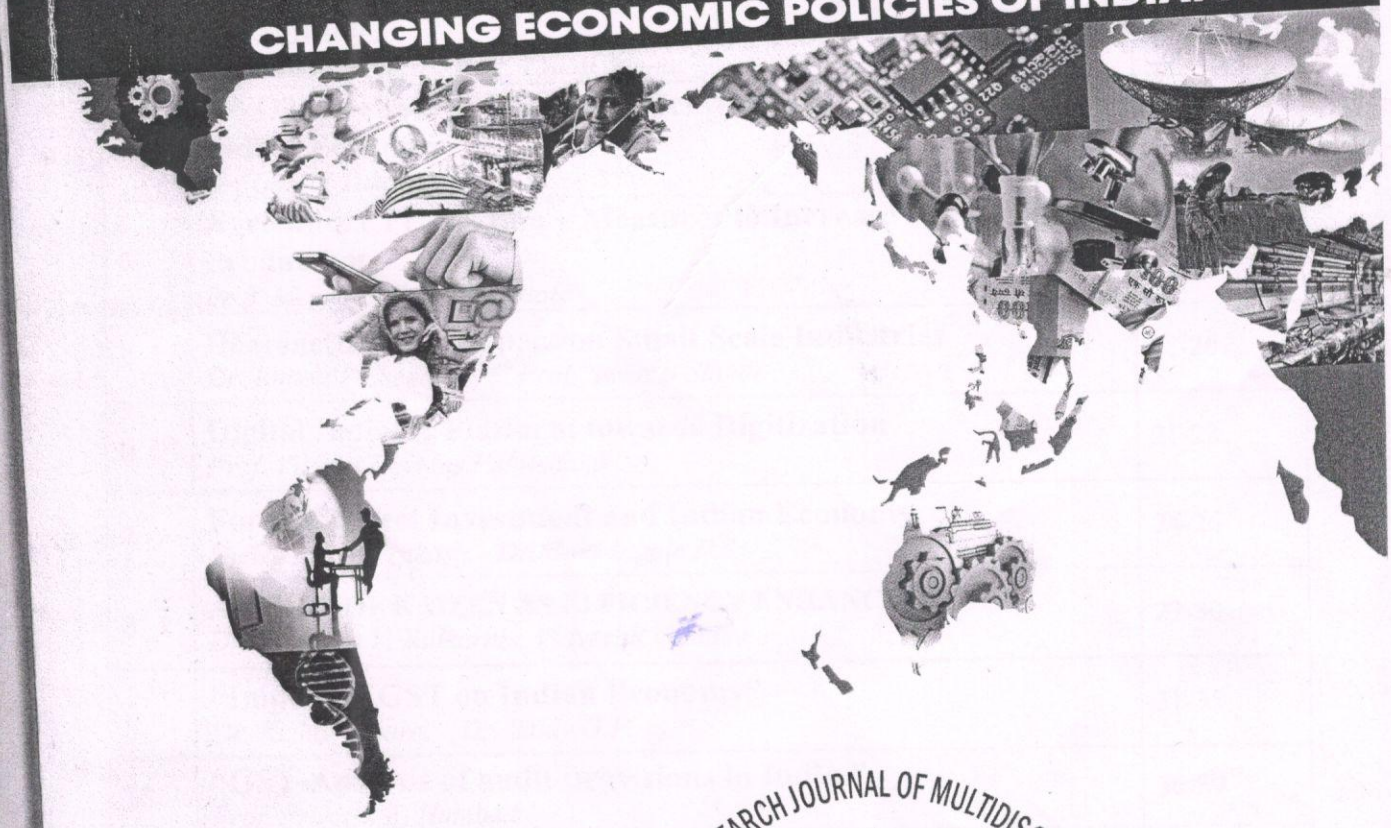
J.M. Joshi

SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMP



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Banks can offer so many channels to access their banking and other services such as ATM, Local branches, Telephone/Mobile banking, Video banking etc. to increase the banking business.

Product Differentiation

Apart from traditional banking services, Indian Banks must adopt some product innovation so that they can compete in gamut of competition

Expansion

Expansion of branch size in order to increase market share is another opportunity to combat competitors. Therefore Indian nationalised and commercial banks must spread their wings towards global markets as some of them have already done it.

Conclusion

Indian banks are trust worthy brands in Indian market, therefore these banks must utilise their brand equity as it is a valuable asset for them. The paper discusses the various challenges and opportunities like transparency, growth in banking sector, global banking, managing technology etc.

Banks are striving to combat the competition. The competition from global banks and technological innovation has compelled the banks to rethink their policies and strategies. Finally the banking sector will need to master a new business model by building management and customer services. Banks should contribute intensive efforts to render better services to their customer. Nationalized and commercial banks should overcome the challenges and to get advantage of opportunities in changing banking scenario.

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Therefore, they need support and it is one of the reasons for merger. ICICI Bank Ltd has used mergers as their expansion strategy in rural market. They are successful in making their presence in rural India. It strengthens their network across geographical boundary improves customer base and market share.

The Commercial banking structure in India

21914 Binija George, Recent trends in banking sector ---- Challenges and opportunities

Managing Technology

Developing or acquiring the right technology, deploying it optimally and then leveraging it to the maximum extent is essential to achieve and maintain high service and efficiency standards while remaining cost effective and delivering sustainable return to shareholders. Early adopters of technology acquire significant competitive advantages. Managing technology is therefore, a key challenge for the Indian Banking Sector.

Market Discipline and Transparency

According to Fernando (2011) transparency and disclosure norms as part of internationally accepted corporate governance practices are assuming greater importance in the emerging environment. Banks are expected to be more responsive and accountable to the investors. Banks have to disclose in their Balance sheets a plethora of information on the maturity profiles of assets and liabilities, movements in NPAs, capital, shareholdings of the government, value of investment in India and abroad, the total investment made in the equity share, bonds, debentures, aggregate advances against shares and so on.

Other Challenges

- Development of skill of bank personnel
- Customer awareness and satisfaction
- Changing needs of customers
- Lack of common technology standards for mobile banking
- Manpower planning etc.

Opportunities

Where there are challenges, there must be opportunities. Following are the opportunities for the banking sector.

Rural area customers

Contributing to 70% of the total population in India is a largely untapped market for banking sector. In all urban areas, banking services entered but only few big villages have the banks entered. So that the banks must reach in remaining all villages because majority of Indian still living in rural areas.

Good customer services

Good customer services are the best brand ambassador for any bank for growing its business. Every engagement with customer is an opportunity to develop a customer faith in the bank. While increasing competition, customer services has become the backbone for judging the performance of banks.

Internet Banking

It is clear that online finance will pick up and there will be increasing convergence in terms of product offerings, banking services, share trading, insurance, loans based on the data warehousing and data mining technologies. Anytime anywhere banking will become common and will have to upscale. Such upscaleing could include banks launching separate internet banking services apart from traditional banking services.

Offering various channels

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The present banking scenario provides a lot of opportunities as well as facing lot of challenges also. India is being
fundamentally strong supported by concrete economic policies,decisions and implementations by the Indian Government.Today in India, the service sector is contributing half of the Indian GDP and the banking is most popular service sector in India. The significant role of banking industry is essential to speed up the social economic development. To improve major areas of banking sector, Government of India, RBI and Ministry of finance have made several notable efforts. Many of leading banks operating in market have made use of the changed rules and regulations such as CRR, interest rate, special offers to the customers such as to open account in Zero balance. In addition to this, now a days banks are entered in non-banking products such as insurance in which area there are tremendous opportunities.

Challenges faced by the banking sector

Customer satisfaction

Today, in banking sector customers are more value oriented in their services because they have alternative choices in it. So that each and every bank have to take care about fulfilling customers satisfaction.

To provide several personnel services

Today, it is demanded that banks are to provide several services for which they have to expand their service, social banking with financial possibilities, computerisation and minnovative mechanization, better customer services, internal supervision and control, adequate profitability, strong organisation culture etc. Therefore banks must be able to provide complete personal service to the customers who comes with expectations.

Competition

The nationalized banks and commercial banks have the competition from foreign and new private sector banks. Competition in banking sector brings various challenges before the banks such as product positioning, innovative ideas and channels and new market trends. Banks are restricting their administrative folio by converting manpower into machine power.ie, banks are decreasing manual powers and getting maximum work done through machine power. Skilled and specialised manpower is to be utilised and result oriented targeted staff will be appointed.

Global Banking

It is practically and fundamentally impossible for any nation to exclude itself from world economy. Therefore, for sustainable development, one has to adopt integration process in the form of liberalization and globalization as India spread the red carpet for foreign firms in 1991. The impact of globalization becomes challenges for the domestic enterprises as they are bound to compete with global players. The foreign banks operating in India, becomes a major challenge for nationalised and private sector banks. These banks are large in size, technically advanced and having presence in global market, which gives more and better options and services to Indian traders.

Growth of Banking

Zhao, Casu and Ferrari (2008) used a balanced panel data set covering the period of 1992-2004 and employing a Data Envelopment Analysis (DEA) based Total Factor Productivity (TFP) index. The empirical study indicated that after an initial adjustment phase, the Indian Banking Industry experienced sustained productivity growth, which was driven mainly by technological progress. Foreign banks appear to have acted as technological innovators when competition increased, which added to the competitive pressure in the banking market. It was found in the study of Goyal and Joshi (2011) that small and local banks face difficulty in bearing the impact of global economy.

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SPECIAL ISSUE ON SPORTS FOR SUSTAINABLE DEVELOPMENT IN INDIA

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Primary Introduction, Rules and Regulations of Weight Lifting Game

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Introduction:

Weightlifting, also called Olympic-style weightlifting, or Olympic weightlifting, is an athletic discipline in the modern Olympic programme in which the athlete attempts a maximum-weight single lift of a barbell loaded with weight plates.

The two competition lifts in order are the snatch and the clean and jerk. Each weightlifter receives three attempts in each, and the combined total of the highest two successful lifts determines the overall result within a bodyweight category. Bodyweight categories are different for male and female competitors. A lifter who fails to complete at least one successful snatch and one successful clean and jerk also fails to total, and therefore receives an "incomplete" entry for the competition. The clean and press was once a competition lift, but was discontinued due to difficulties in judging proper form.

In comparison with other strength sports, which test limit strength (with or without lifting aids), weightlifting tests aspects of human ballistic limits (explosive strength); the lifts are therefore executed faster—and with more mobility and a greater range of motion during their execution—than other strength movements. Properly executed, the snatch and the clean and jerk are both dynamic and explosive while appearing graceful, especially when viewed from a recording at a slowed speed.

While there are relatively few competitive Olympic weightlifters, the lifts performed in the sport of weightlifting, and in particular their component lifts (e.g. squats, deadlifts, cleans), are commonly used by elite athletes in other sports to train for both explosive and functional strength.

The Weights:

The Bar itself is a standard. Women and under use a 15Kg bar which is a slightly smaller diameter than the standard 20Kg bar used by all men.

The Barbell is loaded with **Disks (Plates)** of various weights. A combination of the international standard of 25 (Red), 20 (Blue), 15 (Yellow), 10 (Green), 5 (White), 2.5 (Red), 2 (Blue), 1 (Green), 0.5 (White) Kilogram disks to set the barbell at a certain weight, are used.

The barbell will be loaded with the minimum number of disks required to total the required weight.

In addition, **collars** must be used to tighten on the ends of the barbell to keep the weight disks attached. The standard collars are 2.5 Kg each.

Rules & Regulations

Each lifter is given three attempts at each of the Snatch and the Clean and Jerk.

First, all lifters in a session will complete all three attempts at the Snatch. Then, after a 10 minutes break, all lifters will take three attempts at the Clean and Jerk.

The Total of the Best Snatch and the Best Clean and Jerk determine medal or trophy placement.

Each lifter competes with other lifters in their own weight class but in most sessions, a few weight classes are mixed. In Open events, both Weight Classes and Age Classes are often mixed.

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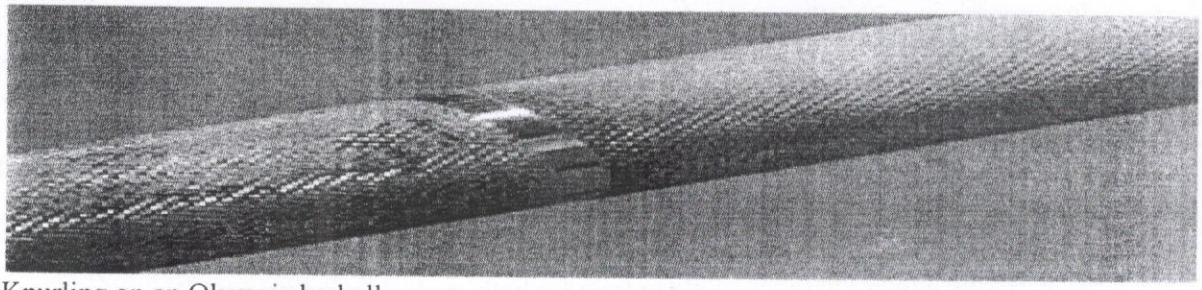
Youth lifters are under 17 years old, Junior Lifters are under 20 years old, Seniors are Open and Masters are over 35.

The weight on the barbell only goes up! All lifters who are attempting a certain weight complete their attempts before the other lifters attempt higher weights.

Three Judges watch for incorrect features of the lift to separate a "Good" lift from a "Bad Lift". Here are the basic items judges look for:

1) No part of the lifter (except the bottom of the feet) shall touch the platform.
2) The Lifter cannot "press out" the barbell. Press out is when the elbows are bent and the lifter uses strength of the arms to lock out the elbows.
3) The lift must be all in one continuous movement - no stopping and restarting.
4) The elbows must not touch thighs or knees during the Clean. This is dangerous and can cause serious injury.
5) The Lifter must hold the bar steady and be motionless between the Clean and the Jerk.
6) The Lifter must hold the bar steady and motionless in all parts of the body overhead with feet inline with the plane of the trunk until the judges give the down signal
7) The Lifter must guide the bar down at least below shoulder level when the lift is complete. Dropping from overhead is dangerous and an incorrect movement.
8) The Lifter must remain on the platform during the execution of the lift.

Barbell



Knurling on an Olympic barbell

Olympic weightlifting uses a steel bar (also known as a barbell) with larger-diameter rotating sleeves on either end, holding rubber-coated weight plates of different weights. This sleeve rotation is important for the Olympic lifts, particularly the snatch and clean movements, because it drastically reduces the rotational inertia of the bar. Without sleeve rotation, the Olympic lifter faces more challenging lifts and a greater risk of injury.

A men's Olympic barbell weighs 20 kg (44 lbs) with a shaft diameter of 28 mm and a length of 2200 mm, whereas a women's Olympic barbell weighs 15 kg (33 lbs) and has a shaft diameter of 25 mm with a length of 2010 mm. The distance between the sleeves, however, is the same for the men's and the women's bars at 1310 mm. The grip texture of the bar is called the knurling, and is distributed differently between the men's and women's bars: the men's has knurling in the centre but the women's does not. The Olympic barbells used in competition are certified by the IWF.

Bumper plates

The weight plates, typically referred to as "bumper plates" because of their rubber coated design, weigh between 10 kg and 25 kg in 5 kg increments. Smaller metal plates from 0.5 kg to 5 kg called

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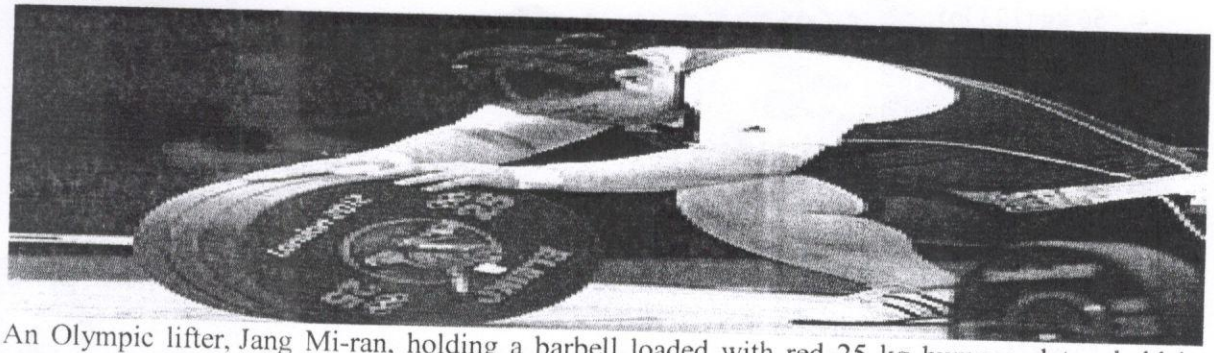
change or fractional plates are used to for smaller weight totals. The bumper plates are coated with rubber to allow the weights to be dropped from various heights—either after a successful lift or during an unsuccessful one. Olympic bumper plates conform to international standards for colouring. That is, 10 kg is green, 15 kg is yellow, 20 kg is blue, and 25 kg is red.

Competition iron plates

In addition to the rubber bumpers, smaller competition iron plates can be used to add weight in small increments to the bar. The colour designations for these iron plates are as follows: 1 kg is green, 1.5 kg is yellow, 2 kg is blue, 2.5 kg is red, 5 kg and 0.5 kg are white. It is useful to note the colour assignment of these iron plates is consistent with the heavier bumper plates (i.e. 1 kg and 10 kg are green, 1.5 kg and 15 kg are yellow, etc.).

Collars



An Olympic lifter, Jang Mi-ran, holding a barbell loaded with red 25 kg bumper plates, held in place with a collar. Note the lifter's taped wrists and thumbs, her weightlifting shoes, and her weightlifting belt.

Weight plates are secured to the bar using collars on each sleeve that weigh exactly 2.5 kg each.

Singlet

Lifters typically wear a one-piece, close-fitting leotard often called a singlet. The wearing of a T-shirt underneath the singlet is optional.

Belt

A weightlifting belt of 120 mm maximum width may also be worn to provide lower back support.

Chalk

Chalk is regularly used by Olympic lifters, generally prior to each attempt at a lift. Lifters rub their hands with the chalk to promote dryness and prevent the bar moving in their hands. In addition to the hands, chalk can be applied to the neck, usually above the collarbone, which is a key point of contact for the bar during a clean and jerk.

Tape

Olympic lifters frequently use tape to cover the areas of their bodies exposed to friction while completing Olympic lifts. Tape is most commonly found on the Olympic lifter's thumb. A taped thumb not only lessens the risk of calluses, it reduces the pain associated with the hook grip.

Olympic lifters also tape their wrists, preventing exaggerated and uncomfortable joint movement during lifts. For particularly heavy overhead lifts, a taped wrist enables the lifter to regulate wrist extension and delimit the translation of the radius and ulna distal heads. However, while taped wrists can prevent wrist and forearm injuries in the short-term, excessive use can lead to weakened connective tissue in the area, increasing the risk of pain and injury.

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Shoes

Perhaps the type of shoes worn by Olympic weightlifters is their most distinctive piece of equipment. Weightlifting shoes are typically designed with a raised heel of 0.5" to 1.5" and one or two metatarsal straps that tighten across the instep of the shoe. The raised heel helps the lifter maintain an upright torso while catching the bar and also allows for a deeper squat under the bar. The soles of the shoes are also quite rigid, helping to resist compression while under heavy loads. The shoes are designed for maximum stability while remaining flexible in the "toebox". This allows the lifter to come up on the toes and to catch the weight on the ball of the back foot during the "jerk" movement of the lift.

Weight classes

Athletes compete in a division determined by their body mass. There have been eight male divisions and eight female divisions since 2017.

Men's weight classes:

- 56 kg (123 lb)
- 62 kg (137 lb)
- 69 kg (152 lb)
- 77 kg (170 lb)
- 85 kg (187 lb)
- 94 kg (207 lb)
- 105 kg (231 lb)
- 105 kg and over (231 lb+)

Women's weight classes:

- 48 kg (106 lb)
- 53 kg (117 lb)
- 58 kg (128 lb)
- 63 kg (139 lb)
- 69 kg (152 lb)
- 75 kg (165 lb)
- 90 kg (198 lb)
- 90 kg and over (198 lb+)

Basic skill

The **Snatch** is a single movement where the lifter holds the bar in a wide grip, lifts the weight off the ground overhead in one movement, then stands upright holding the bar overhead.

The **Clean and Jerk** is a two-part movement. First, the lifter holds the barbell in a shoulder width grip, then pulls the weight up to the shoulders and then stands up with the barbell balanced on the shoulders.

Once settled, the lifter will snap the bar overhead and stand upright again with the barbell in control overhead.

Once the lifter is in control, the judges will give the "Down" signal and the lifter will lower the bar.

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SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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A Review on Maintaining Web Applications and Brute Force Attack

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Abstract :-
Now a days ,almost all generations are using technology. Every and other person is active on social media like Facebook, twitter, as well mail accounts. Each and every organizations,institutes,companies are having their own web portals. Every site is handling lots of data. This data is in terms of product ,employee information, financial data etc.. Most of the time the data attributes are confidential. Through the use of emerging data technologies like cloud computing,Big data etc. these data gets properly stored and accessed. People are using Internet are exchanging information and communicating with each other for business and Personal purpose.Everyone needs safe and secure way of communication.This paper is discussing different aspects of network security-threats,attacks and Vulnerabilities. Theweaknesses in web application security are also discussed. The network security aspects such as authentication, Confidentiality, Integrity are also discussed.Different attack methodology like Hidden Field Manipulation attack,Parameter Tampering attack,Buffer Overflow attack (Denial of Service), SQL Injection etc. are also discussed. The paper is focusing on Brute force attack,reverse Brute force attack.The different tools like Aircrack-ng,John the Ripper, Rainbow crack,Cain and Abel, Hashcat,Ncrack are explained. Hacker's/attacker's purpose and malware activities are identified. Precautionary measures are mentioned against Brute force attack in this paper.Like the Wordpress brute force attack has occurred and the team monitored the attack and traced its consequences are also discussed in this paper. Also Microsoft office365 brute force attack is given in this paper.
Keywords : Attack,Security,ThreatVulnerabilities,Authentication

Introduction

Web application is a software that runs on web browser which allows user interaction for various purpose. Network security is designed to protect the usability and integrity of the network and data. It includes both hardware and software technologies. It targets a variety of threats and stops them from entering or spreading on your network. The most common and simple way of protecting a network resource is by assigning it a unique name and a corresponding password.

Security Elements

Security relies on the following elements:

1. Authentication process uniquely identifies clients of the applications and services. The clients might be end users,other services,process or computers.Authenticated clients are referred as principles.
2. Authorizationprocess governs the resources and operations that the authenticated client is permitted to access. Resources include files, databases, tables, rows, and so on, together with system-level resources such as registry keys and configuration data. Operations may include financial operations such as purchasing a product, transferring money from one account to another.
3. Effective auditing and logging is the key to non-repudiation.

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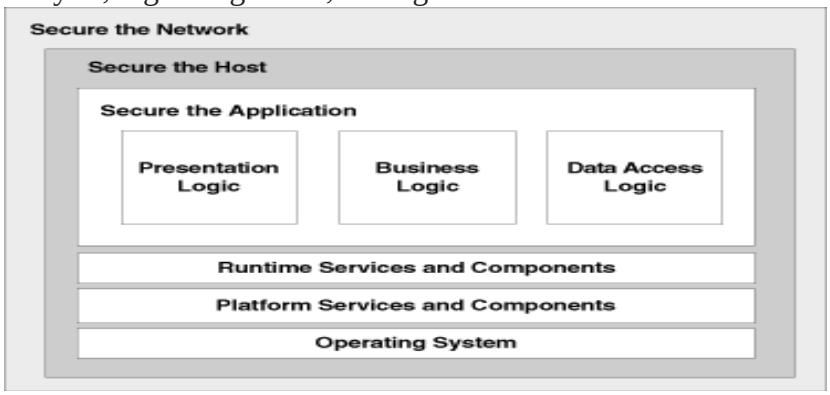
4. Confidentiality, is the process of making sure that data remains private and confidential, and that it cannot be viewed by unauthorized users or eavesdroppers who monitor the flow of traffic across a network. Encryption is used to enforce confidentiality.
5. Integrity is the guarantee that data is protected from accidental or malicious modification. Integrity for data in transit isachieved by using hashing techniques and message authentication codes.
6. Availabilitymeans that systems remain available for legitimate users. The goal for many attackers with denial of service attacks is to crash an application or to make sure that it is sufficiently overwhelmed so that other users cannot access the application.

Threats, Vulnerabilities, and Attacks

A threat is any potential occurrence, malicious or otherwise, that could harm an asset.
A vulnerability is a weakness that makes a threat possible. This may be because of poor design, configuration mistakes, or inappropriate and insecure coding techniques. Weak input validation is an example of an application layer vulnerability, which can result in input attacks.
An attack is an action that exploits a vulnerability or enacts a threat. Examples of attacks include sending malicious input to an application or flooding a network in an attempt to deny service.

Monitoring Web application for security

To design and build a secure Web application you must know the threats.Developers, must develop secure, robust, and hack-resilient solutions by applying security checkpoints and techniques at early stages of development as well as throughout the software development lifecycle for the web application. Security mechanisms that should be used include, threat modeling, risk analysis, static analysis, digital signature, among others.



The Weaknesses in web application security

Invalidated Input : When the program accepts input from an uncontrolled source, there is a chance for a attacker to pass data. If you don't validate the input, it might cause program crashes by allowing an attacker to execute his own code. This can happen like:Buffer overflows,Format string vulnerabilities,URL commands,Code insertion,Social engineering.

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Broken Access Control –While developing web application different roles are provided to different persons which can access different contents and functions of the site.For secure session proper authorization and secure authentication has to be done with controlled access.

Broken Authentication and Session Management

In case of **Cross Site Scripting** (XSS) attacker injects his own code into legitimate website sometimes to break access control, authentication etc.

Through **Injection attacks** attackers inject some code in the program that accompanies unstructured data to get confidential information.

Improper Error Handling,Insecure Storage,Insecure Configuration Management are also some weaknesses in web application.

Attack methodology

Hidden Field Manipulation attack- Sometimes websites may use hidden form fields, which do not get displayed on the page, to post some confidential data in back end database.Hackers can easily hack and manipulate these field values and exploit it. .

Parameter Tampering attack- Information passed with request is not validated before it is used in the application. The request parameters in URL string can be manipulated to get certain information

Buffer Overflow attack (Denial of Service)- An attacker can overwrite the buffer values in the call stack to execute malicious code for the specific purpose and can take advantage of buffer overflow.

Cross-Site Scripting (Hacking / Identity Theft)- In this case attacker can insert and execute malicious code into client side script to deliver malicious script to visitors browser.

Backdoor and Debug Options (Technology Trespassing)- Applications which accesses remote computers are targeted to breakdown the victims network.

Directory Browsing (Hacking into servers and accessing data)- An attacker can access other parts of the file system by stepping out of the root directory. The attacker can view restricted files to gain information to breakdown the system.The attacker executesmalicious commands as if the userof the website.

HTTP Response Splitting-It is the ability to write one HTTP request so that the target generates two responses one to be completely under control of attacker. The attacker can inject malicious script for intended purpose.

Stealth Commanding- Through a set of techniques attackers exploit parsing problems in server-side scripts tries to change the code executed by the server. It is basically used in execution of operating system commands, for complete takeover of the server.

3rd Party Misconfiguration-This is most commonly used attack for web application by introducing third party plugins or services to perform malicious task by the website.

Known Vulnerabilities & SQL Injection- Here, the attacker forms a query and inputs it as part of the authentication and the database .Web server marks this as a valid query executed and opens gates into the web based system as the attempted user.

The Brute force attack

Brute force is a trial and error method used by application programs to decode encrypted data such as passwords or Data Encryption Standard keys, through exhaustive effort (using brute force) rather than employing intellectual strategies. Hackers writes scripts to carry out those numerous attempts instead

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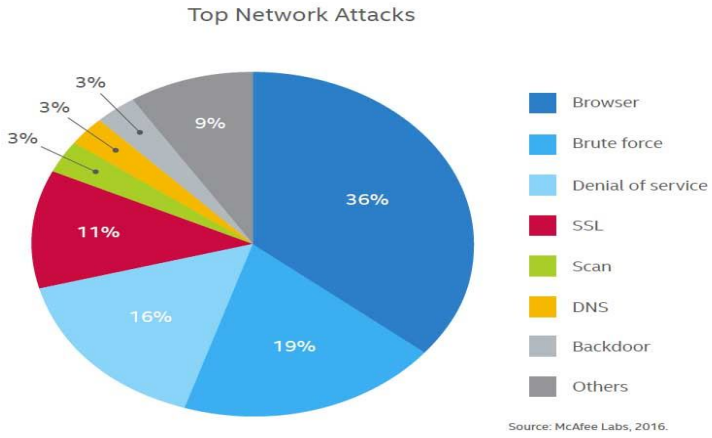
of carrying out it manually,but the success of attack depends on various factors like length and combination of characters,numbers and special characters in forming password. Sites usually suggest for strong passwordwith long length and diversity of characters in password.This make brute force attack difficult but not impossible.It will take longer time to reach password by brute forcing. So sites generally use brute force password cracking to check weak password for security. One more way to prevent this attack ,user can be restricted for number of unsuccessful login attempts.This is why web-based services start showing captchas if you hit the wrong passwords three times or they will block your IP address.

Top network attacks for 2016



Reverse Brute force attack

It is reverse approach for cracking password. Suppose attacker know the password and have no idea about the username. The attacker will try the same password against all possible guesses for username for the purpose. This technique can be used against any site that do not get blocked after defined number of unsuccessful attempts.

Tools used for brute force

Aircrack-ng –As the name suggest this is wireless password cracking tool to attack on WIFI802.11. It performs dictionary attacks against wireless network. The productive password dictionary is more likely to become victim .This tool is available for Windows, Linux, IOS and Android platform.

John the Ripper- This tool can perform brute force attack against encrypted password as it automatically identify hashing used in password.It perform attack by guessing all possible combinations of text and numbers for password.It can also perform dictionary attack.Basically it was designed for cracking Unix password but now it supports fifteen different platforms.

Rainbow Crack- This tool generates rainbow table or uses pre-computed rainbow tables published by various organizations to crack the password. The table reduces the time in performing attack.This tool is available for latest versions of Windows and Linux.

Cain and Abel –This tool performs brute force attack and cryptanalysis attack,can decode scrambled password,recover wireless network keys,analyze routing protocol,crack encrypted passwords using dictionary,reveal password boxes ,Man in the Middle attack .But some virus scanner like Avast and Microsoft Security Essentials find it malware and block it in system.

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L0phtCrack- This tool is basically used to crack windows password of less than 14 character lengths containing only alphabets and numbers and is accompanied by rainbow tables.It cracks the password by usingLM hashing through rainbow tables.

Crack- This oldest password cracking tool is used for the UNIX system to check weak passwords by performing dictionary attacks.

Hashcat- The various attacks like Brute-Force attack, Dictionary attack, Fingerprint attack, Hybrid attack, Mask attack, Table-Lookup attack and Toggle-Case attack etc are supported by this tool. It uses hashing algorithm like LM Hashes, MD4, MD5, SHA-family, Unix Crypt formats for CPU based password cracking. It supports Windows,Linux and MAC OS platform.

SAMInside- It can perform Mask attack, Dictionary attack, Hybrid attack and Attack with Rainbow tables using over 400 hashing algorithms.It is used for cracking Windows OS password.

DaveGrohl- It performs brute force attack for Mac OS X and supports both dictionary attacks and incremental attacks. It enables to perform attacks from multiple computers to attack on the same password hash.

Ncrack-It performs different attacks including bruteforce attacks by supporting various protocols such as RDP, SSH, http(s), SMB, pop3(s), VNC, FTP, and telnet. It can be used with various platforms including Linux, BSD, Windows and Mac OS X.

THC Hydra-It can crack passwords of network authentications by performing brute-force attacks and performs dictionary attacks against various protocols including telnet, ftp, http, https, smb etc. It is available for various platforms including Linux, Windows/Cygwin, Solaris 11, FreeBSD 8.1, OpenBSD, OSX and QNX/Blackberry

Treasure for Hackers–

Aattackerscanuse files and the web host server to cause a wide variety of damage through malicious behavior once they gain access.

Deform: In this case site can display unwanted and malicious content, by deletingthe original content and the website can be broken down.;

Malware distribution: The site visitors get infectedthrough distribution of malware, ransomware and viruses.

Spamvertising*:* It deals with introducing spam content or links to spam websites

Redirecting to malicious site*:* Through accessing the legitimate site may cause visitors to be redirected to malicious websites, or to pages that contain affiliate links and make money for the hackers.

Stealing system resources: Attackers may carry out tasks such as email campaigns and content delivery by using the web server's resources.

Fun: some attackers may perform brute force attacks which are simple and easy just for entertainment and fun.

The following table indicates Times required for Brute force attack on various key lengths using Deep Crack technology

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Bits	Number of Keys	Brute Force Attack Time
56	7.2×10^{16}	20 hours
80	1.2×10^{24}	54,800 years
128	3.4×10^{38}	1.5×10^{19} years
256	1.15×10^{77}	5.2×10^{57} years

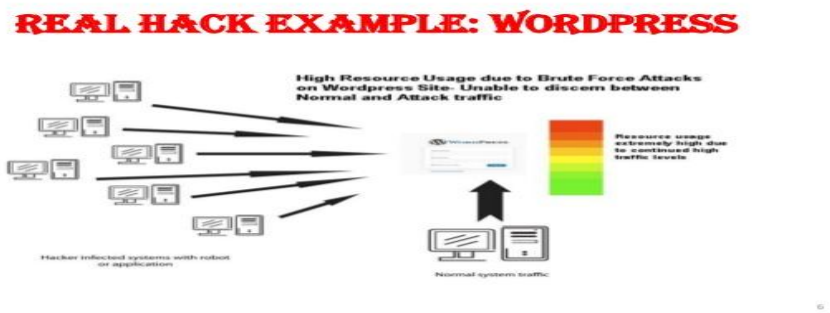
Deep Crack technology was developed in 1998 by the EFF (Electronic Frontier Foundation). They built a machine called the Deep Crack capable of trying a million DES keys per microsecond against a readable ASCII string hours to try all possible keys.

Protecting against Brute force attack-

1. To block Brute force attacks,accounts can be locked after unsuccessful attempt of login. Accounts can be locked for specific period of time or till manuallyunlocked by administrator.But sometimes some websites are unable toenforce this policy due to constant unlocking of accounts.
2. One can block Brute force attack just by injecting random pauses while checking password authentication. Adding a few seconds pause can slow down a Brute force attack without affecting the legitimate users as they login.
3. Advanced users can be allowed to login from certain IP address only to protect their accounts.
4. Unique login URLs can be assigned, so that not all users can access site from the same URL.
5. CAPTCHA can be used to prevent automated attacks.
6. Accounts can be placed in lockdown mode with limited capabilities.

Example

Real life example of Brute Force attack is, large network of compromised servers are trying to break wordpress website through wp-login.php brute force attack since April 2013.Wordpress is a open source software tool foe Content Management System using PHP and SQL. It can be used for creating websites or blogs. The attack is broad in that it uses a large number of attacking IPs, and is also deep in that each IP is generating a huge number of attacks. This is the most aggressive campaign we have seen to date, peaking at over 14 million attacks per hour.



Wordpress can be protected against Brute forcing. The suggestions are as follows

Use strong password with at least 8 character long with proper combination of upper-lower case characters, punctuations numbers or non alphanumeric characters.

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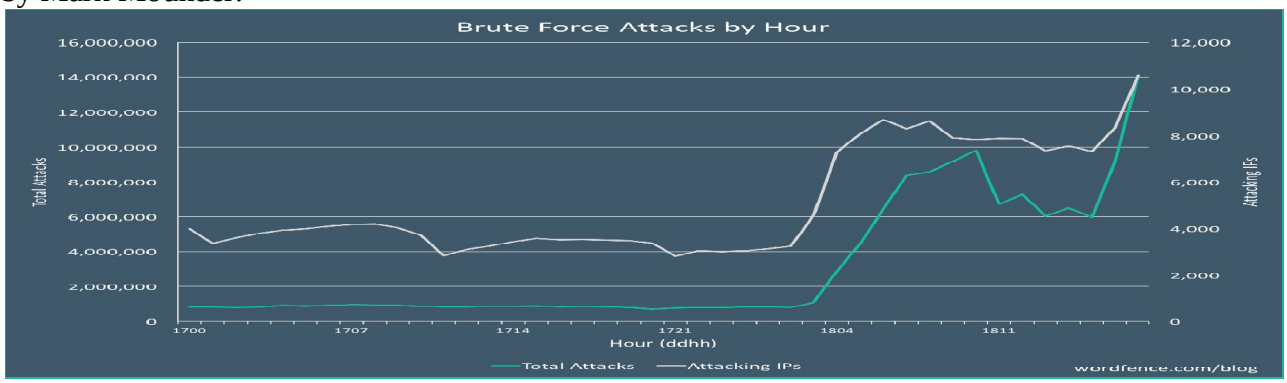
Changing default username for admin.
Locking admin access with hatches.
Disabling CPU intensive login limit plugins.
Scanning website for hacks.
Backup wordpress.
Disable wordpress autosave.
CloudFlare DNS level protection.
Observation by WordPress team for the attack posted in Wordpress Security on December 18 2017 by Mark Mounder.



The attack has so far peaked at 14.1 million attacks per hour.
The total number of IPs involved at this time is over 10,000.
up to 190,000 WordPress sites targeted per hour.
This is the most aggressive campaign seen by hourly attack volume.

Brute Force Attack on Microsoft Office365 cloud

Cloud services are on path to become the standard for enterprise IT solutions, and Office 365, which offers cloud access to Microsoft Word, Excel and other productivity apps, has taken a dominant role with 58.4% of all sensitive corporate data in the cloud is stored in Office 365.The Microsoft office 365 attack was cloud to cloud attack . The hackers used public hosting services infrastructure to attack on Saas service.This attack was directed against a few targets across multiple companies instead of many users as possible. There were 100,000 failed-login attempts originating from 67 IPs and 12 networks over a period of nearly 7 months.It used slow and low strategy to avoid the detection by the provider.First the hackers acquired corporate usernames and passwords from multiple companies that may be tied to multiple cloud services and then tried different email variations derived from the employee name to try to gain access to sensitive information.It can be inferred that they used the same password for each user for every username variation because each email was only used once to attempt the unauthorized login.Another assumption was that the accounts lacked basic security provisions, such as multi-factor authentication (MFA). Organizations using Office 365 have been forced to rely on traditional and inadequate username-password authentication to try to protect themselves from sophisticated attackers. Current versions of Office 365 mail clients support basic two-factor authentication while older Microsoft clients and third-party email applications do not. Because of this antiquated approach to authentication, attackers know that Office 365 is ripe to be exploited, and we

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anticipate attacks against Office 365 to proliferate for the foreseeable future."It can be difficult for organizations to fully protect themselves from sophisticated attacks targeting the cloud without having a robust cloud security infrastructure.Organizations need to gain awareness of their cloud usage in order to mitigate the risk of a security incident in a meaningful way.

Conclusion

Security of web application is getting more attention. The security treats and internet should be analyzed to determine security technology. Confidentiality, Authentication,Integrity, Authorization, Non-repudiation must be considered while developing secure application.Web Application must be protected against Threats, Vulnerabilities and attacks.Secure host secure application and secure network are the key for secure web application. Hackers or attackers identifies weaknesses in web application and applies various attacking methodology.Brute force attack is popular amongst attackers to crack password or user authentication to a web application to perform malfunction for specific purpose.Almost all hash cracking algorithms use the brute-force to hit and try. This attack is best when you have offline access to data. In that case, it makes it easy to crack, and takes less time.Brute-force password cracking is also very important in computer security as it can be used to check the weak passwords used in the system, network or application.There is a long list of password cracking tools which use brute-force or dictionary attack. Here are listedsome of them, the best and most popular tools.Protecting against Brute force attacks can be achieved upto some extent.Wordpress brute force attack example can be a new topic research.

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A Review on Eco-Friendly Technology Green Computing: Latest Practice in a Global Era

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Abstract -*InModern era of globalization computers plays vital role in every field. They are a part of our life, so use of computers are increased day by day to fulfill our need. A large amount of electricity required for manufacturing of computer peripheral unit, such as CPU, Memory Unit, Monitor and functional unit etc. By this a large amount of carbon content is harmful to environment.These carbon contents directly or indirectly dangerous to human being and to the earth. There are many technique used by intelligent people to overcome this problem, one of that technique is "Green computing".Green Computing is the emerging technology which takes responsibility of eco-friendly use of computer and their resources.In recent years, companies in the computer industry, manufacturer or vendors have come to realize that going green is the best solution, manufacturing the energy efficient computing resources, green use,in these terms of public relations and reduced costs.In today's world the e-waste the major issue, green technology is the application of one or more of environmental science, green chemistry, environmental monitoring and electronic devices to monitor, model and conserve the natural environment and resources, and to keep under control the negative impacts of human involvement. The main focus of this paper is to save the energy, reduce the carbon foot prints, increase the paperless work, encouraging the recyclability of digital devices, reducing the use of dangerous material, reuse the old computer devices and make environment green by providing some new ideas or techniques.*

Keywords–Green Computing, Energy Star, Environment, Recycle, Carbon dioxide (CO2), E-Waste, Eco- Friendly, Recycling etc.

1 INTRODUCTION

Green computing refers to environmentally sustainable computing.ItMeans eco-friendly use of computers and their devices. It minimizes the use of electricity as well as energy and reduces the environmental waste when we are using a computer. It is also defined as the study of designing, engineering, manufacturing and proper disposing of computing devices i.e. Electronic Waste(e-waste) in a way that reduces their environmental impact.Green computing is also known as green information technology (green IT).

"Greening" your computing equipment is a low risk way for your business to not only help the environment but also reduces the costs.It's also one of the largest growing trends in business today. Making a proper decision to go green in the workplace such as offices not only improves the net profit of your business but also reduces your carbon footprint. Reducing energy usage, which also reduces carbon-dioxide emission andyour energy bill, is the most effective thing you can do.Green computing is very much related to other similar movements like reducing the use of environmentally hazardous materials like CFCs, promoting the use of recyclable materials, minimizing use of non-biodegradable components, and encouraging use of sustainable or biodegradable resources.Each and every part of devices we use has some impact on the environment. The power used to run a device is generated by burning fossil fuel which has a high amount of carbon footprint. It is non-renewable source of energy which are limited in quantity and are exhausting very rapidly. The emissions from the burning fossil

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fuels contain carbon dioxide, carbon monoxide and other greenhouse gases and are serious concerns. They not only pollute the atmosphere but also have serious health issues. They are the reason behind greenhouse effect and global warming.Every 1000MW power station running on black coal produces CO2 emission of about 7 milliontons per year. After lightning computers have the highest energy consumption in office environment.Power managements of computers, monitors and other devices can significantly reduce energy consumption, saving thousands of dollars per year on electricity cost. Green Computing is the solution on the above problem. It is the need of green computing.A main thing of research is maximizing energy efficiency during the product's lifetime,testing and applying alternative nonhazardous materials in the products manufacturing process.

2 HISTORY OF GREENCOMPUTING

In 1992, the U.S. Environmental Protection Agency(EPA) launched Energy Star, a voluntary labeling program which is designed to promote and recognize energy efficiency in monitors, climate control equipment's and other technologies. This resulted in the widespread adoption of sleep mode among consumer electronics. The term "green computing" was probably stamped shortly after the Energy Star program began.The Energy Star program was revised in October 2006 to include efficiency requirements for computer peripherals, along with a tiered ranking system for approved products.Climate Savers Computing Initiative (CSCI) is an effort to reduce the electric power consumption of PCs in active and inactive states.It was started on 6th December 2007. Basically, the whole green aspect came about quite a few years back when the news that the environment was not a renewable resource really hit home and people started realizing that they had to do their part to protect the environment. Basically, the efficient use of computers and computing is what green computing is all about.

3 PROBLEMS BEING FACED WITHOUT GREEN COMPUTING

According to researchers of Green Computing following are few noticeable Challenges that Green computing is facing today:

3.1 Health Hazards - Using toxic materials that can harm our health can cause cancer and technology addiction can lead to other health problems like obesity and carpal tunnel syndrome

3.2 Carbon Emissions-Carbon dioxide and carbon monoxide are greenhouse gasses that are produced by people. The other gases which affect the greenhouse are methane (CH4), nitrous oxide (NO2) and fluorocarbons (CCl4). These greenhouse gasses trap in the atmosphere and reflect heat and radiation back to the planet's surface, which leads to Global warming.These gases are able to increase the temperature of the earth, which causes to lead the drought and floods and rising the sea level.These also affect the life on earth.

3.3 Disposal of Electronic Wastes -The major issue is the disposal of the e-waste in the environment. They are likely to be free of hazardous materials such as brominates flame-retardants, PVCs and heavy metals such as lead, cadmium and mercury, which are commonly used in computer manufacturing. Replacements like the front-runner, a tin/copper/silver alloy, also require higher melting temperatures, which can affect chip life.

3.4 PowerEmission -Use of computers and resources, it requires large amount of power or electricity, by continuous using of computers and resources, a lot of energy gets wasted. Large amount of heat emitted from the computers and servers. It affect on environment and human health.

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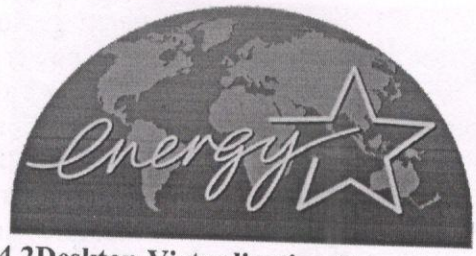
3.5 Consuming Resources - Non-renewable resources such as coal are used to generate the electricity for technology. Contaminate the food chain can greatly affect the environment's natural cycles.

4 GREEN COMPUTING APPROACHES AND SOLUTIONS/ IMPLEMENTATIONS

4.1 Governments go green: Many governments worldwide have initiated energy-management programs, such as Energy Star, an international standard for energy efficient electronic equipment that was created by the United States Environmental Protection Agency in 1992.Energy Star reduces the amount of energy consumed by a product by automatically switching it into sleep mode when not in use or reducing the amount of power used by a product when in standby mode.ENERGY STAR tools and resources help businesses determine cost-effective approaches to managing energy use in their buildings and plants—enabling the private sector to save energy, increase profits, and strengthen their competitiveness.



4.2Desktop Virtualization: It involves running two or more logical computers on just on one set of physical hardware.This not only saves the cost of multiple computers but also reduces the carbon foot-prints due to manufacture and usage of multiple computer devices.In virtualization, one physical server hosts multiple virtual servers. Virtualization also reduces data centers floor space, makes better use of computing power and reduce the data center's energy demand.

4.3Carbon free computing:One of the VIA Technologies' ideas is to reduce the "carbon footprint" of users — the amount of greenhouse gases produced, measured in units of carbon dioxide (CO2). In 1997 Kyoto in USA tried to reduce the emission of CO2 from electronic devices and other devices. These devices are manufactured in such way that they take less energy. VIA aims to offer the world's first PC products certified carbon free, taking responsibility for the amounts of CO2 they emit.To reduce the percentage of CO2 in atmosphere to grow a plant to against each product after manufactured. It has been estimated that 4 to 6% are of planted tree can absorb 20 to 25 % area CO2. Different companies are now

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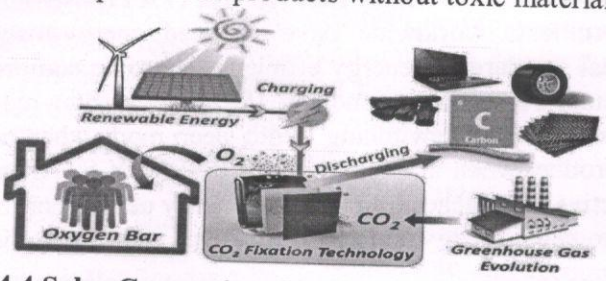
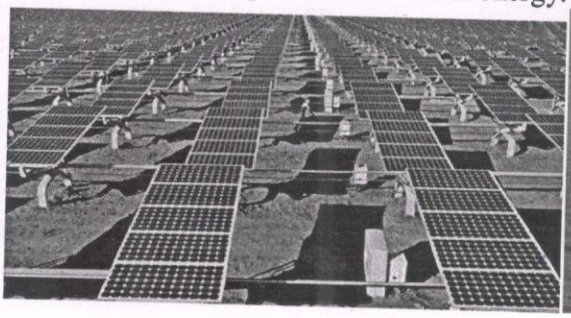
working on this issue very keenly. Dell is working on worldwide product-recycling program. In this program Dell company allows to customers to pay an extra $2 to $4, for grow a plant against each product AMD, a global microprocessor manufacturer, is also working toward to reduce energy consumption in its products without toxic material and carbon free product.

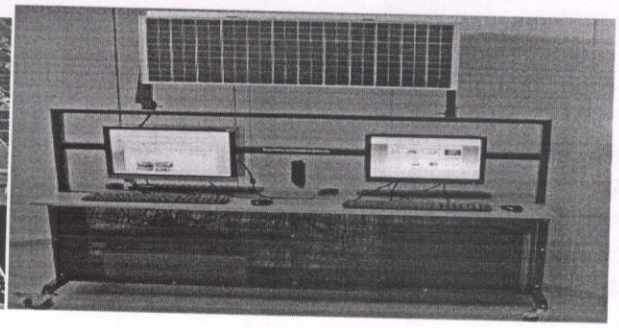


4.4 Solar Computing:Computers with the help of solar technology is called solar computing. Nowadays solar power gaining is the more and more attention throughout the world. Solar energy is power derived from the sun through the use of solar panels. Good example of powering PC's with the sun is Taiwanese manufacturer VIA Technologies Inc. VIA Solar Computing initiative is a part of VIA Green Computing projects. VIA Solar Computing use advanced, cost-effective solar panel technology in cooperation with Motech Industries – one of the largest and leading solar product manufacturers and innovators. Solar cells combined with VIA processor platforms and system technologies developed complete solar-powered computing solutions that are less polluting, more affordable, more reliable and more flexible for a wide variety of new markets, applications and environments. VIA Solar Computing is focusing on photovoltaic (PV) solar power to take advantage of the numerous benefits for both emerging market and urban computing installations:

- Solar power is clean non-polluting energy.
- Once capital costs are covered (like purchasing and installation) solar cells require very little maintenance, hence in further perspective of time they provide energy at virtually no cost (Lakshmi, LalitaSarwani, NaliniTuveera, 2012, p. 1284).
- Solar panels are silent in operation.
- Solar panels do not require refueling; they are self-sufficient.

Due to the undeniable benefits of renewable energy in the form of solar energy private companies continue to invest in research and development of this kind of power providing. This solution is not the cheapest however leasing is common way to go solar today (IrshadShiddiqui, 2013, p.53). At the same time, governments are starting to recognize the benefits of solar power, with much now offering tax and rebate incentives to promote this clean energy.





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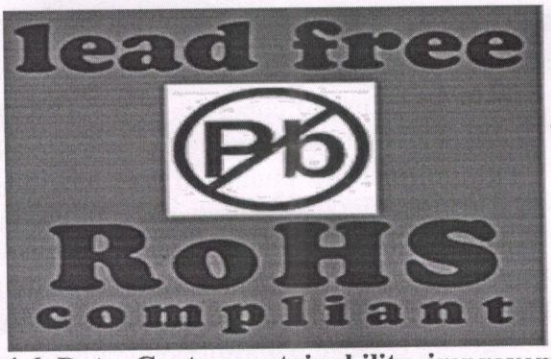
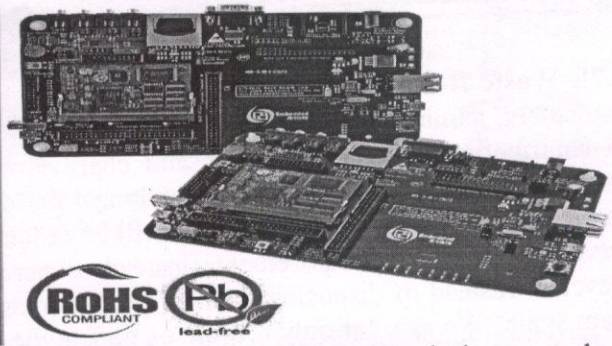
4.5Lead-Free and RoHS computing: In February 2003, the European Union adopted the Restriction of Hazardous Substances Directive (RoHS). The process of making laws restricts the use of six hazardous materials that are Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalentchromium(Cr (V1)), Polybrominated Biphenyls (PBBs), and Polybrominated Diphenyl Ethers (PBDEs)etcin the manufacture of various types of electronic and electrical equipment.The instruction is closely linked with the Waste Electrical and Electronic Equipment Directive (WEEE), which sets collection, recycling, and recovery targets for electrical goods and is part of a capability of law making that aims to reduce the huge amounts of toxic e-waste. In 2001, they focused on lead-free manufacturing, introducing the Enhanced Ball Grid Array (EBGA) package for power efficient VIA processors and the Heat Sink Ball Grid Array (HSBGA) package for their chipsets.VIA's lead-free manufacturing technologies do not require a lead bead, and the solder balls now consist of a tin, silver, and copper composite.





4.6 Data Center sustainability improvements: The rising energy costs, desire to make existing investments more and more profitable are making today's cloud providers to implement best practices to make datacenters operation green. To build eco-friendly data center, several best practices in key areas has been proposed for improving sustainability:

- Proper location which allows clean energy consumption through renewable sources (solar energy generation, wind power generation, fuel cells, cogeneration).
- Cooling system (new systems based on liquid cooling, nano-fluid cooling systems, and in server, in-rack and in-row cooling by companies such as Spray Cool; free cooling, spot cooling, using cable grommets to reduce cool air leakages).
- Building design (heat insulation, optimizing floor layout, recycling water)
- Information and Communication Technology (ICT) platform (middleware-facility linkage, dedicated racks & servers, virtualization technologies).
- Deployment of newest power efficient servers and processors (Kumar Garg, Buyya, 2012).
- Energy linking (power sharing between company centers, locating data center near power station).

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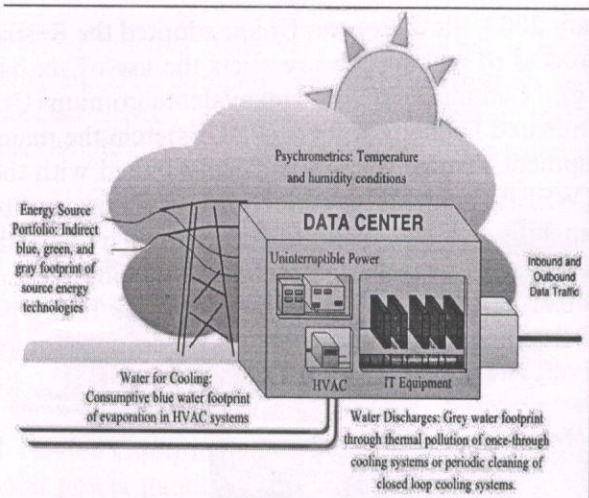
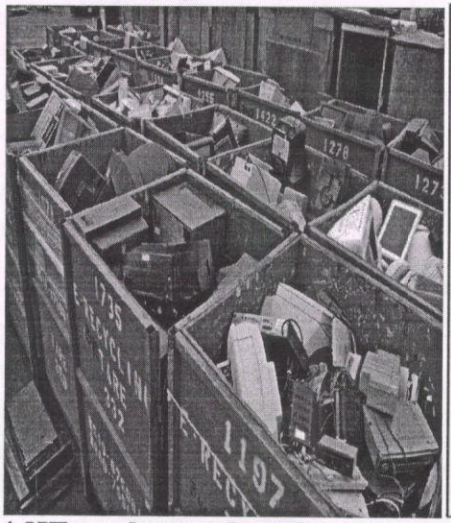
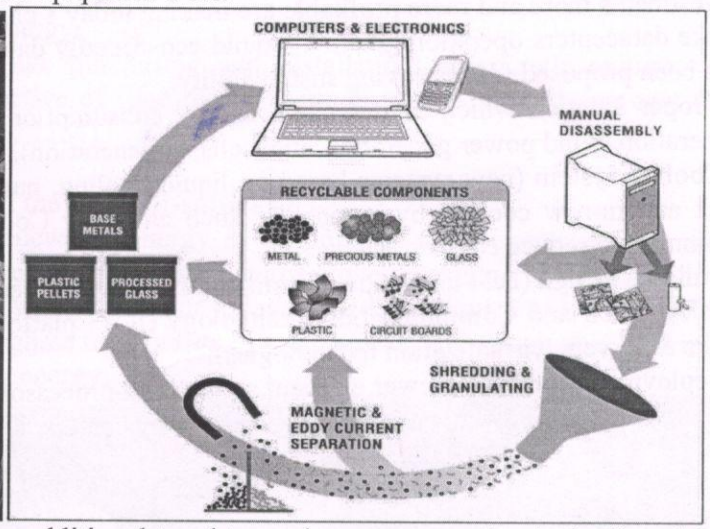


4.7E-Waste Recycling: E-Waste recycling is the reuse or recycling of computing devices such as old computers, monitors, printers, mouse, keyboard, networking devices etc. Instead throwing it should try to contributing to the non-profits and charities or submit it to the municipal or private recycling associations.By using the hardware for longer period of time, the total environment footprint caused by computer manufacturing and disposal will be reduced greatly. We can also renovate old computers and servers to meet new requirements instead of purchasing new devices. Printer cartridge can also be recycled. Instead of disposing them off and increasing the e-waste burden, we can refill them and use them again. We can not only recycle or donate the computing e-waste but also mobile phone, business and office equipment's, entertainment equipment's etc.





4.8IT product and eco-labeling: An additional trend toward green computing is the "eco-label" which has been supported by several organizations around the world. These eco-labels are given by organizations to IT products based on several factors aiming to save the environment. An eco-label

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identifies products or services proven environmentally preferable overall, within a specific product or service category. The factors include the ability of recycling the system, noise energy consumption etc.

4.9Reducing Energy Consumption: We can reduce the energy by following the above operations

- Turn off your computer when you're done for the day.
- Use Power Saver Mode.
- Don't print unless necessary.
- Use an Ink Jet printer and turn it on only when printing - Printer energy consumption varies widely. You'll have to use your voltmeter to see how much electricity yours draws when printing and when turned on but idle.
  From least to greatest energy consumed printer technologies order like this:
  Dot Matrix --> Ink Jet --> Laser
  Since dot matrixes are largely obsolete due to lesser print quality, this makes the ink jet is the best energy-conscious choice for most home users. An active laser printer uses several times more electricity than your computer!
- Use LED's instead of CRT monitors as they are more power efficient.Bulky old CRT monitors use several times the power of space-saving, power-sipping flat panel or LED displays. CRT's often consume between 60 and 110 watts, while most flat panels are down in the 15 to 60 watt range.
- Use a laptop instead of a desktop.**Laptops are more efficient.** Laptop computers consume up to 80 percent less electricity than desktop computers and get by on between one-fifth and one-third as much energy.
- **Set your Power Management options**:Measurements with your new voltmeter quickly expose a power consumption hierarchy. These are your computer's power usage levels, from greatest power consumption to least:
  Heavy Use -> Light Use -> Idle -> Standby -> Hibernate or Turned Off

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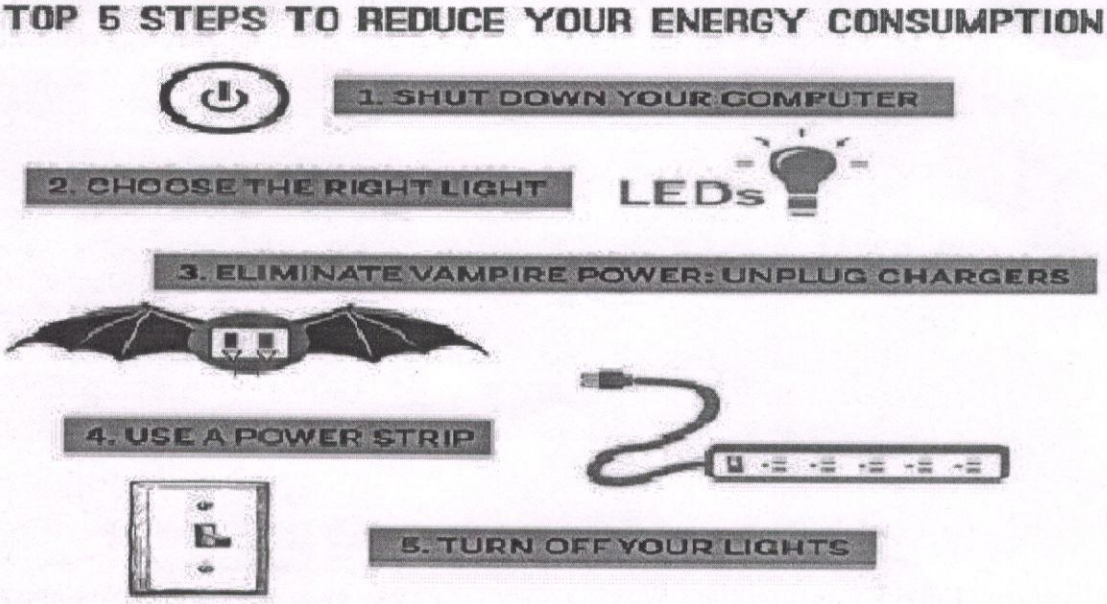

4.10 Green Manufacturing: Green manufacturing is the reducing of waste during the manufacturing of computers and other subsystems to reduce the environmental impact of these activities.Green manufacturing is the renewal of production processes and the establishment of environmentally-friendly operations within the manufacturing field.One being the manufacturing of "green" products and secondly the "greening" ofmanufacturing-reducing pollution and waste by minimizing natural resource use, recycling and reusing what was considered waste, and reducing emissions.

Here are just a few of the toxic chemicals found in your average computer

- Brominated flame retardants (BFRs) in plastic casings.
- Cadmium and selenium in circuit boards.
- Cathode ray tubes (CRT) in old monitors.
- Lead in solder.
- Mercury in LCD screens backlights.

Due to new research and growing public alertness about the effects of these hazardous materials, many companies are beginning to research and are finding new ways to build greener PCs that do not make use of these dangerous chemicals.

A list of the different materials that manufacturers are using to build computer parts:

- **Bamboo** – is becoming progressively popular for making coverings for computers and peripherals. It has the advantages of being a sustainable and quickly renewable resource and it is lightweight and stylish.
- **Recyclable plastics** – many computers are made up of from non-recyclable plastics but there is an alternative. One way is to use recyclable polycarbonate resin.

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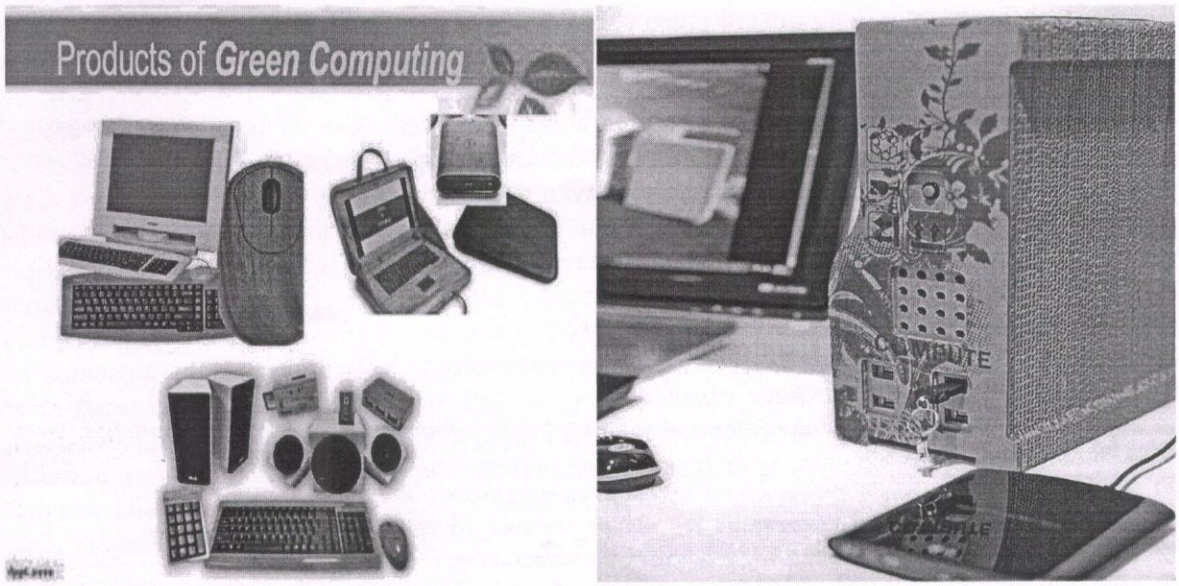
- **Eco-friendly flame retardant** – Flame retardants are often some of the most toxic chemicals in traditional PCs, there are flame retardant silicone compounds available that are flame retardant and completely non-toxic.
- **Eliminating lead soldering**– getting rid of the lead makes a big difference, it can protect individuals responsible for breaking down computer pieces during the recycling processes and prevent toxins leaching into the ground and water supplies at landfills and storage points.



The companies that are started green manufacturing.

- **Apple**- Apple is has begun to make many of its green computers with recyclable materials such as aluminum, polycarbonate and glass. Apple has made efforts to remove toxic substances, such as brominated fire retardants (BFRs), polyvinyl chloride (PVC), arsenic, lead and mercury from its products.
- **Hewlett Packard** - HP is determined to use more recycled materials in its products and product packaging. HP has also instituted buy back and recycling programs for all brands of computers, monitors, printers, scanners and other computer technology. HP has its own huge recycling facility in Roseville, California which processes about 4 million pounds of electronics per month.
- **IBM** - IBM has been moving towards more environmentally friendly practices since back when "green" still meant "yellow + blue." In the decade between 1990 and 2000, it reduced its overall power ingesting by 5.1 billion kilowatt hours, and that includes power used for manufacturing.
- **Phillips Electronics** - Not only does Philips strive to drastically increase its energy efficiency in its production process, but it also invests billions of euros into green research, so that every company on earth can someday be as eco-friendly as it is trying to be. That research has resulted in a tiny LED, award-winning LEDs, the world's "smartest" LED, the most efficient white LED, and much more

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CONCLUSION

To come to our knowledge, the man-made greenhouse gas emissions increasing is a major contributing factor to global warming, enterprises, governments, and also our society. In the meantime, people trying to test the environmental issues and adopting naturally to live in harmony and peacefully with this earth. Therefore, greening our IT products, applications, services and practices are both economic and environmental essential, as well as our social responsibility. As a result, a growing number of IT vendors and users are moving toward green computing and thereby assisting in building a green society and economy.

Through the effort of developing sustainable energy, we can create a better quality of life for the coming generation. We can put our effort to learn more about knowledge of computer disposal to protecting the environment. By green computing technology, we are trying to make the whole process surrounding computers friendlier to the environment, economy and society.

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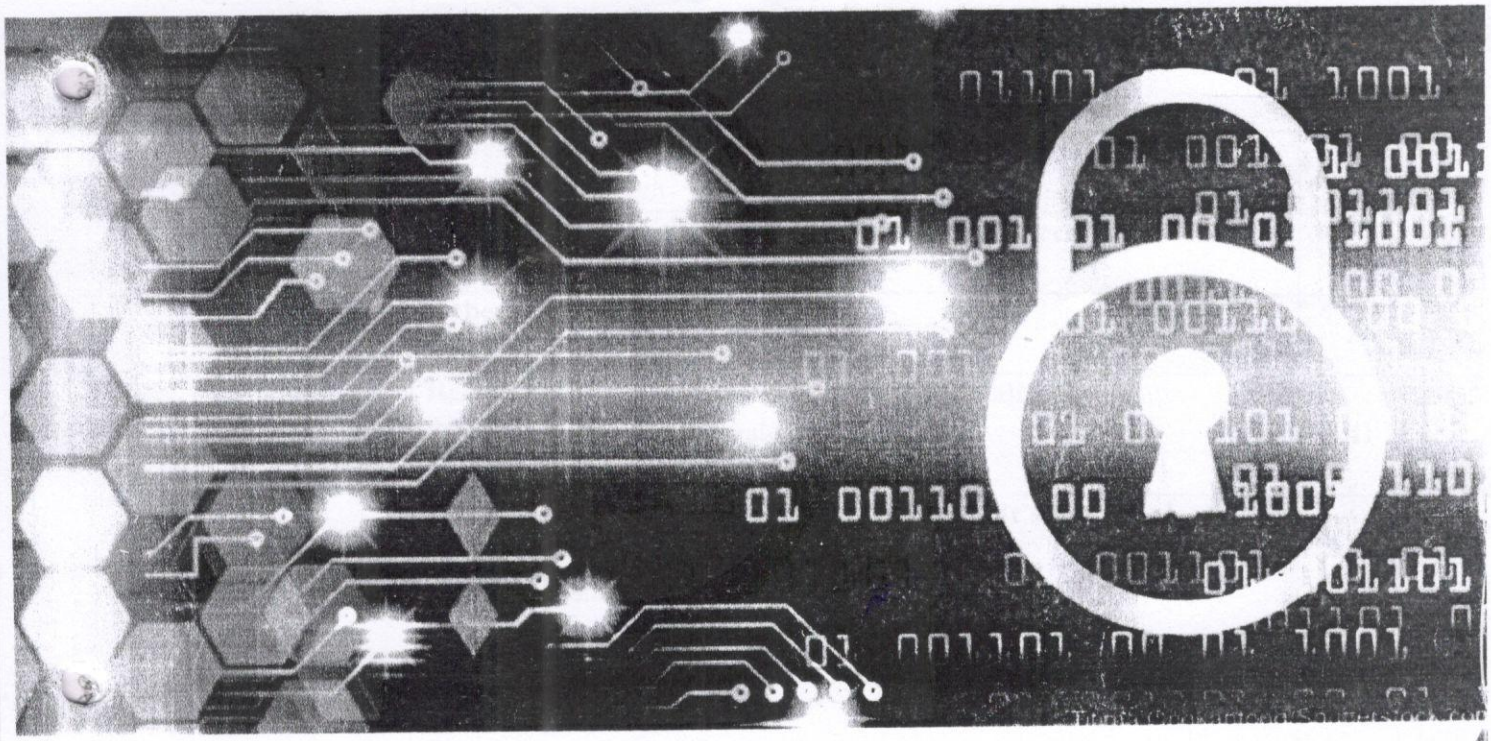

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A REVIEW OF CRYPTOGRAPHY: STEGANOGRAPHY

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Abstract
Cryptography is a special encryption technique to hide information in such a way that will not be retrieved by any Third Party or Hackers. In this paper we focused on the cryptography techniques and how we can provide security through these techniques. A technique steganography is a useful technique through which we can provide a security by hiding confidential data behind the carrier file such as image, audio, video etc. For example – any sensitive data can be hidden inside a digital image and receiver gets image along with confidential message then he apply key for decryption and he gets original message. The detection of steganographically encoded packages, messages or confidential data is called steganalysis. It is useful in
Keywords–*Encryption, Steganography, Cipher, Cryptanalysis, Data Hiding, Certification Authority*

Introduction

Cryptography plays an important role on ensuring the security and reliability of modern computer systems. Any web based computer system is susceptible to attacks from system hackers who could attempt to overwhelm a computer system to gain information for illegal use. They could also attempt to crash a system for the aim of sabotaging Company's business operations. There are a number of system attacks that have been established to destroy or damage the computer systems. Areas of interest for this special journal issue include, but are not limited to, the following topics: Authentication, Cryptographic algorithms and their applications, Cryptanalysis, Email security, Electronic commerce, Data integrity, Fast cryptographic algorithms and their applications, Identity-based cryptography, IP security, Key management, Multicast security, Computer network security, Privacy protection, Security in Peer-to-Peer networks, Security in sensor networks, and Smartcards. Steganography provides better security than cryptography because cryptography hides the contents of the message but not the existence of the message

Cryptography Basics

Computers are used by millions of people for many purposes. Such as banking, shopping, military, student records etc. Privacy is a critical issue in many of these applications, how are we need to make sure that an unauthorized parties cannot read or modify messages.

Cryptography is the transformation of readable and understandable data into a form which cannot be understood in order to secure data. Cryptography refers exactly to the

methodology of concealing the content of messages, the word cryptography comes from the Greek word "Kryptos", that means hidden, and "graphikos" which means writing. The information that we need to hide, is called plaintext , It's the original text. It could be in a form of characters, numerical data, executable programs, pictures, or any other kind of information, The plaintext for example is the sending of a message in the sender before encryption, or it is the text at the receiver after decryption. The data that will be transmitted is called cipher text, it's a term refers to the string of "meaningless" data, or unclear text that nobody must understand, except the recipients. it is the data that will be transmitted Exactly through network, Many algorithms are used to transform plaintext into cipher text.

Cipher is the algorithm that is used to convert plaintext to cipher text, This method is called encryption, in other words, it's a mechanism of converting readable and understandable data into "meaningless" data.

The Key is an input to the encryption algorithm, and this value must be independent of the plaintext, This input is used to transform the plaintext into cipher text, so different keys will yield different cipher text, In the decipher side, the inverse of the key will be used inside the algorithm instead of the key.

Computer security it's a generic term for a collection of tools designed to protect any data from hackers, theft, corruption, or natural disaster while allowing these data to be available to the users at the same time. The example of these tools is the antivirus program.

Network security refers to any activity designed to protect the usability, integrity, reliability, and safety of data during their transmission on a network, Network security deals with hardware and software. The activity can be one of the following anti-virus and anti-spyware, firewall, Intrusion prevention systems, and Virtual Private Networks.

Internet Security is measures and procedures used to protect data during their transmission over a collection of interconnected networks, while information security is about how to prevent attacks, and to detect attacks on information-based systems.

Cryptography Goals

By using cryptography many goals can be achieved, These goals can be either all achieved at the same time in one application, or only one of them.

These goals are:

1. **Confidentiality:** it is the most important goal, that ensures that nobody can understand the received message except the one who has the decipher key.
2. **Authentication:** it is the process of proving the identity, that assures the communicating entity is the one that it claimed to be. This means that the user or the system can prove their own identities to other parties who don't have personal knowledge of their identities.
3. **Data Integrity:** its ensures that the received message has not been changed in any way from its original form. The data may get modified by an unauthorized entity intentionally or accidently. Integrity service confirms that whether data is intact or not since it was last created, transmitted, or stored by an authorized user. This can be achieved by using hashing at both sides the sender and the recipient in order to create a unique message digest and compare it with the one that received.

4. **Non-Repudiation:** it is mechanism used to prove that the sender really sent this message, and the message was received by the specified party, so the recipient cannot claim that the message was not sent. For example, once an order is placed electronically, a purchaser cannot deny the purchase order, if non-repudiation service was enabled in this transaction.
5. **Access Control:** it is the process of preventing an unauthorized use of resources. This goal controls who can have access to the resources, If one can access, under which restrictions and conditions the access can be occurred, and what is the permission level of a given access.

Data Encryption

A data encryption is a random string of bits created explicitly for scrambling and unscrambling data. Data encryption is designed with algorithms intended to ensure that every key is unpredictable and unique. Cryptography uses two types of keys: symmetric and asymmetric. Symmetric keys have been around the longest; they utilize a single key for both the encryption and decryption of the cipher text. This type of key is called a secret key. Secret-key ciphers generally fall into one of two categories: stream ciphers or block ciphers. A block cipher applies a private key and algorithm to a block of data simultaneously, whereas a stream cipher applies the key and algorithm one bit at a time. Most cryptographic processes use symmetric encryption to encrypt data transmissions but use asymmetric encryption to encrypt and exchange the secret key. Symmetric encryption, also known as private key encryption, uses the same private key for both encryption and decryption. The risk in this system is that if either party loses the key or the key is intercepted, the system is broken and messages cannot be exchanged securely.

Data Decryption

One of the foremost reasons for implementing an encryption-decryption system is privacy. As information travels over the World Wide Web, it becomes subject to access from unauthorized individuals or organizations. Decryption is the process of taking encoded or encrypted text or other data and converting it back into text that you or the computer can read and understand. This term could be used to describe a method of un-encrypting the data manually or with un-encrypting the data using the proper codes or keys. Encryption is the process of translating plain text data (*plaintext*) into something that appears to be random and meaningless (*ciphertext*). Decryption is the process of converting cipher text back to plaintext.

Symmetric Key Cryptography

In symmetric key cryptography is also known as private-key cryptography, a secret key may be held by one person or exchanged between the sender and the receiver of a message. If private key cryptography is used to send secret messages between two parties, both the sender and receiver must have a copy of the secret key.

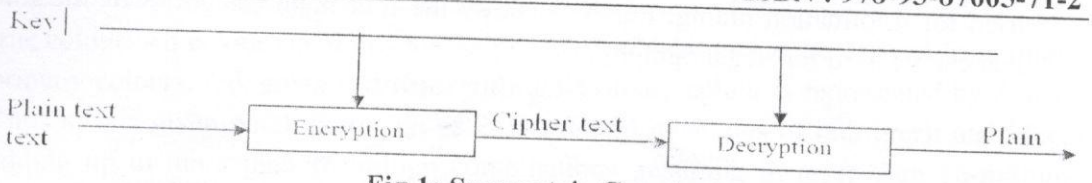

Fig 1: Symmetric Cryptosystem

Asymmetric Key Cryptography

In the two-key system is also known as the public key system, one key encrypts the information and another, mathematically related key decrypts it. The computer sending an encrypted message uses a chosen private key that is never shared and so is known only to the sender. If a sending computer first encrypts the message with the intended receiver's public key and again with the sender's secret, private key, then the receiving computer may decrypt the message, first using its secret key and then the sender's public key. Using this public-key cryptographic method, the sender and receiver are able to authenticate one another as well as protect the secrecy of the message.

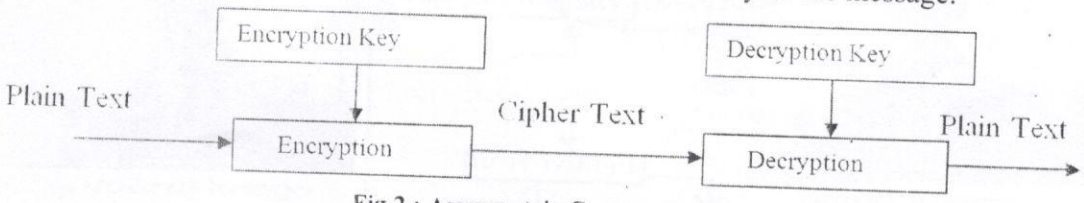

Fig 2 : Asymmetric Cryptography

Digital Certificates

A digital certificate is security identification medium used in juxtaposition with Asymmetric cryptography. Digital certificates can be provided by the certification authority (CA). The true owner of the public key is determined and the owner is verified to determine if the owner of the public key is who he/she claims to be. The certificate can hold the digital signature of the CA which the CA signs using their private key. The CA" s public key is also included to verify that the certificate is valid. Through the use of a digital certificate the user of an online system can be sure of whom they may be dealing with on the internet. The process of verifying the certificate is done by the user's browser software.

Steganography

The word *steganography* combines the Greek words *steganos* meaning "covered, concealed, or protected," and *graphein* meaning "writing". *Steganography* is the hiding of a secret message or information within an ordinary message and the extraction of it at its destination. Steganography takes cryptography a step farther by hiding an encrypted message so that no third party suspects it exists. Ideally, anyone scanning your data will fail to know it contains encrypted data. It is the practice of concealing a file, message, image, or video within another File, message, image, or video.

Deferent kinds of Steganography

Almost all digital file formats can be used for steganography, but the formats that are more suitable are those with a high degree of redundancy. Redundancy can be defined as the bits of an object that provide accuracy far greater than necessary for the object's use and display. The redundant bits of an object are those bits that can be altered

without the alteration being detected easily. Image and audio files especially comply with this requirement, while research has also uncovered other file formats that can be used for information hiding. Figure 3 shows the four main categories of file formats that can be used for steganography.

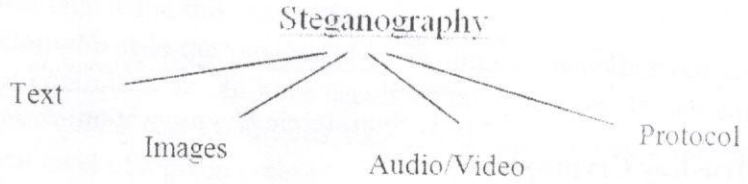

Fig 3: Categories of Steganography

Image Steganography

As stated earlier, images are the most popular cover objects used for steganography. In the domain of digital images many different image file formats exist, most of them for specific applications. For these different image file formats, different steganographic algorithms exist.

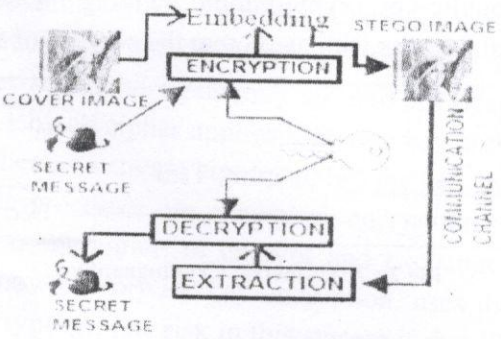

Fig 4: Steganography

The block diagram given in figure.4 explains the process of Steganography in which we generally embed some secret message into an innocuous looking simple image (called as the cover image) and create a Stego image. The Stego image visually seems to be indifferent from the original cover but hides the secret message inside it and is transmitted to the desired recipients over the communication channels without creating any suspicion in the minds of the intermediately sniffers or/and receivers. When the authorised recipient receives the image, they follow the extraction procedure to retrieve the secret message.

Image definition

To a computer, an image is a collection of numbers that constitute different light intensities in different areas of the image . This numeric representation forms a grid and the individual points are referred to as pixels. Most images on the Internet consists of a rectangular map of the image's pixels (represented as bits) where each pixel is located and its colour . These pixels are displayed horizontally row by row. The number of bits in a colour scheme, called the bit depth, refers to the number of bits used for each pixel. The smallest bit depth in current colour schemes is 8, meaning that there are 8 bits used to describe the colour of each pixel . Monochrome and greyscale images use 8 bits for each pixel and are able to display 256 different colours or shades of grey. Digital colour images are typically stored in 24-bit files and use the RGB colour model, also known as

true colour. All colour variations for the pixels of a 24-bit image are derived from three primary colours: red, green and blue, and each primary colour is represented by 8 bits. Thus in one given pixel, there can be 256 different quantities of red, green and blue, adding up to more than 16-million combinations, resulting in more than 16-million colours. Image steganography techniques can be divided into two groups: those in the **Image Domain** and those in the **Transform Domain.** Image Domain uses Least Significant Bit (LSB) For BMP Images and Transform Domain Uses the JPEG file format is the most popular image file format on the Internet, because of the small size of the images.

Figure 5 shows Confidential Message Embedded in stego Image

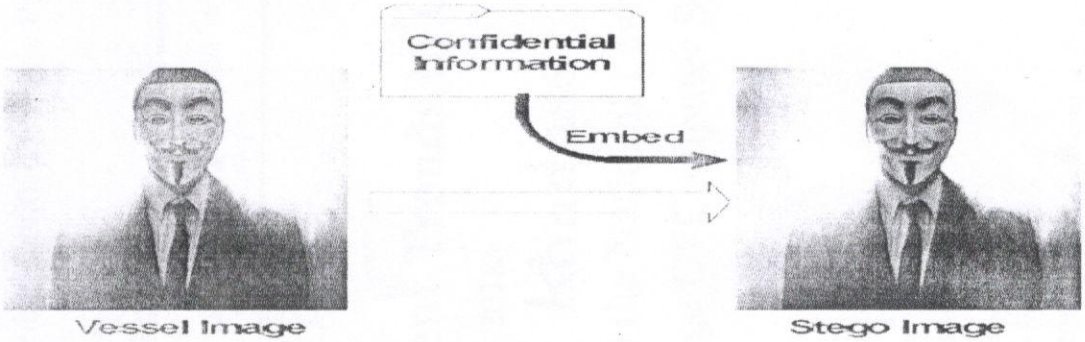

Fig 5: Stego Image

Conclusion:

Although steganography is not a new concept, its recent application with technology instigates many new ideas. First, substantial research is necessary to create algorithms that are strong enough to withstand the many unique forms of steganalysis. Although in the past, the government disagreed with individuals and businesses on the issue of public use of strong encryption products, each group must recognize the benefits that this technology brings to society. Further research in this field will not only help to decrease the effects of the drawbacks of public use, but it will also create possibilities for even more individual identity protection and a more secure nation.

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Positive Impact of GST on the Development Areas

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Abstract

Despite the various impediments to the proposed transition, until the time GST is implemented, it would be worthwhile to assess its positive impacts on the various development areas namely agriculture, manufacturing industry, MSME, housing, poverty reduction, employment etc. The paper addressed the cascading effect under the erstwhile system by giving set-off for tax paid on inputs as well as tax paid on previous purchases and resulted in a major simplification of the rate structure and broadening of the tax base. The replacement of the Central excise duty of the government of India by Central Value Added Tax (CENVAT) and sales tax system of the State governments by the VAT marked a major mile stone in the reform process of indirect taxes in India. Although there are many hurdles to be crossed before the implementation of GST the Central government reiterated its commitment towards the adoption GST for the survival of the India's economy in the face of increasing international competition consequent to globalization and liberalization.

Introduction

The transparent and complete chain of set-offs, GST will help-widening the coverage of tax base and improve tax compliance. Despite the various impediments to the proposed transition, until the time GST is implemented, it would be worthwhile to assess its positive impacts on the various development areas in India. GST is a broad based, single, comprehensive tax levied on goods and services at each point of sale of goods or provision of service, in which, the seller or service provider may claim the input credit of tax which he has paid while purchasing the goods or availing the service; the final consumer will thus bear only the GST charged by the last dealer in the supply chain. Thus it marks a major improvement over the previous system of VAT. This may lead to higher revenue which further results in lowering of tax burden. Although there are many hurdles to be crossed before the implementation of GST like consensus over rates, constitutional amendment, compensation mechanism for States losing out on revenue, varying models, dispute resolution etc. the Central government has reiterated its commitment towards the adoption of a 'flawless' GST for the survival of the India's economy in the face of increasing international competition consequent to globalization and liberalisation. With the introduction of GST at the State level, the additional burden of CENVAT and services tax would be comprehensively removed and major Central and State taxes will get subsumed into GST which will reduce the multiplicity of taxes.

GST and Poverty Reduction

At present, primary food articles like rice and wheat are liable to tax by many States either by way of purchase tax or sales tax at a lower rate. Since expenditure on food constitutes a large proportion of the total consumption expenditure of the poor, the GST is designed as a poverty reduction initiative. In any case, as at present, these services will continue to be exempted from tax and therefore no

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GST and Government Revenue

Increased GDP, indirect positive impact on direct tax collections, gain for the government on account of reduction in the price level of a large number of goods and services consumed by the government as a result GST etc. a flawless GST would trigger an increase in the government revenue. Since all goods and services would be under the purview of GST, it is expected that the number of exemptions would reduce very much. Again, the tendency of tax evasion by producers and distributors will be low as to the single (or dual) and low rate of tax proposed under GST.

GST and Price Level

Though there is an allegation that GST is a regressive tax as it minimizes the number of tax rates to even a single (dual) rate, the subsuming of major Central and State taxes in GST, continuous chain of set-off of input goods and services and phasing out of CST the commitment of taxes on goods would come down under GST. Hence, a 'flawless' GST would be viewed as pro-poor and not regressive. It is anticipated that, other things remaining the same, this would encourage manufacturers and distributors to reduce the prices of their produce and ultimately benefit the consumers.

GST and Exim Trade

The gains in exports are expected to vary between 3.2 and 6.3 per cent and imports are expected to gain somewhere between 2.4 and 4.7 per cent (Thirteenth Finance Commission, 2009). As a result, while exports can be expected to register an increase, imports are likely to decrease. Consequently, both export-oriented industries and import-substituting industries would become internationally more competitive. At present export of taxes to other countries is sought to be eliminated through the mechanisms of duty draw back on the basis of estimated incidence of embedded taxes. By considering its weakness the GST requires that exports from the taxing jurisdiction would be tax free and imports into the jurisdiction would be taxed at the same rate as products produced and consumed within the jurisdiction.

GST and GDP

Additional gains in GDP would be earned during ever year over and above the growth in GDP which would have been achieved otherwise. The implementation of a 'flawless' GST across goods and services is expected to induce India's Gross Domestic Product (here after referred to as 'GDP') somewhere within a range of 0.9 to 1.7 per cent.

Conclusion

It is noted that, buoyed by the success of GST, more than 140 countries have introduced GST in some form to other and is fast becoming the preferred form of indirect tax in the Asia Pacific region. To conclude, though the positive impacts referred above are dependent on a neutral and rational design of the GST, balancing the conflicting interests of various stakeholders, full political commitment for a fundamental tax reform with a constitutional amendment, the switchover to a 'flawless' GST would be a big leap in the indirect taxation system and also give a new impetus to India's economic change.

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The Role of Government Schemes in Sport Development

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1) Introduction :

The Department of Sports was set up in 1980 under the Ministry of Human Resources Development as part of the 1982 Asian Games preparations. Youth Affairs was later added in 1985. The Department of Youth Affairs and Sports was upgraded to the status of an independent Ministry in 2000 and in 2008, Sports and Youth Affairs were bifurcated into two separate departments viz., Department of Sports and the Department of Youth Affairs.

2) National Sport Policy Initiatives:

Physical education, games and sports have been receiving attention over successive Plans. However, it was only after India hosted the IX Asian Games in 1982 that "Sports" as a subject of policy started receiving attention. National Sports Policy, 1984 was the first move towards developing an organized and systematic framework for the development and promotion of sports in the country, and the precursor of the present National Sports Policy, 2001.

National Sport Policy 2001

The twin planks of the National Sports Policy 2001 are "Broad-basing of Sports" or Sports for All and achieving excellence in sports at the national and international levels.

Features of the Policy:

1. Broad-basing of sports
2. Achieving excellence
3. Up-gradation and development of infrastructure
4. Support to National Sports Federations and other appropriate bodies
5. Strengthening of scientific support to sports
6. Strengthening of coaching support to sports
7. Incentives to promote sports
8. Enhanced participation of women, scheduled tribes and rural youth
9. Promote sports-mindedness among the public at large

3) Functions and Objectives :

The programmes and schemes of the Department of Sports can be categorized under four broad heads as given below:

1. **Sports for All**

(i) **„Khelo India** - National Programme for Development of Sports" has been prepared by merging the erstwhile „Rajiv Gandhi Khel Abhiyan", „Urban Sports Infrastructure Scheme" and „National Sports Talent Search System Programme" as a Central Sector Scheme for implementation from the Financial year 2016-17 onwards. Khelo India Scheme has three components viz., competitions, talent and sports infrastructure. Objectives of the scheme are mass participation of youth in annual sports competitions through a structured competition, Identification of talent, guidance and nurturing of the talent through existing sports academies and new set up either by the central

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Government or State Government or in PPP mode and creation of Sports Infrastructure at mofussil, Tehsil, District, State levels, etc.

(ii) Promotion of sports among persons with disabilities

(iii) Creation, promotion and preservation of playing fields as safe play spaces.

2. **Promotion of Excellence in Sports:**
   - i) Scheme of Assistance to National Sports Federations to hold domestic competitions and participation in international competitions
   - ii) National Sports Development Fund
   - iii) Scheme of Human Resource Development in Sports
   - iv) National Anti-Doping Programme for dope -free sports

3 **Incentives to sportspersons:**
   - (i) Scheme of National Awards (Rajiv Gandhi Khel Ratna Award which is a plan scheme; and Arjuna Award, Dhyan Chand Award and Dronacharya Award which are Non-Plan Schemes).
   - ii) Scheme of Cash Awards to medal winners in international sports
   - iii) Maulana Abul Kalam Azad (MAKA) Trophy for University Sports
   - iv) Scheme of pension to meritorious sportspersons.
   - v) National Welfare Fund for sportspersons.

4. Scheme Review :

A) Sports for All -

i) **'Khelo India - National Programme for Development of Sports':**

Khelo India - National Programme for Development of Sports" has been prepared by merging the erstwhile „Rajiv Gandhi Khel Abhiyan", „Urban Sports Infrastructure Scheme and „National Sports Talent Search System Programme" as a Central Sector Scheme for implementation from the Financial year 2016-17 onwards. Khelo India Scheme has three components viz., competitions, talent and sports infrastructure. Objectives of the scheme are mass participation of youth in annual sports competitions through a structured competition, Identification of talent, guidance and nurturing of the talent through existing sports academies and new set up either by the central Government or State Government or in PPP mode and creation of Sports Infrastructure at mofussil, Tehsil, District, State levels, etc.

The talented sportspersons from amongst the participants of the competition for the different age groups at, District, State and National level will be identified through the defined competition structure. On conclusion of the competitions, the Organizing Committee of the respective level of Competitions will prepare a discipline-wise list of talented candidates separately for boys and girls keeping in view gender sensitivity and representation of Scheduled Castes, Scheduled Tribes, Minorities, and weaker sections of society. The selected candidates will be eligible for either grant of suitable scholarships or for admissions in Sports Authority of India (SAI) Centers and Sports Academies. The disbursal of scholarships shall be on the Direct Benefit Transfer (DBT) principle through the implementing agency. Every potential candidate will have to pass through the same competition structure to be eligible for scholarships under this Scheme in a particular year and his/her having received the scholarship during any previous year will not have any bearing on his selection in any subsequent year. Thus, the process of fresh selection every

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year will ensure that only the most deserving candidate will be eligible for scholarships, thereby maintaining reasonable standard. Such selected candidates will also be given preference for induction in various sports promotional schemes of the Ministry of Youth Affairs & Sports (MYAS)/Sports Authority of India (SAI), wherever feasible and if the selected talents so desire. The possibility of their induction in State sports academies may also be worked out with the State Governments. The scholarships will be granted in a graded manner for each level, i.e, the National level scholarships will be the highest while the district level the lowest.

The following sports infrastructures will be sanctioned under this scheme:-

S. No.	Particulars	At District/State level
1.	Synthetic Athletic Track	Rs. 7.00 crore
2.	Synthetic Hockey field	Rs. 5.50 crore
3.	Synthetic turf football ground	Rs. 5.00 crore
4.	Multipurpose Hall of size 60M x 40M x 12.5M	Rs. 8.00 crore
5.	Swimming Pool	Rs.5.00 crore
6.	Construction of Stadia complex at District Hqs.	Rs.50.00 crore

The cost of the project over and above the admissible grant mentioned above shall be borne by the grantee. State Governments/State Sports Council/State Sports Authority, Local Civic Bodies, School, Colleges and Universities under Central/State Governments and Sports Control Boards shall be eligible to receive assistance for creation of sports infrastructure under this scheme.

The erstwhile USIS scheme was converged with Member of Parliament Local Area Development (MPLAD) scheme with effect from March, 2012. In the new scheme of Khelo India, this convergence with MPLAD will continue on the lines of USIS and if a Member of Parliament contributes 50% of the grant admissible for an infrastructure project, two additional projects will be sanctioned in that State/UT. The total estimated cost of the Scheme in the year 2016-17 will be of the order of Rs. 500 crore. Budgetary allocation of Rs. 140 crore for Khelo India Scheme has been made during 2016-17.

(ii) The promotion of sports among person with disabilities:

The Ministry formulated a scheme for promotion of sports and games among disabled during 2009 on a pilot basis for a period of 5 years. The objective of the Scheme is broad-basing participative sports among the disabled. The Scheme of Sports & Games for the Disabled has the following components:-

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1) Grant for Training of Coaches
2) Grant for holding District, State & National level competitions for the disabled.

Budgetary allocation of Rs. 4 crore has been made for the Scheme of Sports & Games for Persons with Disabilities during 2016-17.

iii) National Playing Fields Association of India (NPFAI):

NPFAI was established in February 2009 as a Society under the Societies Registration Act 1860. Union Minister for Youth Affairs and Sports is the chairperson of the NPFAI and the members include senior officers in the Ministry of Youth Affairs and Sports, representatives of State Governments etc. The main objectives of NPFAI are: to protect, preserve, promote, develop and improve playing fields and open spaces and other facilities for sports and games; and to evolve a national policy on playing fields, playgrounds, play pitches, parks and open spaces. The NPFAI received Rs 50.00 lacs as seed money from the National Sport Development Fund in July 2009. The NPFAI had sanctioned Rs 192.00 lacs to the NDMC for development of 78 playfields in the NDMC area. This project has been completed

(B): Sports Excellence:

(i) The Scheme of Assistance to National Sports Federations (NSFs)

Provides financial assistance to NSFs for holding National Championships; participation of national teams in international competitions; organization of international tournaments; holding national coaching camps, including the engagement of foreign coaches; and equipment support. Budgetary provision made for the Scheme of Assistance to NSFs during 2016-17 is Rs. 165 crore.

(ii) National Sports Development Fund (NSDF) was instituted by the Central Government in 1998 with a view to mobilizing resources from non-governmental sources, including the private/corporate sector and non-resident Indians, with Government proving matching grant, for the promotion of sports and games in the country. In order to make contributions to the Fund attractive, 100% exemption from income tax is available on all contributions. The total money available in the Fund, as on 31.03.2016, was Rs. 125.00 crore.

iii) Scheme of Human Resources Development in Sports:

The Ministry of Youth Affairs & Sport revised the existing Scheme relating to Talent Search & Training and renamed it as Scheme of Human Resources Development in Sports in 2013-14. Under the revised scheme, the Government intends to focus on developing human resources in sports science and sport medicine for the overall development of sports and games in the country. Budgetary allocation of Rs. 4.00 crore has been made for scheme of human resource Development in Sport for 2016-17.

(C) Sports Incentives:

i) Rajiv Gandi Khel Ratna Award :

The Scheme was launched in the year 1991-92 Under this scheme, a medallion along with a cash award of Rs.7.5 lakh is given to the most spectacular and outstanding sportsperson of the year. Normally only one award is given every year. 28 sportspersons have been given this award since the inception of the scheme.

ii) Arjuna Award : was instituted in 1961 and is given to players who have exhibited good performance consistently for the previous three years at the international level and have

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shown qualities of leadership, sportsmanship and a sense of discipline. The awardees are given a statuette, a scroll of honor, ceremonial dress and award money of Rs. 5. 00 lakh. Normally, up to 15 awards can be given each year. 799 outstanding sportspersons from various disciplines have been conferred Arjuna Awards so far.

iii) **Dhyan Chand Award for Life Time Achievements in Sport and Games :** was instituted in the year 2002. This award is given to honor those sportspersons who have contributed to sports by their performance and continue to contribute to promotion of sports even after their retirement from active sporting career. The awardees are given a statuette, a scroll of honor, ceremonial dress and award money of Rs. 5.00 lakh. 45 sportspersons have been given this award since inception.

iv) **Dronacharya Award :** was instituted in 1985. This award honors eminent coaches who have assisted national athletes and teams in achieving outstanding results in international competitions. The awardees are given a statuette, scroll, ceremonial dress and a cash prize of Rs.5.00 lakh. Normally, up to 5 awards can be given each year. 88 Coaches have been given this award since its institution.

V) **Rashtriya Khel Protsahan Puruskar :** With a view to recognizing the contribution made to sports development by entities other than Sportspersons and coaches, Government has instituted from 2009 a new award entitled Rashtriya Khel Protsahan Puruskar, which has four categories, namely, community sports development,

vi) **Scheme of Special Awards to Winners in International sports events and their Coaches:** was introduced in the year 1986 to encourage and motivate outstanding sportspersons for higher achievements and to attract the younger generation to take up sports as a career. The Ministry has revised the Scheme on 29.01.2015, in which amount of cash award to medal winning sportspersons has been substantially enhanced and the discriminatory clause of the scheme under which medal winners in closed events like Para-Olympics, Special Olympics Championships for handicapped, Deaf, Dumb, Blind etc. was done away with and these events were included in the revised scheme.

vii) **Scheme of Pension to Meritorious sportspersons:**

This scheme was launched in the year 1994. Under this scheme, those sportspersons, who are Indian citizens and have won gold, silver and bronze medals in Olympic Games, World Cup/World Championships, Asian Games, Commonwealth Games and Paralympic games; attained the age of 30 years; and have retired from active sports career are eligible for life pension

Viii) **MAKA Trophy:** With a view to promoting competitive sports in colleges and universities, Maulana Abul Kalam Azad (MAKA) Trophy with a cash award of Rs.10 lakh is given to the University standing first in inter-university sports tournaments. The Universities standing second and third are given cash award of Rs. 5 Lakh and Rs. 3 lakh each, respectively.

Ix) **National Welfare Fund for sportspersons** was set up in March, 1982 with a view to assisting outstanding sportspersons of the past, living in indigent circumstances, who had brought glory to the country in sports. The scheme was last reviewed and revised in July 2009. Scheme of National Welfare Fund of Sportspersons has been reviewed again and has been revised extensively in May 2016. Under the revised Scheme, amount of annual income

Pune District Education Association's

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"Sports for Sustainable Development in India"

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Certificate

This is to certify that Prof. / Dr. Yogesh Pawar

of Mamasaheb Mohol college, Pune-38

participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Study of obesity in Women's

Yogesh

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Study of Obesity in Women's

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Obesity is increasing at an alarming rate throughout the world and has become a global prob
The World Health Organization has declared overweight as one of the top 10 health risks i
world and one of the top five in developed nations. According to recent estimates, there are
than one billion overweight people worldwide, and some 250 million of these are estimated
clinically obese, equivalent to seven percent of the adult population. Once considered a pro
related to affluence, obesity is now fast growing in many developing countries and in
neighborhoods of the developed countries.
Even in countries like India, which are typically known for high prevalence of under nutriti
significant proportion of overweight and obese people now coexist with those who are
nourished (Popkin, 2002). Comparison of two major studies conducted by National family
survey in 1998-1999 and in 2005-2006 shows that prevalence of obesity among Indian wom
elevated from 10.6% to 12.6% (increased by 24.52%). The prevalence is more profound
women of age between 40-49 years (23.7%), residing in cities (23.5%), having high qualifi
(23.8%). Although this number seems small in the international perspective, it is significant b
of the sheer size of population in India. In India the increased levels of obesity is pri
associated with the transition from rural to urban lifestyle. However, it is evident th
phenomenon is more profound among the urban populations in comparison to the rural ones.
A living person's exact body fat percentage generally cannot be determined, but there are
techniques which can be used to estimate it to a good degree of accuracy.

Near-infrared interactance

A beam of infra-red light is transmitted into the biceps. The light is reflected from the und
muscle and absorbed by the fat. The method is safe, noninvasive, rapid and easy to use.[4]

Dual energy X-ray absorptiometry

Dual energy X-ray absorptiometry, or DXA (formerly DEXA), is a newer method for est
body fat percentage, and is a very efficient and advantageous method of determinin
composition and bone mineral density.

Body average density measurement

The most accurate method of estimating body fat percentage was to measure that person's
density (total mass divided by total volume) and apply a formula to convert that to
percentage.[6]

Bioelectrical impedance analysis

The bioelectrical impedance analysis (BIA) method is a more affordable but less accurat
estimate body fat percentage. The general principle behind BIA: two conductors are atta
person's body and a small electric current is sent through the body. The resistance bet
conductors will provide a measure of body fat, since the resistance to electricity varies
adipose, muscular and skeletal tissue. Also reducing the reliability of this method is the
between models of the BIA devices: for instance when comparing outputs from a Tanita s

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Omron Body Logic handheld device the Tanita scale overestimated the percentage body fat in college-aged men by 40% and in college-aged women by 55%.[9]

Anthropometric methods

There exist various anthropometric methods for estimating body fat. The term anthropometric refers to measurements made of various parameters of the human body, such as circumferences of various body parts or thicknesses of skinfolds. Most of these methods are based on a statistical model. Some measurements are selected, and are applied to a population sample. For each individual in the sample, the method's measurements are recorded, and that individual's body density is also recorded, being determined by, for instance, under-water weighing, in combination with a multi-compartment body density model. From this data, a formula relating the body measurements to density is developed

Skinfold methods

The skinfold estimation methods are based on a skinfold test, also known as a pinch test, whereby a pinch of skin is precisely measured by calipers at several standardized points on the body to determine the subcutaneous fat layer thickness. These measurements are converted to an estimated body fat percentage by an equation.

Ultrasound

Ultrasound is used extensively to measure tissue structure and has proven to be an accurate technique to measure subcutaneous fat thickness. By making thickness measurements at multiple sites on the body you can calculate the estimated body fat percentage. Ultrasound techniques can also be used to directly measure muscle thickness and quantify intramuscular fat.

Height and circumference methods

There also exist formulas for estimating body fat percentage from an individual's weight and girth measurements.

1. **BMI**
2. Body fat can be estimated from your body mass index (BMI). The BMI is calculated from an individual's weight divided by the square of the height if expressed in kg/m^2, multiplied by 703 if expressed in lbs/in^2.

Need for study

Obesity has emerged almost unnoticed in our society. Problems of overweight and obesity are caused by a chronic imbalance between energy intake and actual energy needs of the body. The metabolic factors concerned include a low metabolic rate, low insulin sensitivity and high respiratory quotient. In addition, various socio-demographic factors such as smoking habits, dietary habits, socioeconomic situation, education level, use of contraceptives, postpartum status and rapid weight gain in childhood, have been recognized as modifying factors. While the problem of under-nutrition still exists in many parts of India, the additional burden of obesity due to increasing sedentary lifestyle, junk food habits in some urban and economically sound areas is really alarming. Regardless of its cause, obesity may be associated with a variety of risks. Obesity causes or exacerbates many health problems, both independently and in association with other diseases. It is related to the risk for developing non-insulin dependent diabetes mellitus, hypertension, and cardiovascular disease. It also creates an enormous psychological burden. Thus, obesity is associated with a significant increase in morbidity and mortality. There are numerous studies worldwide that have dealt with obesity and its consequences. However, in the Indian context, very

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limited information is available. Considering the economic burden and importance of overweight and obesity, documenting the patterns and trends in overweight and obesity in different Indian populations are of paramount importance. However, it is noteworthy to point out that, to date, there is no reliable estimate of the frequency of overweight and obesity among adult House working women in Pune city. Hence, the investigator conducted a survey to understand the obesity situation of adult House working women in Pune city.

Area and Population: The investigation was carried out during the year 2009-2010. The data were collected from adult House working women aged between 18 to 32 years in Pune city residing within the Mukundnagar, Parvati and Ghorpadi Peth area. The method used to measure the amount of fat in the body of the subjects. The purposive sampling method was used to select the sample for the study. Total 90 subjects were investigated during the study. 30 adult House working women from each selected area were tested using skinfold measurement method.

The measurements were taken at three places on the subjects body, at tricep, suprailac and abdominal region with the help of harpender caliper. The values were then compared using the norms available in total fitness book. The subjects were further divided into three age categories 18 – 22, 23 – 27, and 28 – 32 .years. After the data was collected it was processed through series of statistical analysis.

Analysis:

Table 1.

Descriptive statistic of subject

Age Group	N	Mean	Standard Deviation	Minimum	Maximum
18 to 22 years	27	28.52	6.59	17.90	40.50
23 to 27 years	31	32.90	5.96	18.10	41.70
28 to 32 years	32	42	13.90	32.90	57.50

Table 2.

Classification of subjects' according to body fat content.

Category of body fat	N (18 to 22 yr)	Percentage (18 to 22 yr)	N (23 to 27 yr)	Percentage (23 to 27 yr)	N (28 to 32 yr)	Percentage (28 to 32 yr)
Low	0	0%	0	0%	0	0%
Optimal	9	33%	3	10%	4	13%
Moderate	5	19%	4	13%	9	28%
High	6	22%	12	39%	9	28%
Very High	7	26%	12	39%	10	31%

Table 3

Descriptive statistic of subject between 18 to 32 years

N	Mean	Standard Deviation	Minimum	Maximum
90	31.23	6.44	17.90	57.50

Table 4.

Classification of subjects' aged between 18 to 32 years according to body fat content.

Category	N	Percentage
Low Body Fat	0	0%
Optimal Range of Body Fat	16	18%
Moderate Range of Body Fat	18	20%
High Body Fat	27	30%

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Very High Body Fat	**29**	**32%**

Result and conclusion: Of the 90 subjects tested 18% of them were in the range of optimal body fat. 20% of the women were in moderate range. 30% of the women were in the high fat range and the remaining 32% of the women were in the very high body fat category. When the total subjects were divided into 3 age groups it was found that in the 18 to 22 yrs group 50 % of then fall in the optimal and moderate body fat range and remaining in the high and very high range. The number of subject in the risk zone for the 23 to 27 age group and 28 to 32 years is 60% and above which is alarming. The increased levels of obesity can primarily associated with the transition from rural to urban lifestyle.

Recommendations:

- It emerges from the study that we should not put the issue of obesity on the back burner.
- It was found that there is a significant increase in overweight and obesity among women in Pune.
- There is an urgent need to recognize the gravity of the problem of obesity and therefore incorporate it in the general health system.
- Further elaborate should be undertaken to find the reasons tin the increase in body fat and obesity.
- A healthy lifestyle should be promoted to tackle this emerging health threat.

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INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES
SPECIAL ISSUE ON ADVANCEMENT IN FIELD OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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A Study on Artificial Neural network, an evolutionary technique in Data mining

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Abstract:-*An artificial neural network isan algorithm which is a wide branch of data mining. Both supervised and unsupervised learning applications are applied on neural network. It has a base of human brain or neural structure. This artificial neurons helps to form the decision support system. In this field, machine experiences learning process like human and generatessignalon the basis of previous as well as current data.The collection of such artificial neurons which are connected to each other is called artificial neural network. Neural network is a complex adaptive system that can change its internal structure on the basis of information flowing through it. Every neuron of this network shows an intelligent behavior. These neurons of information works in the field of statistics, genetic engineering, pattern recognition, machine learning, robotics etc.In machine learning or in robotics decision making process is depending on learning process of ANN. So, ANN is a parallel distributed processing algorithm.This paper illustrates how these neurons or neural network works and how does it help to mine last granule of data through variety ofits application. Besides that, it mentions various other issues and aspects of neural network.*

Keywords:-neuron,neural,granule, network,mining, hypothesis,ANN,perceptron,weights

Introduction:-A millions of data are available in this world. Since we are living in the information age, the need of converting data into information is necessary. This can be possible with data mining where this data is analyzed. Data mining provides various algorithms for such analysis. This millions of data are stored in data warehouse. Thus data warehouse is a repository system where such data are maintained separately from an organization's operational databases.So,Data mining is the process of discovering patterns and knowledge from large amounts of data.This neural network algorithm of data mining helps to match or compare many patterns of data to each other on the basis of which it creates computationalmodel.Neural network acquires knowledge through learning and knowledge of this network stores within inter-neuron connection strengths called synaptic weights. This model further leads to prediction. With the help of such model we could mine as much data as we can.

Content:-

Neural Network

"*Neural network is the study of such adaptable nodes which has created from many learning tasks, stores as an knowledge and make it available for future reference.*" Here every task is a process of creating neuron or node. Each task has its own data. As the human brain is an intelligent enough to investigate from the given data and could able to derive hypothesis, neural network works exactly the same. The neural network is an intelligent model which has large number interconnected processing units that computes many complex patterns and derive meaningful results.

This algorithm classifies the given multi-dimensional data, applies conditions on to it for similarities or does statistical analysis which leads to prediction. In many cases an NN (neural network)is an adaptive system that changes its structure based on external or internal information that flows through the network during the learning phase. Thus, artificial neural network involves in classification, clustering, pattern recognition for learning process. An artificial neuron is called perceptron. These neurons are connected to each other. Network having input node called receivers and output connection called transmitter. Connection weights acts as a synaptic junctions. Learning occurs through changes in the value of connection weights.

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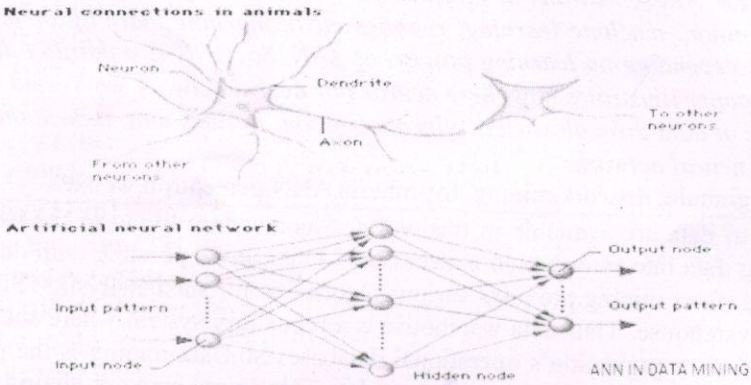
Properties Artificial Neural Network:-

- Information is stored in connections hence no memory required.
- It is a parallel processing.
- Connectivity is a must among neurons.
- Having learning and generalization ability.
- Robust in nature.

The generalization ability of neural network is based on:

- How the training data is represented to the network.
- The architecture of a network.
- The complexity of a given problem.



Working mechanism of neurons in animal :-

In the animal, all the neurons with its dendrite are connected to each other and form tree like a structure.They accept input from the surrounding and pass it to other neurons where axon works like a transmission line. Here, every neuron plays a vital role in recognizing the pattern of given input data and hence data is keep on passing from one neuron to the other. Once the pattern is matched on the basis of certain hypothesis then prediction is made. For this pattern matching neuron uses previous data or experience as a reference.

Working mechanism of neurons in ANN:-

In a same way ANN(Artificial Neural Network) works. An artificial neuron is a device which has many inputs and one output. All the nodes of neurons accept the data from the surrounding and generates an input signal. This input signals is then passes to other nodes for pattern matching. This pattern matching can be done on the basis of previous data and derives hypothesis. Once the pattern is recognized then output signal is generated by a output node decision is made. Through ANN machine learns everything like human. Thus ANN is a demanding field in data mining.Generally every neural network consists following threelayers:

1) **Input layer**:-The input unit of this layer accepts all raw information and feed into the network. It receives an input valuesof each observation. It represents the pattern to the network and pass it to the hidden layer.
2) **Hidden layer**:-In this layer actual processing is done through weighted connectivity of neurons. The values entering the hidden nodes multiplied by weights. The total weighted inputs are then added to produce a single number.

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3) **Output layer**:-The node of this layer accepts information from hidden layer and generates response variable.

Data sets in ANN:-

1) Training set:- A set of examples need to be selected in such a way that, it should fit the parameters of network. One complete cycle has to be implemented over a network.
2) Validation set:- The examples which will be selected for this set can able to alter the architecture of network. For example to choose the number of hidden units in a neural network.
3) Test set:- Here, the set of examples should be chosen in such a way that it can able to assess the performance of network by giving and also need to check how network successfully gives a prediction through input.

Types of artificial neural network:-

1) *FEED FORWARD NETWORK*:-Here input layer of source nodes assigns into an output layer of neurons but not vice-versa is known as single feed-forward or acyclic network. That means forwarding the data from source to destination.
2) *MULTILAYER FEED FORWARD NETWORK*:-This network has one or more layers whose computation nodes are called hidden neurons. The main function of this hidden neuron is to form an interaction between input node and output node. In short, it works as a mediator. The input node passes the signal to the hidden neurons of 1st layer. The output signal of 2nd layer works as a input signal of 3rd and so on.
3) *RECURRENT NETWORK*:- In this network the output of neuron is fed back to its own input. In a repetitive manner this process works due to which dynamic behavior occurs. It has a cyclic path.

Other types of Neural Network:-

1) **Modular Neural Network**—It is the combined structure of different types of the neural network like multilayer perceptron, Hopfield network, recurrent neural network etc which are included as a single module into the network to perform independent task of whole complete neural networks.
2) **Physical Neural Network**—In this type of artificial neural network, electrically adjustable resistance material is used to emulate the function of synapse instead of software simulations performed in the neural network.

Training issues of ANN:-

- Ensures prime training.
- Learning parameters should be adequate.
- Data preparation is necessary.

Training approach of ANN:-

- **Supervised training**:- In this approach, both inputs and outputs are provided where network whatever errors are generated that are sending back to the system or network by which flow of information can be controlled.The set of data, which enables the learning, is called the "training set."During the learning of a network, the same set of data is processed many times. In supervised learning set of data needs to be hold back to test the system or network. If a network can't able to solve the problem then both input and output can be reviewed. Through this approach both input and output can easily be memorized.

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- **Unsupervised training**:-In this approach, inputs are provided but desire output are not provided. The system itself decides what to do with given inputs. The system should adapt the methods of processing an input. Network has to decide the complete function of every element within the system.
- **Reinforcement training**:-In this type of learning we need to strengthen the work of system.The network receives some feedback from the environment. After receiving the feedback, the network performs modifications of the weights to get better information in future. Thus, this type of approach is based on feedback and to a certain extent it is similar to supervised learning.

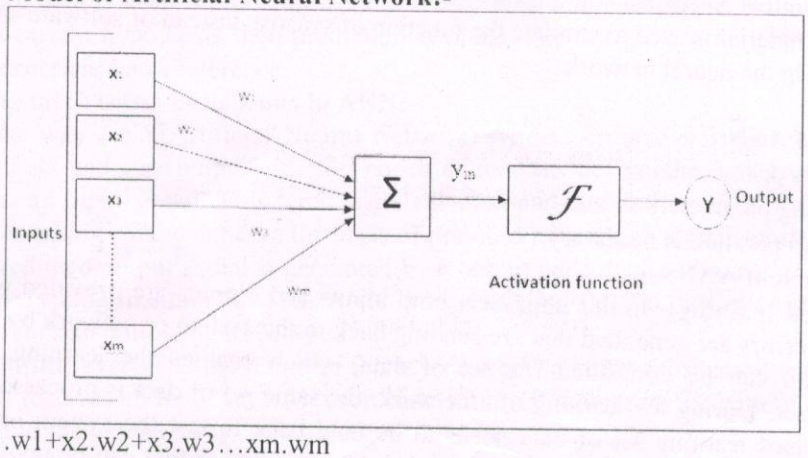
Objectives of network training:-

- Establish maximum acceptable error rate.
- Train the network using validation testing
- Need to validate the trained network against the separate training data.

Analysis after the training :-

- Examine and visualize the constructed neural network model.
- Check the sensitivity of input attributes.
- Develop some analytical techniques.
- Remove unwanted attributes.

- **Examine and visualize the constructed neural network model:-** We could use some graphical tools to display the response or output from selected input variables.
- **Network analysis:-.** Need to check the sensitivity of input attributes of hidden nodes as well. Then manual analysis of weight values is to be done through graphical tools. Convert an equation to a executable code.
- **Develop some analytical techniques:-** Develop few analytical techniques for analyzing various factors or aspects of network. Then the weight analysis of a network is to be done.
- **Remove unwanted attributes:-**Remove unwanted attributes from network which excess the load of network and it may interfere in the process of computation.
- **Model of Artificial Neural Network:-**



yin=x1.w1+x2.w2+x3.w3…xm.wm

i.e., input yin=∑mixi.wi

output can be

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Y=F(yin)

The function of neuron is to sum the given inputs and produce the output of given sum which is greater than threshold value. ANN multiplies each component of input by the weight of its connection. Then it sums all the weighted inputs and deducts threshold value, afterwards ANN transforms total weighted input into the output using activation function.

Let us see the steps that perceptron follows:-

- Receive inputs
- Weight inputs
- Sum inputs
- Generate output

How does neural network works?

- ANN receives an input from the external world in the form of pattern and image in vector form.
- These inputs are mathematically labeled by the notation X(n) for n number of inputs.
- Each input is then multiplied by corresponding weights.
- Weights are nothing but information that is used by neural network to solve the problem.
- The weighted inputs is then added inside the neuron.
- In case the weighted sum is zero then bias is added to make the output non-zero.
- The sum corresponds to any numerical value ranging from 0 to infinity.
- In order to get desire value, threshold value is set up. For this sum is pass through activation function.
- The activation function is set of the transfer function which is used to get desire output.

Learning rule of ANN:-

- Hebb's rule:-The basic rule is that if a neuron receives an input from another neuron and if both are highly active , the weight between the two neurons should be increased.
- Hopefield rule:-If the desired output and the input are both active or both inactive, then there is a change in weight connection between two neurons, it has to be increment otherwise it has to be decrement.
- Delta rule:-This rule suggests that the change in the input connections of two neurons to minimize the difference between the desired output value and the actual output of a processing element.
- Competitive learning rule:-The neurons that are having the largest output is declared the winner. So, now winner can adjust its weight connection.

The learning process of ANN:-The memorization of patterns can be categorized into two parts:

- Associative mapping:- Here, network learns to produce a particular pattern of on a given set of input units. This enables the network to complete the pattern which could be similar to previously learned data. In this process network learns to store the relationship among patterns.
- Regularity detection:- In this process neurons learns to respond to particular properties of input pattern. The response of each unit has a particular unit.

Transfer function:-The behavior of ANN depends on the weight connection of neurons and the input-output function i.e transfer function. This transfer function is of 3 types.

- Linear unit:-The output movement is proportional to the total weighted output.
- Threshold unit:- The output is set at two levels, depending on whether the total input is greater than or less than some threshold value.

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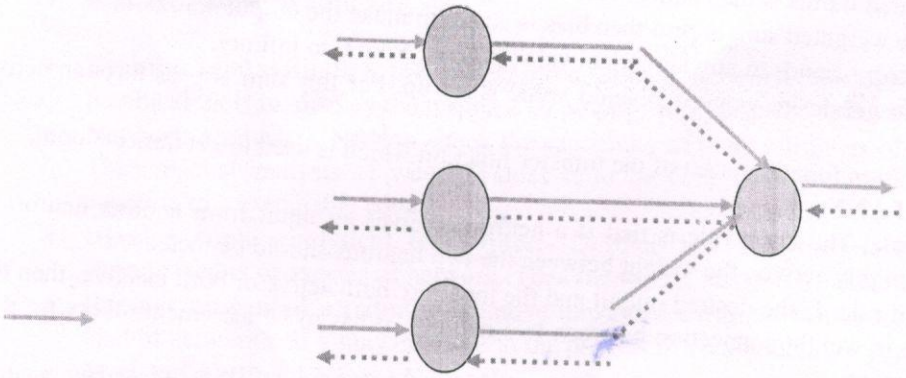
- Sigmoid unit:- The output changes continuously but not exactly as input changes.

Back-propagation algorithm:-This algorithm of ANN sends back the error through the network to correct all weights.Back-propagation algorithm consists of the repeated application of the following two passes:

- **Forward pass**: in this step the network is activated on one input and the error of (each neuron of) the output layer is calculated.
- **Backward pass**: in this step the network error is used for updating the weights. Starting at the output layer, the error is propagated backwards through the network, layer by layer.

Calculation of error is based on the difference between target and actual output.

$$E=\frac{1}{2}\sum_j (t_j - o_j)^2$$



Network activation forward step
Error propagation backward step

Compute $\frac{\partial E}{\partial w_{ij}}$ for all w_{ij}

w_{ij}-weight from node I to node j O_j-Output of node i.e $=f(x_j=1/(1+e^{-x}j)$
X_j- total weighted input of node E= Error for one pattern over all output nodes
n

$$=\sum_{i=0} w_{ij}O_i$$

Design issues of ANN:-

- Architecture of network
- Structure of neurons
- Learning rules

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Let us discuss the above issues one by one

Architecture of network:-First of all how many nodes are required in the network ?that has to be decided.

- Then determine the number of network weights.
- Afterwards layer of a network has to be decided.
- Besides that, How many nodes per layer is also important.
- Then the method of data processing.
- Ensures the connectivity of all neurons in the network.
- Then the concept of hypothesis model needs to be seen.

Structure of neurons:-

- How an input is integrated ?
- Then the choice of activation(transfer) function is important. Whether it is linear, sigmoid etc.

Learning rules:-

- Selecting learning rules.
- Then weight space search technique.

Data preparation for ANN:-

- Determine appropriate and adequate inputs.
- Combine data into working databases.
- Estimate the missing values.
- Remove exceptions.
- Determine the probabilities of categories.
- We need to select examples from random selecting process.
- Eliminate redundant attributes.
- Combine all attributes.
- Group the discrete values of attributes.

Guidelines for using ANN:-

- Select the best possible method for both training as well as for learning.
- Check the hidden units first.
- Select proper input variables.
- Decides the method of processing.
- Determine validation technique.

Advantages and disadvantages of neural network:-

1) **Advantages**:-

- Neural network works well while dealing with linear and non-linear data.
- Even if few units fail in the network it responds to the given data.
- Neural network works from analyzed data and does not need reprogramming.

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2) **Disadvantages**:-

- Neural network requires diverse set of training data for learning.
- It requires large space of computer memory.
- Without training it cannot able to compute the data.

Neural network Vs Conventional computer

Parameter	Neural network	Conventional computer
Approach	It always takes a different approach for problem solvingi.e learning approach	It always accepts set of instructions from useri.e algorithmic approach
Working	It works like a human brain	It follows specific steps to solve the problem
Learning	It learns with example. Does not need to be programmed	It needs to be programmed.
prediction	Operations are unpredictable.	Operations are predictable.

Framework of ANN:-

- Assign random weights to all the nodes to apply the algorithm.
- Find out the activation rate of hidden nodes besides activation rate of input nodes and output node.
- Monitor the error rate and restructure the connectivity of all nodes.
- Readjust the weight between input node and hidden node.
- Repeat the process until objective is met.
- Check the final score of output node.

Application area of ANN:-

- Pattern recognition
- Speech recognition
- Image compression
- Handwriting recognition
- Stock exchange prediction
- Whether forecasting
- Medicines

Now, we will discuss few applications of neural network

1) **Handwriting recognition**:-The pattern of handwritten character is input. For such program user need to train the network before it applies to actual input variables. The two common application handwriting recognition they are:
    - Optical character recognition for data entry
    - Validation of signatures over bank cheques

The perceptron of first layer accepts an input where each perceptron is connected to the other Perceptron of the next layer. These perceptron of input layer passes the data to next(hidden) layer. It is then processed in this layer. After processing it is then forward to the output layer which generates desire output with its output node.

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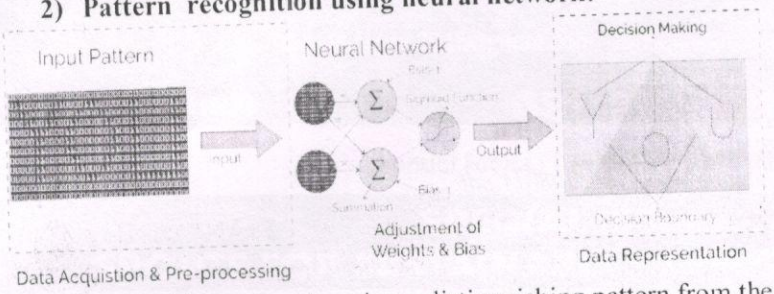
2) Pattern recognition using neural network:-



Pattern recognition means learning a distinguishing pattern from the given environment and make the categories accordingly and take the decision. Some of the examples of pattern recognition are: Fingerprint image, handwritten word, human face etc. Pattern recognition consists following functions:

1) Supervised classification
2) Unsupervised classification

There are three aspects related to pattern recognition

- Data acquisition and preprocessing
- Data representation
- Decision making

Following are the approaches for pattern recognition

- Template matching
- Statistical
- Syntactic matching
- Artificial neural network

3) **Neural network in medicine:-**Neural network is ideal for recognizing disease using scans because it does not need specific algorithm. Neural network learns with the help of example.

4) **Neural network in image compression**:-Neural network can do compression and decompression of data. The network can reduce eight bits of data to three bits and vice-versa. Thus, it can restructure an image.
5) **Neural network in signal processing**:- This network is capable enough to do the filtering of electronic noise. It can differentiate pulses.

Conclusion:- Artificial Neural Network is a connectionist system which is inspired by biological neural system that can able to learn or recognize any complex pattern of input from the world and gives output i.e decision like human.The neurons of network storenumerous information in the form of weights as human brain stores. Due to ANN classification, clustering and regression analysis of data became easy. Even if any error is generated this model sends it back to network through its back – propagation algorithm as human corrects his behavior through the mistakes. This model can able to derive correct hypothesis and on the basis of which it gives accurate prediction.ANN is capable enough to mine last particle of data. Thus, Neural network is becoming a valuable tool in the field of

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neuroscientific research. Hence this model works well in Artificial Intelligence where it reduces the gap between man and machine.

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Dshilvant

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Co-ordinator

Dr. M.M. Shikare
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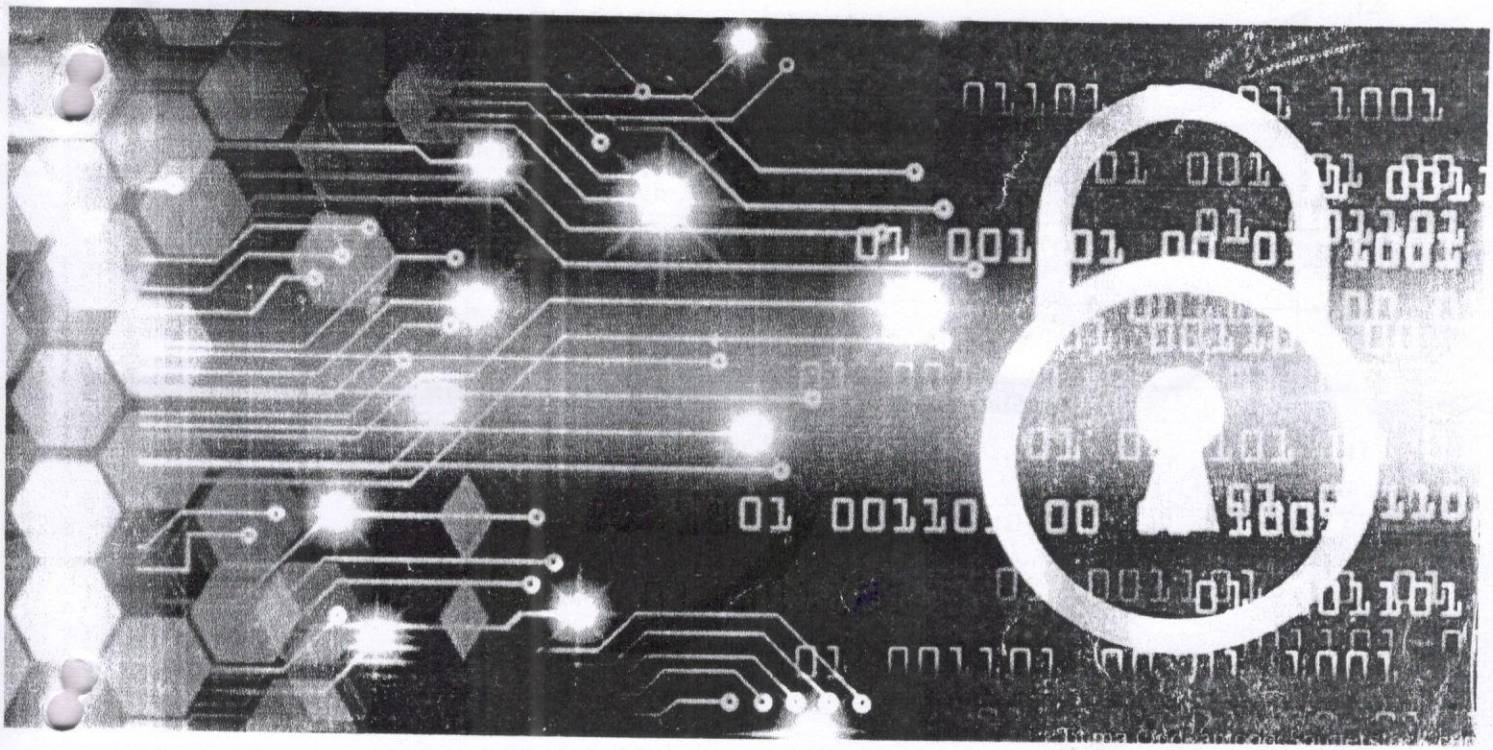

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RECENT TRENDS IN CLOUD SECURITY AND VIRTUALIZATION

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Abstract:
The current cloud infrastructure demands variousinnovativesecurity strategies. These strategies should be implemented by considering all possible cyber attacks but at the same time it should be properly analyzed. This can be possible with virtualization.The virtualization technology supportsand limits security capabilities in order to secure wide area environment such as the cloud.Thus, there is a needtoimprovisethetraditional virtualization architecture.

Keywords:- *Cloud,attack,IOT,virtualization,Virtual Machine,DoS,SSH,NIST,LDAP*

Introduction

Cloud computing is a network-based environment that focuses on sharing computations and resources. Actually, cloud computing is defined as a pool of virtualized computer resources: Thus virtualization is the key to cloud computing, since it is the enabling technology which allows the creation of an intelligent abstraction layer which hides the complexity of underlying hardware or software. A cloud computing platform supports, self-recovering, highly scalable programming models that allows workloads to recover from many expected hardware and software failures.

Current and emerging cyber attack:-

1) Destructive DoS, IOT attacks will rise. Cybercriminals will find it easy to extend their reach because there are so many IoT devices containing outdated code based on poorly-maintained operating systems and applications with well-known vulnerabilities.
2) Rising threats against virtualized and cloud systems. Attacks against physical hardware will increase which leads the possibility of exploiting virtualized cloud systems. Attackers might misuse the host or other guests running on a shared host, attack privilege models, and perhaps access others 'data..

Security predictions:-

- By 2020, investment will rise in the field of artificial intelligence/machine learning-based tools that reduces IT failures.
- By 2018, most of the organizations will implement a cloud visibility and control tool that leads to fewer security failures.

Working on Global cyber security front and privacy landscape:-

- Developing new security policies and focusing new risks..
- Need to tighten, monitor and control information flow.
- More focus on cloud infrastructure and its security techniques.

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Six emerging security technologies:-

- AI, Machine, and Deep Learning:-
- Cloud-Specific Applications and Solutions:-
- Endpoint Hardware Authentication:-
- Emerging Security Technologies for Preventing Data Loss:-
- User Behavior Analytics (UBA):-
- Blockchain :-

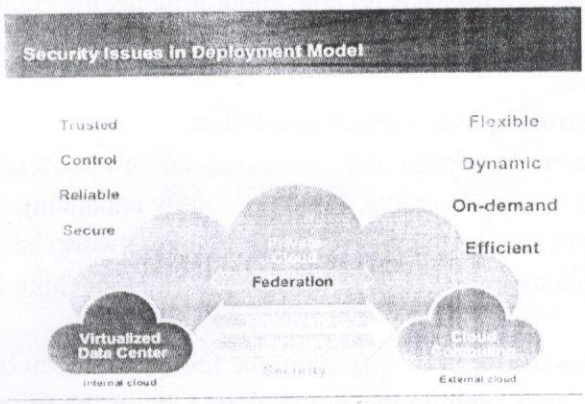
The following section will now focus on security of cloud infrastructure with virtualization.

Cloud computing

Cloud computing is "A model for enabling universal, convenient, on-demand network access to a shared group of configurable computing resources like networks, servers, storage, applications, and services etc. that can be rapidly running and released with minimal management effort or service provider interaction."

NIST (National Institute of Standard and Technology)identifies three service models of cloud:

- **Infrastructure as a Service (IaaS):** "The capability ofmodel is to provide to the computing resources like processing, storage, networks, and other fundamental servicesthrough which the consumer is able to deploy and run arbitrary software. This can include operating systems and applications." IaaS typically provides you computers, which may be virtual, and where we can choose an operating system to run on it and do what we want with them. A popular example of IaaS is Amazon Web Services (AWS), including its Amazon Elastic Compute Cloud (EC2) that provides scalable virtual private servers using Xen. Other examples include Windows Azure, Google Compute Engine, and Rackspace Open Cloud. OpenStack is open source software that lets you implement your own IaaS.
- **Platform as a Service (PaaS)**: "This type of model has capability to provide various platforms tothe consumer which could deploy onto the cloud infrastructure. The consumer does not have to manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but can control over the deployed applications and possibly configurationor settings for the application-hosting environment." Examples include Google App Engine, Red Hat OpenShift (built on OpenShift Origin), Heroku, and Windows Azure Cloud Services. Amazon Web Services (AWS) also provides support as a PaaS. OpenShift Origin is open source software that lets you implement your own PaaS.
- **Software as a Service (SaaS):** "Thistype of model provides the numerous applications to the consumer which can run on cloud infrastructure." Here you are just using (via a network) an application that can very rapidly scale. Examples include SalesForce and Google docs.



Possible attacks on cloud computing can be classified into:-

1. **Resource attacks:**
   These kinds of attacks include manipulating the available resources by mounting a large-scale attack on collection of internet-connecteddevices. These kinds of attacks target either cloud providers or service providers.
2. **Data attacks:**
   These kinds of attacks include unauthenticated modificationsin sensitive data at nodes, or performing configuration changes to enable a sniffing attack via a specific device etc. These attacks are focused on cloud providers, service providers, and also on service users.
3. **Denial of Service attacks:**
   The creation of a new virtual machine is not a difficult task, and thus, creating reprobate VMs and allocating huge spaces for them can lead to a Denial of Service attack. These attacks can be done on service providers when they opt to create a new VM on the cloud. This kind of attack is generally called virtual machine rambling.
4. **Backdoor:**
   Another threat on a virtual environment empowered by cloud computing is the use of backdoor VMs that leak sensitive information and can destroy data privacy.

Virtualization

In computing, **virtualization** refers to the act of creating a virtual (rather than actual) version of something, including virtual computer hardware platforms, storage devices, and computer network resources.

Virtual security in cloud computing

The virtual machines that provides agility, flexibility, and scalability to the cloud resources by allowing the vendors to copy, move, and manipulate their VMs at will. The term *virtual machine* essentially describes sharing the resources of one single physical computer into various computers within itself. *VMware*and *virtual box* are very commonly used virtual systems on desktops. Cloud computing effectively stands for many computers pretending to be one computing environment. Obviously, cloud computing can have many virtualized systems to maximize resources.

Now a days more and more organizations implement the "Cloud Infrastructure" , malicious hackers keep finding ways to get their hands on valuable information by

manipulating precautionary measures and breaking the security layers (if any) of cloud environments. One issue is that the cloud-computing scenario is not as transparent as it seems. The service user has no clue about how his information is processed and stored. In addition, the service user cannot directly control the flow of data/information storage and processing.

Traffic monitoring over virtual machines:-

Traffic between the virtual machines needs to be monitored closely by using at least a few standard monitoring tools.After thoroughly enhancing physical security, it's time to check security on the inside. A gateway of network has to be well-configured and should be able to apply security when any virtual machine is reconfigured, migrated, or added.

The following section tries to explain the method that can be used to check the integrity of virtual systems running inside the cloud.One of the primary focuses of this integrity is to check the unified integration of existing virtual systems like VMware and virtual box. This would lead to file integrity checking and increased protection against data losses within VMs.

Data on cloud infrastructure:-

Data on a cloud should be encrypted with suitable encryption and data-protection algorithms. Using these algorithms, we can check the integrity of the user profile and system profile. To enhance the security aspect even more, after a particular environment is used, it is best to reload the system and destroy all the residual data. By using incoming IP addresses we can determinethescope on Windows-based machines. and using SSH configuration settings on Linux machines, will help maintain a secure one-to-one connection.

Light weight Directory Access Protocol (LDAP) and Cloud Computing:

LDAP is an extension to DAP (directory access protocol). As the name suggests, it gives small pieces of code that helps by locating organizations, individuals, and other files or resources over the network. Automation of manual tasks in a cloud environment is done using a concept known as *virtual system patterns*. These virtual system patterns enable fast and repeatable use of systems. Having dedicated LDAP servers is not typically necessary, but LDAP services have to be considered when designing an efficient virtual system pattern.

LDAP servers to cloud management would lead a buffering of existing security policies and cloud infrastructure. This also allows users to remotely manage and operate within the infrastructure.

An architecture for Securing Virtualization in Cloud Environment:

The system assumes the attacker is located in any form within the guest VM. This system is also asynchronous in nature and therefore is easier to hide from an attacker. Asynchronicity prevents attacker from detecting the system. The model believes that the host system is trustable. When a guest system is placed in the network, it's vulnerable to various kinds of attacks like, viruses, code injections (in terms of web applications), and buffer overflows. Other lesser-known attacks on clouds include DoS. keystroke analysis, and estimating traffic rates.

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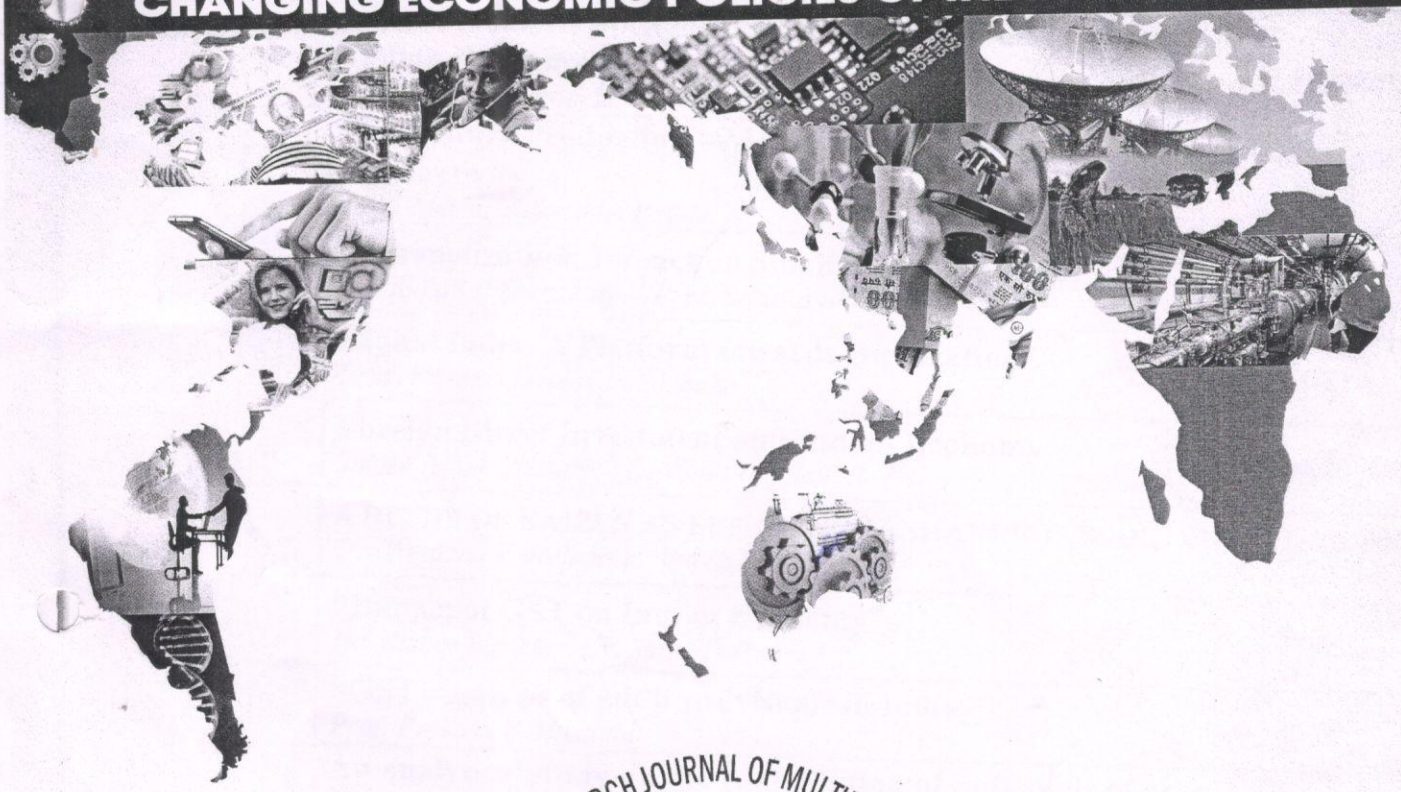

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MAKE IN INDIA

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Abstract

Today make in India is one of the business friendly reforms invited by our Hon. Prime Minister Narendra Modi. Applying Say's law 'supply creates its own demand. India's unique combination of democracy demography and demand makes it possible to harness the top fruits of globalization. The main aim of this project show- in a pure classical economics after liberalization ,privatization and globalization (LPG). In the area of health and tourism sector and the food processing industries the Govt. can attract FDL In the educational sector there is scope for increasing number of foreign students earn foreign exchange. Make in India ,since its very appearance on the political and economic front has grasped the attention of policy makes and thinkers all around the world in general and of India in particular for a successful. In this way nearly two decades of economic liberalization, couple with use domestic demand a growing middle class, a you population and high return on investment make in India a incredible investment destination.

Keywords:- Make in India, Needs of Make in India, Sectors focuses on Make in India.

Introduction

What is Make in India Campaign The Make in India campaign was launched and started by Prime Minister Narendra Modi in India on September 25, 2014 in a function at the Vigyan Bhavan. Basically it is an initiative of the Government of India to encourage multinational, do- mestic as well as, companies to manufacture their products in India. Indeed, it hopes to make India a major manufacturing hub. India has emerged, after first quarter of 2015, as the top destination globally for investment, beating our next to door neigh- bour as well as the States. During the end of 2014 on 29th December the Department of Industry Policy and Promotion conducted a workshop, which was attended by Modi, his cabinet ministers and chief representatives of states as well as various industry tycoons. The major expectation from this campaign is that it will create around 100 million job opportunities for youths in India over time. The aim is to take a share of manufacturing in country's gross domestic product from 16% to 25% by 2022 as stated in national manufacturing policy. Major objective of this scheme focuses on 25 sectors. The sectors Automobiles, textiles and Garments, Biotechnology Wellness, Defiance, Manufacturing, Ports, Food Processing Mining and Media .

Needs of Make in India

The manufacturing in India by MNCs is to be promoted under make in India concept. India has basically to promote the health and tourism sector. This will attract foreign currency in India. The initiative of make in India is expected to attract the FDI for capital investment purposes and the technological investment in various economics sectors in Indian Economy. However the investment prospects by Japan, Germany, South Korea in the various rail and road project is the outcome of the make in India concept. Today, discussion on the smart cities and Metro rail project for various cities in India is the outcome of make in India concept. This concept is expected to increase the growth in infrastructure. It is essential to promote the growing services and industrial sector in Indian economy. Make in India will help increasing job opportunities which are now sometimes on the basis of the outsourcing of the work. This is especially in the IT and related sector. Focus is being

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on various aspects i e. job create and skill development in various sectors of economy specially IT bio-technology, electronics, chemicals and pharmaceuticals. In this way 25 are to be taken under the concept of make in India. In this way the manufacturing sector has played a modest role in providing formal employment which partially explains India's low growth elasticity of poverty reduction in urban areas. The main objective of the mega program is to ensure that manufacturing sector which contributes around 15% of the country's Gross domestic Products (GDP) is increased to 25% in next few years.

Changing Paradigm in Manufacturing Sector after the initiation of Make in India

Campaign India before 1991 was a much less developed and underutilized economy in terms of globalization. FDI (foreign Direct Investment) before 1991 globalization reform was 97 (U.S. million with a GDP growth less than 3%, but then came the globalization phase for India, which opened Indian market for the rest of the world thus increasing the FDI to 129 (U.S. million in 1991-1992 financial year, with GDP as 4.2%, this was the time when Indian economy witnessed a high growth rate as compared to previous year (before globalization). And the trend went on of increasing FDI and increasing growth of GDP. Sectors like retail, FMCG, automobile, software, health sector etc saw a healthy FDI. In 2008 after the market crisis in India growth rate went down to 6.7% than 7.1 percent of previous years. Till 2013 FDI in India was 31,731 (U.S. million In 2014 after winning the general election Modi, announced a dynamic campaign called MAKE IN INDIA, which brought about 41,223(U.S. million up-till mid of2015 with GDP growth of 8.1 brought smiles Pasco in Indian economy, world renowned manufacturers like for investment. Thu STEEL, TETRA PACK etc, to India with smiling faces India came over the world such that Modi's MAKE IN INDIA campaign became famous all economy 2015. was ranked 7th among the top ten FDI most promising source f in all "MAKE IN INDIA's" main objective is to attract the potential manufactures from over the world to invest in Indian economy which will result in huge employment generation.

Sectors Make in India focuses on the following Five sectors of the economy:

Chemicals And Petrochemicals Summary

Seventh largest producer of chemicals worldwide and third largest producer in Asia. (by output) The estimated size of Indian chemicals sector stands at approximately USD 139 billion. Fourth largest global producer of agro chemicals. Total production of the major chemicals including petrochemicals was 23.9 million tons during 2015-16 while production of polymers stood at around 9 million tons. Chemicals sector also acts as a key enabling industry and provides support for variety of other sectors like agriculture, construction, leather etc

DEFENCE MANUFACTURING

India has the third largest armed forces in the world. The allocation of Defence in the India's union budget is approx USD 34.53 billion and 31.1% of the defence budget is spent on capital acquisitions. 60% of defence related requirements are met by imports which offers a huge opportunity for import substitution.

ELECTRICAL MACHINERY

Market growth in past 10 years 11.6% Domestic Power Equipment industry growth in past 10 years 11.9% Export growth in past 10 years 18.6% Major Electrical Equipment industry growth in past 10 years 8.3% & in past 5 years 4% Estimated market value is expected to reach USD 100 billion by 2022.

PHARMACEUTICALS :-

Third largest pharmaceuticals market by 2020 in terms of incremental growth 20% of global exports in generics, making it the largest provider of generic medicines globally. USD 45 Billion in

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revenue by 2020, revenue of USD 55 billion by 2020 as base case, and can grow to USD 70 billion in a aggressive case scenario. USD 26.1 Billion in generics by 2016. USD 200 Billion to be spent on infrastructure by 2024.

India's filing of Drug Master Files' (DMF's) with USFDA as of Dec 2013 is 3411, the highest filed by any country in the world. Total exports of Drugs, Pharmaceuticals for 2013-14 at USD 15,095 million, recording a growth rate 2.5% over the corresponding period of previous years.

PORT AND SHIPPING

118 projects involving investment of USD 7.73 billion have been approved in last four years. India has 12 major ports and 64 minor ports handling Export Import cargo. Indian ports handled 1605 million metric tonnes of cargo in 2015-2016 USD 2.69 billion invested in last three years in Ports & Shipping sector.

Conclusion :-

The Make In India movement started in September 2014. The main aims of make in India is creating such an environment to lure foreign producers and investors to come and create jobs in our country and enable domestic firms to compete globally. However this program is to exploit every possible source to raise the share of manufacturing in GDP from 16% to 25% by 2022 and also to create 100 million manufacturing jobs over the same period make in India initiative is based on four pillars i.e. new processes, new infrastructure, new sectors and new mindset. The campaign make in India focuses on 25 sector i e. automobiles, construction, food machinery, defense manufacturing, chemicals, IT& BPM, railways, electrical pharmaceuticals, thermal power, textiles and garments, roads and highways, media and entertainment, space, parts, wellness tourism and hospitability leather, mining, renewable energy, electronic systems, biotechnology etc along with live projects like industrial corridors, FDI policies and details of investor facilitation cell. "Make in India' concept was already in existence in India right from the times of East India Company when the SKF Bearings company had started its manufacturing plant in Calcutta before 150 years. In this way, this campaign is to boosts up Indian manufacturing sector by attracting business from around the world to generate huge employment increase trade and spur economic growth.

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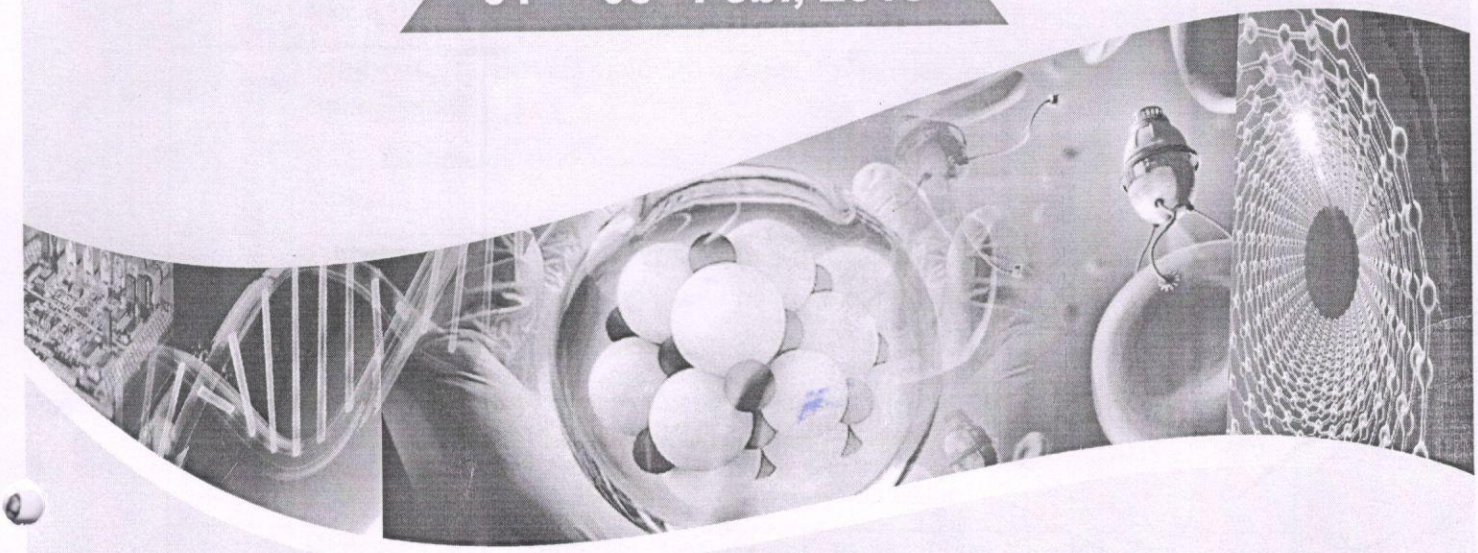

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Hydrogen and Ammonia Gas Sensor using Silver Loaded Zno Nanorods

Sapana Rane[1*], Neha Joshi[2], Sudhir Arbuj[2], Sunit Rane[2], Suresh Gosavi[3*]
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Abstract

This paper reports the preparation of resistive type thick film sensor by simple screen printing technique using nanostructured Ag-ZnO. The prepared Ag-ZnO sensor showed high sensitivity towards H_2 gas. Sensor prepared with pure ZnO nanostructures showed operating temperature beyond 300 °C whereas sensor prepared using Ag-ZnOnanostructures showed superior gas-sensing performances with reduction of operating temperature to 214 °C as compared to pure ZnO.The response and recovery time's of the sensor was 10 s and 110 s respectively. Similarly, for NH_3 gas, the Ag-ZnOsensor showed very good response of 3.7 at the operating temperature of 210°Cas compared to pure ZnO nanostructures.

INTRODUCTION:

In recent decades, Zinc Oxide (ZnO) nanostructures have achieved a great interest of numerous researchers because of their wide application as gas-sensor [1-3].It is one of the most interesting material being considered for gas sensing application of various gases including ethanol, H_2, CO, H_2S, NH_3, etc due to its high chemical stability, low cost and short response time. ZnO-related gas sensing involves the chemisorptions of oxygen on the oxide surface, followed by charge transfer during the reaction between chemisorbed oxygen and target gas molecules, changing the surface resistance of the sensor element [4].However, gas sensors based on ZnO have certain limitation such as low sensitivity and high optimum operating temperature that restrict the use of ZnO. Also, pure ZnO films showed lower stability in corrosive, humid ambient due to large amount of oxygen vacancy. ZnO nanorods provide much larger length-to-diameter and surface-to-volume ratio than bulk ZnO and ZnO films. Owing to the physical and photoelectrical properties, one-dimensional (1-D) ZnO nanorods have attracted considerable attention and have promising applications in nanosensor [5-7]. Many researchers have devoted themselves towards improving the performance of ZnO sensor, in order to lower its working temperature and enhance the gas selectivity [8]. To the best of our knowledge as on date, much progress has been made either by employing ZnO nanoparticles or by adding catalysts to the ZnO sensors [9]. Usually, high sensitivity and quick response can be expected for a sensor made from porous materials, since it has a comparatively large surface area. In addition, the gases will quickly diffuse into the pores and the surface reactions will take place at a higher rate. Considering the versatility of ZnO as the gas sensing material, significant efforts are being taken to overcome these limitations and thus to improve the sensing performance by developing hybrids such as semiconductor-semiconductor and metal-semiconductor material. Surface modification is one of the most effective methods used to improve the gas-sensing properties of metal oxides.

The use of noble metal modifiers such as Pd, Pt, and Au have resulted in sufficient growth in sensitivity and decrease in operating temperatures [10-11]. Among them, as a comparatively cheaper noble metal, Ag nanoparticles can act as catalyst to accelerate the chemisorption process of metal oxides and greatly improve their gas-sensing performance. However, relatively very few researchers have reported the use of Ag-modified ZnO with enhanced gas-sensing properties.Therefore, the detailed study on the solvothermal synthesis of ZnOnano rods and loading of Ag nanoparticles with different mol.% on the surface of ZnOnano rods using photochemical reduction technique, materials characterization using various spectroscopic techniques and hydrogen gas sensing properties with respect to Ag loading on the ZnO surface is reported in this paper.

SYNTHEIS OF MATERIALS AND PREPARATION OF SENSOR FILMS:

ZnO nanostructures were synthesized bysolvothermal reaction technique. For this purpose we used Zinc acetate (10 mmol) and NaOH (20 mmol). The above materials is dissolved in methanol and mixed and further heated at 200 °C for 24 hrs. in an autoclave. After completion of reaction, material was washed by distilled water and dried using oven at 50 °C. In order to prepare the Ag-ZnO nanostructures, the photochemical deposition technique was used for loading of Ag onto ZnO. Ag was deposited having different concentration i.e. 1 and 5 mol % on the surface of ZnO nanostructures. The thick films were prepared using the synthesized nanostructured ZnO and Ag-

ZnOpowders as a functional sensing material. Appropriate quantities of the functional powder material and the organic vehicle were mixed thoroughly to obtain the homogeneous paste. Thick films of 1x1 sq. inch size were prepared using screen printing technique on glass substrate. These prepared films were then dried under IR lamp for 15 minutes and subsequently annealed in the muffle furnace at 400 °C with dwell time of 1 hour having ramp rate of 2 °C/ min. The thickness of the sensing films was around 30 µm. To measure the electrical resistance of the films, two aluminum foil contacts were made on the top of the films.

RESULTS AND DISCUSSION:

The XRD patterns of prepared Ag-ZnO nanostructures were investigated using the XRD technique and results are depicted in Fig. 1. The observed X-ray diffraction peaks at 2θ = 31.7, 34.4, 36.2, 47.5, 56.6, 62.8 and 67.9° correspond to *hkl* planes (100), (002), (101), (102), (110), (103) and (112) respectively, confirms the formation of crystalline ZnO having hexagonal wurtzite phase in all prepared compositions. Additionally, sharp and intense XRD pattern of synthesized Ag-ZnO matches with standard ZnO pattern (JCPDS No. 36-1451) indicating high phase purity and crystallanity. Along with ZnO reflection peaks, the silver peaks are also visible in case of Ag-ZnO samples. The reflection peaks at 2θ = 38.1, 44.2 and 64.4° correspond to *hkl* planes (111), (200) and (220) respectively confirms the presence of cubic metallic silver phase (JCPDS No. 04-783).The morphological analysis of the ZnO and Ag-ZnO nanostructures was performed under field emission microscope.

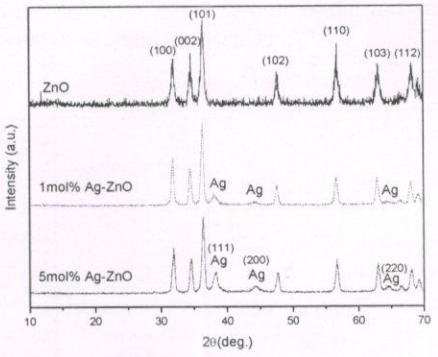


Figure 1: X-ray diffractogram of ZnO and Ag-ZnO nanostructures

FESEM micrographs of pure ZnO and Ag-ZnO nanostructures are shown in Fig.2. The FESEM image indicates the formation of rod like morphology having length around 50 to 200 nm and diameter *ca* 30 nm. The Ag loading with varying concentration was deposited on ZnO surface by photochemical reduction method. The FESEM images of Ag loaded ZnO nanostructures (Fig. 2c, d) also show same nano rod morphology as pure ZnO (Fig. 2 a, b) along with spherical nanoparticles that might be of Ag.

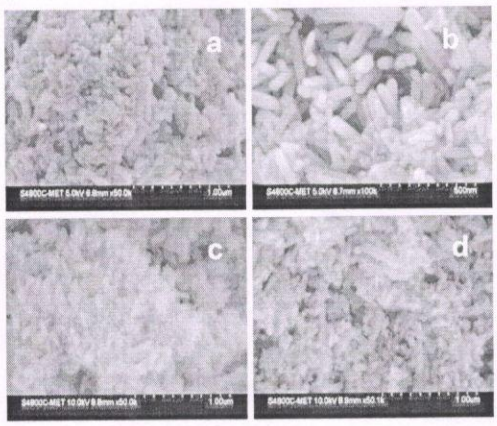


Figure 2: ***FESEM micrographs of synthesized material: (a, b) ZnO, (c) 1% Ag-ZnO and (d) 5 % Ag-ZnO***

The gas sensitivity of a film is usually measured as the percentage change in film resistance on the exposure of gas or may be defined as the ratio of its resistance in air and resistance in presence of a gas or vice versa. The gas sensing properties of the prepared sensing thick films were carried out for H_2 gas. The gas concentrations from 75 ppm to 1050 ppm were varied to study the gas sensing response of the pure ZnO and Ag-ZnO films. Figure 3 shows the typical gas response curves of the pure ZnO and Ag-ZnO films for 750 ppm H_2 gas. In case of pure ZnO film sensor, it can be noted that there is petty response around 90 °C but again there is continuous increase in response up to 300 °C. Beyond this limit we could not detect the response due to the limitations of our gas sensing measurement system. The trivial response occurred around 90 °C is very less and therefore could not be an operating temperature of the sensor. From the experimental observations we can say that operating temperature in case of pure ZnO film sensor might be beyond 300 °C. The sensor film with 1% Ag-ZnO also showed a trivial response of 1.73 at 83 °C and again higher response of 4.9 at 242 °C. Similar trend was observed in case of sample with 5% Ag-ZnO. The sample showed minor repose of 1.69 at 80 °C and highest response of 4.29 at 214 °C. However the response is slightly lower that 1% Ag-ZnO sample.

It can be seen from the observed results that the loading of Ag on ZnO nanostructures has played a significant role in reducing the operating temperature of the sensor for H_2 gas. The optimum

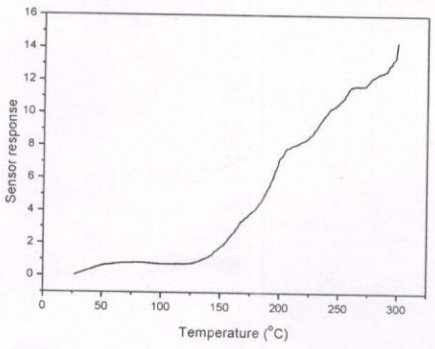
loading will surely lower down the operating temperature of the sensor with obtaining the reasonable sensor response.

The sensor response at different concentration of H_2 gas at the operating temperature of 83 °C for 1% Ag-ZnO sample were measured and it showed linear response with respect to concentrations of H_2 gas.The response and recovery time of the sensor was also measured for the H_2 gas. Figure 5.9 shows the graphical presentation of response and recovery time of 1% Ag-ZnO sensor for H_2 gas. The sensor showed the response and recovery times of 10 s and 110 s respectively.

For comparison study, gas sensing properties of prepared sensing thick films were carried out for NH_3 gas. The sensor showed very good response of 3.7 to NH_3 gas at operating temperature of 210°C for 5% Ag-ZnO hybrid sensor as compared to pure ZnO nanostructures. To avoid the repetitiveness, the data is not shown here.

CONCLUSION:

One dimensional (nanorod morphology) ZnO powders were synthesized by usingsolvothermal reaction technique.Ag nanoparticles were deposited on thesurfaceof the ZnOnanorods by photochemical deposition technique. FESEM and TEM analysis confirms the formation of rod like morphology having length 50 to 200 nm and diameter of 30 nm. Resistive type nanostructured ZnO thick film sensor were prepared on glass substrate by simple screen printing technique. Sensor showed high sensitivity to H_2 gas. The sensor prepared with pure ZnO nanostructures showed operating temperature beyond 300 °C, whereas the sensor prepared using Ag-ZnO nanostrcures showed superior gas-sensing performances with the reduction in the operating temperature as compared to pure ZnO,



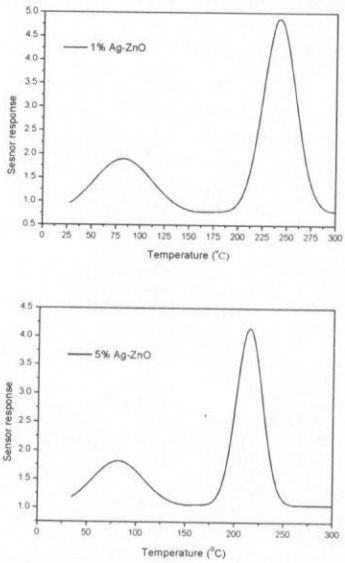


Figure 3: Sensor response of pure ZnO and Ag-ZnO films for 750 ppm H_2 gas

The operating temperature reduced to 242 °C for 1% Ag-ZnO sensor which further reduced to 214 °C for 5 % Ag-ZnO based senor. The sensor showed the response and recovery time's of 10s and 110s respectively. For NH_3 gas, the sensor showed very good response of 3.7 at the operating temperature of 210°C for 5% Ag-ZnO hybrid sensor as compared to pure ZnO nanostructures.

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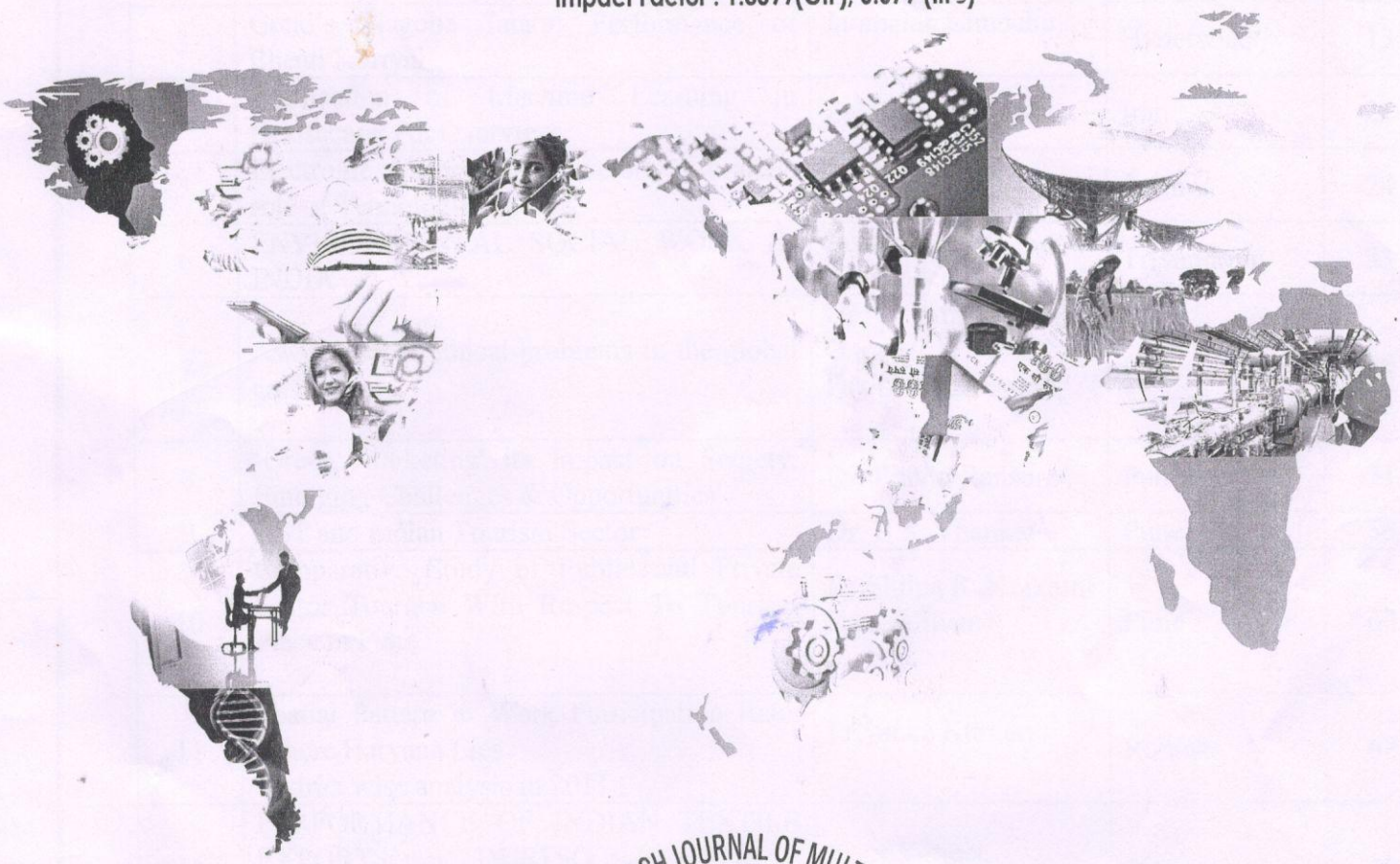

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प्रमुख जागतिक समस्या : एक दृष्टिक्षेप

डॉ. भरत राठोड
सहा. प्राध्यापक, राज्यशास्त्र विभाग,
पुणे जिल्हा शिक्षण मंडळाचे, मामासाहेब मोहोळ महाविद्यालय, पौड रोड, पुणे. ३८

गोषवारा ;:

विसाव्या शतकात निर्माण झालेले राजकीय व सामाजिक द्वेषाचे राजकारण, वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, लोकसंख्या व गरिबी, बेसुमार वृक्षतोडीमुळे निर्माण झालेली तापमानवृद्धी या समस्या एकविसाव्या शतकात गंभीर स्वरुप धारण केलले आहे. वांशिक संघर्षाने युरोप व दक्षिण आशियायी खंडास आजपर्यंत प्रभावित केले आहे. अल कायदा, तालिबान, इसिस या एकविसाव्या शतकातील सर्वात जहाल संघटनांनी हजारो लोकांचा बळी घेतला आहे. जगाची वाढती लोकसंख्या व गरिबीने आरोग्याच्या समस्या निर्माण झाल्या आहेत. वाढत्या लोकांच्या बेशिस्त वागण्यामुळे, औद्योगिक कचरा, बेसुमार वृक्षतोड, वाहनांच्या अतिरेकी वापरामुळे हवा प्रदुषीत होत आहे. यातूनच जागतिक तापमान वाढीच्या समस्येने आज जगासमोर एक आव्हान निर्माण केले आहे. या आव्हानांचा किंवा समस्यांचा सामना करण्यासाठी जगातील सर्व राष्ट्रांनी युनो संघटनेच्या अंतर्गत येऊन काम करणे गरजेचे आहे.

प्रस्तावना ;प्दजतवकनबजपवदद्ध:

दुस–या महायुद्धानंतरच्या काळात विशेषत: विसाव्या शतकाच्या उत्तरार्धात निर्माण झालेल्या प्रमुख समस्येत प्रामुख्याने वांशिक संघर्ष, अण्वस्त्राची स्पर्धा, दहशतवाद, वाढती लोकसंख्या व गरिबी, हवाप्रदूषण व तापमानवृद्धी यांचा समावेश होतो. या सर्व समस्या ख–या अर्थाने मानवनिर्मित आहेत. आपल्या राजकीय व भौतिक जीवन जगण्याच्या स्वार्थातून या समस्या निर्माण झालेल्या आहेत. दुस–या महायुद्धानंतर जगातील अनेक देशांत वांशिक संघर्षाला सुरुवात झाली. जगाला प्रमुख महाशक्तींतील अण्वस्त्रांची स्पर्धा विनाशाकडे नेत आहेत. दहशतवाद हा महाशक्तींच्या स्वार्थीय राजकारणाचा परिपाक आहे. लोकसंख्या वाढीमुळे दारिद्रय व गरिबीची समस्या निर्माण झाली आहे. जंगलतोडीमुळे निर्माण झालेले हवाप्रदूषण व तापमानवृद्धीचे स्वरूप आज पराकोटीला पोहोचले आहे. या समस्या निवारणाच्या बाबतीत जगातील सर्वच राष्ट्रे प्रयत्न करत आहेत. परंतु या समस्या निवारणात त्यांना फारसे यश आलेले दिसून येत नाही. संयुक्त राष्ट्र संघटनेचे प्रयत्नही अपुरे पडत आहेत. म्हणून आज एकविसाव्या शतकात या समस्या गंभीर स्वरुप धारण करत आहेत.

प्रस्तुत शोधनिबंधात वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, वाढती लोकसंख्या गरिबी, हवाप्रदूषण व तापमान वृद्धी या प्रमुख जागतिक समस्यांचा व उपाययोजनांचा विचार करावयाचा आहे.

संशोधन अध्ययनाचे महत्त्व ;ैपहदपपिबंदबम वि जनकलद्ध:

संपूर्ण जग व दक्षिण आशियास अनेक समस्यांनी दीर्घकाळ प्रभावित केलेले आहे. त्यामुळे, सामाजिक, राजकीय, आर्थिक विकास व जागतिक शांतता निर्माण करण्यास बाधा निर्माण झालेली दिसून येते. त्यामुळे या समस्यांपैकी प्रबळ समस्या कोणकोणत्या आहेत यांचे स्वरूप कसे आहे यादृष्टीने संशोधन अध्ययनाचे महत्त्व आहे.

संशोधन अध्ययनाची उद्दिष्टये ;व्इरमबजपअमे वि जनकलद्ध :

१. जगातील प्रमुख समस्या कोणकोणत्या आहेत याचे अध्ययन करणे..
२. जगातील प्रमुख समस्येचे उपाययोजना व शिफारशी करणे.

गृहीतके ;भ्लचवजीमेपेद्ध:

१. जागतिक समस्येबाबतीत युनोच्या वेगवेगळया परिषदा व राष्ट्राराष्ट्रांतील कराराच्या माध्यमातून प्रयत्न होत आहेत.

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२. जागतिक समस्येबाबत महाशक्ती राष्ट्रांनी राजकीय दुटप्पीपणाची भूमिका घेतलेली आहे.

संशोधनाची पद्धती ;त्मेमंतबी उमजीवकवसवहलद्ध :

प्रस्तुत अध्ययनात विश्लेषणात्मक, वर्णनात्मक व सांख्यिकीय पद्धतीचा अवलंब करण्यात आला आहे.

विषय मांडणी व विश्लेषण:

जागतिक समस्या

१. वांशिक संघर्ष :

वांशिक संघर्षाचे निराकरण करणे आज जगापुढील प्रमुख आव्हानांपैकी एक आहे. ही समस्या जगाला दीर्घकाळापासून प्रभावित करत आलेली आहे. आज बहुतांश राष्ट्रांत वांशिक संघर्ष सुरु आहे. श्रीलंकेतील तमिळ–सिंहली, तुर्कस्थान इराक आणि इराणमध्ये कुर्द, बोस्निया, क्रोएशिया, सर्बियामध्ये सर्ब, भारतात नागा, मिझो, बोडो, पाकिस्तानात पक्तुन, बलुच, मोझाहिर, न्युझीलॅंड माओरी, बांग्लादेश हिंदू, खांडा, हुतु आणि त्सुत्सी हे होत. या वांशिक संघर्षात हजारो लोकांचा बळी गेला आहे. वांशिक संघर्ष त्या देशाच्या सरकारविरोधात वेगळ्या राष्ट्रांच्या निर्मितीसाठी व आर्थिक राजकीय अधिकारांच्या प्राप्तीसाठीचा आहे. दक्षिण आफ्रिकेतील तसेच लॅटिन अमेरिकेतील काळे–गोरे वांशिक संघर्ष जगाला परिचित आहे. ऑस्ट्रेलिया अमेरिकेत भारतीय नागरिकांवर वारंवार होणारे हल्ले वांशिक द्वेषाचे प्रतिक आहे. आज जगात वांशिक संघर्ष दिवसेंदिवस वाढत चालले आहे.

इसिस ;ैपै. प्सेंउपब ैजंजम वि प्मतंब ंदक ैपतपलंद्ध या दहशतवादी संघटनेने सिरीया इराकला शियापंथीय राष्ट्रांची निर्मिती करण्याचे ध्येय बाळगून आहे. यामुळे संपूर्ण अरबराष्ट्रांत वांशिक संघर्षाचे लोण वाढत चालले आहे. संपूर्ण इस्लामी राष्ट्रातील तरुण व तरुणी, महिला या दहशतवादी संघटनेत सहभागी होत आहेत. जानेवारी २०१६ च्या प्रारंभी सौदी अरेबियातील राजघराण्याने ४७ कैद्यांबरोबरच शियापंथीय मौलवी शेख निम्र अल निम्र या धर्मगुरुस फाशी दिली. यामुळे सौदी अरेबियाबरोबरच इराणमध्ये मोठ्या वांशिक दंगली उसळल्या. गेल्या अनेक दिवसांपासून सौदी अरेबिया व इराणमध्ये धुसफूस चालू आहे. दक्षिण आशियालाही वांशिक संघर्षाला तोंड द्यावे लागत आहे. बांग्लादेश, पाकिस्तान, भारतातील नागालॅंड, आसाम ही राज्ये वांशिक द्वेषाला बळी पडली आहेत.

श्रीलंकेतील वांशिक संघर्षाने जगाला व दक्षिण आशियायी उपखंडाला सर्वाधिक प्रभावीत केले आहे. २००९ साली सैनिकी कारवाईत प्रभाकरणची हत्या करुन श्रीलंकेतील वांशिक संघर्ष संपविण्यात आले आहेत. २०१५ पासून नेपाळने धर्मनिरपेक्ष राज्यघटना स्वीकारली. नवीन राज्यघटनेमुळे नेपाळमध्ये पहाडी नेपाळ भारु, आदिवासी आणि भारतीय मूळ असणारे मधेशी यात वांशिक भेद, जातीय तेढ निर्माण झाली आहे. नवीन राज्यघटनेत भारतीय मूळ असणारे मुख्यत्वे बिहार आणि उत्तरप्रदेशमधील मधेवंशीय लोकांचे राजकीय हक्क डावलले जात आहेत. त्यामुळे भारत नेपाळ सीमेवर तीव्र आंदोलने करण्यात आली आहेत. या आंदोलनात शेकडो लोकांचे बळी गेले आहे. २१ व्या शतकात अरब राष्ट्रातील वांशिक संघर्षाबरोबरच इतर खंडातील वांशिक संघर्ष जागतिक विकासासमोर आव्हान निर्माण करणारे आहे.

२. अण्वस्त्रांची स्पर्धा :

एकविसाव्या शतकातील आणखीन एक गंभीर समस्या म्हणजे वाढती अण्वस्त्रांची स्पर्धा रोखणे हे होय. दुसऱ्या जागतिक महायुद्धानंतर शीतयुद्धाला सुरुवात झाली. या शीतयुद्धाच्या काळात अमेरिका व रशियाने नाटो, सिटो, सेन्टो, अंजुस, वार्सापॅन्ट सारख्या लष्करी संघटनांची निर्मिती केली आहे. यातूनच आण्विक शस्त्रास्त्रांची स्पर्धा सुरु झाली. आज जगात रशिया–अमेरिका, ब्रिटन–फ्रान्स, उत्तर कोरिया–दक्षिण कोरिया, पॅलेस्टाईन–ईस्त्राईल, भारत–चीन, भारत–पाकिस्तान, जपान–द. कोरिया अशा राष्ट्रांत अण्वस्त्रांची स्पर्धा आहे. जगातील अण्वस्त्रधारी राष्ट्रांची सिप्री–स्टॉकहोम इंटरनॅशनल पीस रिसर्च इन्स्टीट्यूट २०१३ चा अहवालातील माहिती दाखविणारा तक्ता पुढील प्रमाणे

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तक्ता क्र. १. अण्वस्त्रधारी राष्ट्रे

अ.क्र.	अण्वस्त्रधारी देश	अण्वस्त्रांची संख्या
१.	रशिया	१२०००
२.	अमेरिका	९६००
३.	चीन	४४०
४.	ब्रिटन	२२५
५.	फ्रान्स	३००
६.	इस्त्राईल	८०
७.	भारत	६० ते ७०
८.	पाकिस्तान	६० ते ७०

संदर्भ : सिप्री–२०१३चा अहवाल

वरील तक्त्यावरुन असे दिसून येते की, आज जगातील एकूण आठ राष्ट्रे अण्वस्त्रधारी राष्ट्रे म्हणून ओळखली जातात. दक्षिण व उत्तर कोरियाकडेही रासायनिक अण्वस्त्रे आहेत. ६ जानेवारी २०१६ रोजी उत्तर कोरियाने अणुबॉम्बपेक्षा घातक असलेल्या हायड्रोजन बॉम्बची चाचणी व २०१७ मधील वेगवेगळया क्षेपणास्त्रांच्या चाचण्या घेत संपूर्ण जगाला हादरवून सोडले आहे. उत्तर कोरियाची ही अनपेक्षित अणुबॉम्बची निर्मिती अमेरिकेबरोबरच संपूर्ण जगाला धडकी भरवणारी आहे. दक्षिण आशियातही शस्त्रास्त्रे व अण्वस्त्र निर्मितीची स्पर्धा चालू आहे. चीन–भारत, भारत–पाकिस्तान ही राष्ट्रे अण्वस्त्रसंपन्न असून भारत व पाकिस्तानकडे अनुक्रमे ६० ते ७० अण्वस्त्रे आहेत. याशिवाय भारताने पृथ्वी, ब्रह्मोस, अग्नी, निर्भय, शौर्य यासारख्या मिसाईल व क्षेपणास्त्रे तयार केली आहेत. तर पाकिस्तानने शाहीन, धोरी, बाबर, गझनवी यासारखी क्षेपणास्त्रे बनवली आहेत. चीन हे मोठी लष्करी क्षमता असणारे राष्ट्र आहे. जगातील अण्वस्त्रधारी देशांनी ही स्पर्धा थांबवून विकास व शांततेच्या मार्गाने मार्गक्रमण करणे गरजेचे आहे.

३. दहशतवाद :

विसाव्या शतकाच्या उत्तरार्धात निर्माण झालेला दहशतवाद आज २१ व्या शतकाच्या दीड शतकात गंभीर स्वरुप धारण केले आहे. प्रत्येक राष्ट्रांत कोणतीनकोणती दहशतवादी संघटना असून दररोज दहशतवादी हल्ले होऊन लोक मारले जात आहेत. नायजेरियात–बोकोहारम, अफगाणिस्तानात तालिबान, अल कायदा, पाकिस्तानात जैश ए महंमद, लष्कर ए तोएबा, पाकिस्तानी तालिबान, अल कायदा, सिरीया इराकमधील इसीस, अलकायदा, रशियाचे चेन दहशतवाद, भारतात सिमी, नक्षलवाद, नेपाळ–माओवाद, बांग्लादेशातील इस्लामी कट्टरवाद यामुळे संपूर्ण दक्षिण आशिया दहशतवादाच्या छायेखाली आहे.

खरे तर दहशतवादाच्या विस्ताराला महासत्ताच कारणीभूत ठरली आहे. सोव्हिएत रशियाच्या विस्ताराला विरोध करण्यासाठी अमेरिकेने ओसामा बीन लादेनला पाठीशी घातले. या माध्यमातुनच लादेनने जिहादि संकल्पनेला चालना दिली. अफगाणिस्तानातील तालिबानी राजवट अमेरिकेच्या धोरणाचाच परिणाम आहे. ११ सप्टें. २००१ रोजी अमेरिकेवर झालेल्या दहशतवादी हल्ल्यानंतर अमेरिका मानसिक व आर्थिकदृष्ट्या खचली गेली. त्यातुनच दहशतवादाच्या विरोधात अफगाणिस्तान, इराकमध्ये मोहिमा आखल्या गेल्या. ओसामा बीन लादेनचा शोध घेवून एका दशकानंतर पाकिस्तानातील एटादाबाद येथे लादेनचा अमेरिकेने नाट्यमयरीत्या खात्मा केला.

ओसामा बीन लादेनच्या खात्म्यानंतर जगाला असे वाटले की, दहशतवादाला आळा बसेल, परंतु अगोदरच फुटून अबु–अल–बगदादी नावाचा दहशतवादी इसिस ;ैै.ैसंउपब ैजंजम वि प्मतंब ंदक ैपतपलंद्ध या नावाची अत्यंत विषारी संघटना स्थापन केली. सिरीया व इराकमध्ये तिचा मोठा प्रभाव असून अलीकडेच या संघटनेने पॅरीस, ग्रीस, अमेरिका, तुर्कस्थान, इस्तांबूलमध्ये अत्यंत विद्ध्वंसक हल्ले करुन शेकडो लोकांना मारले

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आहे. दक्षिण आशियातील पाकिस्तान, बांग्लादेश, भूतान, नेपाळ, श्रीलंका, अफगाणिस्तान या राष्ट्रांना गेल्या अनेक दशकांपासून दहशतवादाला तोंड द्यावे लागत आहे. दहशतवादाने हजारो लोकांचे बळी गेले आहेत. पाकिस्तान या दहशतवाद्यांना भारताच्या विरुद्ध वापरत असून भारतातील मुंबई, जम्मू–काश्मीर, हैद्राबाद, दिल्ली अशा अनेक शहरांत दहशतवादी हल्ले केले जात आहेत. सन २०१० ते २०१७ या आठ वर्षांच्या काळात दक्षिण आशियात दहशतवादी कारवायांमुळे मृत्यू पडलेल्यांचा तपशील दाखविणारा तक्ता पुढीलप्रमाणे

तक्ता क्र. २ दहशतवादी कारवायांमध्ये मृत्युमुखी पडलेल्यांचा तपशील

(२०१० ते ६ ऑगस्ट २०१७)

अ.क्र.	वर्ष	नगरिक	सुरक्षारक्षक	दहशतवादी	एकुण
१.	२०१०	२५७१	८४४	६०१३	९४३१
२.	२०११	३१७३	९६२	३२८४	७४१९
३.	२०१२	३२७०	८७१	२९०२	७०४३
४.	२०१३	३५३६	८८७	२२४४	६६६७
५.	२०१४	२२१७	७०३	३६३१	६५५१
६.	२०१५	११४४	४९६	२८३७	४४७७
७.	२०१६	८५४	४७६	१५०५	२८३५
८.	२०१७	५३३	२४९	६६३	१४४५
एकुण		१७२९८	५४८८	२३०७९	४५८६८

संदर्भ: ऐंजचण्वतह कंजमरू ६६८६२०१७

वरील तक्त्यावरुन असे दिसून येते की, २०१० ते ६ ऑगस्ट २०१७ या कालावधीत दक्षिण आशियातील दहशतवादी कारवायात नागरिक, सुरक्षारक्षक, दहशतवादी यांचा मोठया प्रमाणात मृत्यू झाला आहे. सन २०१० ते ६ ऑगस्ट २०१७ या कालावधीत एकूण १७२९८ नागरिकांचा मृत्यू झाला तर सुरक्षारक्षक ५४८८ व दहशतवादी २३०७९ इतके मारले गेले. या सात वर्षाच्या काळात एकूण ४५८६८ लोकांना आपले जीव गमवावा लागला. एकुणच जगातील अनेक राष्ट्रांत व दक्षिण आशियात दहशतवाद ही एकविसाव्या शतकात जगासमोर एक गंभीर समस्या असून युनोसहीत जगातील प्रत्येक राष्ट्राने दहशतवाद निर्मूलनासाठी प्रामाणिक प्रयत्न करणे गरजेचे आहे.

४. वाढती लोकसंख्या व गरिबी :

वाढती लोकसंख्या व गरिबीने आज जगासमोर अनेक गंभीर समस्या निर्माण केल्या आहेत. आज जगाची लोकसंख्या एकूण ७३२३४५७ इतकी आहे. सर्वाधिक लोकसंख्या आशिया खंडाची असून चीन व भारत अनुक्रमे पहिल्या व दुसऱ्या क्रमांकावर आहेत. संयुक्त राष्ट्रसंघाच्या आर्थिक व सामाजिक व्यवहार मंडळाने जागतिक नागरीकरण समृद्धी अहवाल १० जुलै २०१४ रोजी प्रसिद्ध केला आहे. या अहवालात असे नमूद करण्यात आले आहे की, आशिया व आफ्रिका खंडात एकूण ग्रामीण लोकसंख्येच्या ९० : लोकसंख्या आहे. जगातील लोकसंख्येच्या ५४: लोकसंख्या शहरात आहे. सन १९५० मध्ये जागतिक शहरी लोकसंख्येचे प्रमाण ३०: होते. इ.स. २०५० पर्यंत जगात राहणाऱ्या लोकांचे प्रमाण ६६: इतके असेल. असा अंदाज युनोच्या अहवालात व्यक्त करण्यात आला आहे. सध्या जगात उत्तर अमेरिका, लॅटिन अमेरिका आणि कॅरेबियन राष्ट्रात अधिक शहरी लोकसंख्या असून त्याचे प्रमाण ८२:ए ८०: आणि ७३: इतके आहे. याउलट आशिया, आफ्रिका

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खंडात शहरी लोकसंख्या अनुक्रमे ४०: आणि ४८: आहे. २०५० मध्ये या खंडातील शहरी लोकसंख्येचे प्रमाण अनुक्रमे ६४: आणि ५६: इतके असेल.

सध्या जगातील ग्रामीण लोकसंख्या ३.४ अब्ज इतकी आहे. यामध्ये घट होवून इ.स. २०५० पर्यंत ती ३.२ अब्ज इतकी होईल. भारतात सर्वाधिक ग्रामीण लोकसंख्या असून त्याचे प्रमाण ८५७ दशलक्ष आहे. तर चीनची ग्रामीण लोकसंख्या ६३५ दशलक्ष इतकी आहे. दक्षिण आशिया हा सर्वाधिक लोकसंख्या असणारा प्रदेश म्हणून ओळखला जातो. एकूण जगाची व दक्षिण आशियाची लोकसंख्या दाखविणारा तक्ता पुढीलप्रमाणे

तक्ता क्र. ३ जग व दक्षिण आशियायी राष्ट्राची लोकसंख्या (आकडेवारी कोटीमध्ये)

अ.क्र.	देश	लोकसंख्या	लोकसंख्या विकासदर
१.	जग	७३२३४५७	१.०६:
२.	भारत	१२६६८८३५९८	१.१९:
३.	पाकिस्तान	२०१९९५५४०	१.४५:
४.	भूतान	७५०१२५	१.०९:
५.	नेपाळ	२९०३३९१४	१.२४:
६.	बांग्लादेश	१५६१८६८८२	१.५:
७.	श्रीलंका	२२ २३५	०.८:
८.	मलदीव	३९२९६०	०.०७:
९.	अफगाणिस्तान	३२३३२०२५	२.३४:
१०.	जगाच्या तुलनेत	२३.४०	भूभाग २.९६:

संदर्भ : ण वतसक थ्ंबज इववा. रनसल २०१६

वरील तक्त्यावरुन असे दिसते की, दक्षिण आशियायी राष्ट्रांच्या लोकसंख्येचे प्रमाण हे प्रचंड आहे. दक्षिण आशियात लोकसंख्येच्या प्रमाणात भारत पहिल्या क्रमांकावर असून १.२६ कोटींपेक्षा जास्त लोकसंख्या भारताची आहे. याचा विकासदर १.१९: इतका आहे. दुसऱ्या क्रमांकावर पाकिस्तान आहे. त्यांचा विकासदर भारतापेक्षा जास्त असून याचे प्रमाण १.४५: आहे. तिसऱ्या क्रमांकावर बांग्लादेश आहे. बांग्लादेशच्या लोकसंख्या वाढीचा दर १.०५: आहे. त्यानंतर अफगाणिस्तान, नेपाळ, श्रीलंका, भूतान, मालदीव यांचा क्रमांक लागतो. ही लोकसंख्येच्या बाबतीत लहान राष्ट्रे आहेत. जगाच्या तुलनेत ही लोकसंख्या २३.४०: इतकी आहे. यांचा एकूण भूभाग २.९६: इतके आहे. वाढत्या लोकसंख्येमुळे द. आशियायी राष्ट्रांना लोकसंख्येला आळा घालण्यासाठी धोरणात्मक कार्य करणे अत्यंत आवश्यक आहे.

जगाच्या तुलनेत द. आशियायी राष्ट्रांचा विचार केल्यास असे दिसून येते की, जगातील सर्वाधिक लोकसंख्या असणाऱ्या राष्ट्रांत दारिद्रयाचे प्रमाणही अधिक आहे. मानव विकास अहवाल २०१४ चे अध्ययन केल्यास असे दिसून येते की, द. आशियायी राष्ट्रांतील बहुआयामी दारिद्रयाचे प्रमाण सर्वात कमी मालदीव राष्ट्राचे २.०: इतके आहे. तर सर्वात जास्त भारताचे ५५.३: इतके आहे. भूतान २९.४, नेपाळ ४१.४, पाकिस्तान ४५.६, बांग्लादेश ४९.५ : तर श्रीलंका व अफगाणिस्तानची आकडेवारी उपलब्ध नाही. या राष्ट्रातील बहुआयामी दारिद्रयामुळे दक्षिण आशियायी राष्ट्रांच्या विकासात मोठी समस्या निर्माण झाली आहे.

५. हवाप्रदूषण व तापमानवृद्धी :

हवा प्रदूषण व तापमानवृद्धी ही एक प्रमुख समस्या असून जगातील सर्वच राष्ट्रांच्या अमर्याद व बेशीस्त वागण्याचे द्योतक आहे. संयुक्त राष्ट्र संघटनेच्या आरोग्य विभागाने ;ॅभ्व. ॅवतसक भ्मंसजी व्तहंदप्रंजपवदद्ध इ.स. २०१२ या वर्षातील जागतिक हवाप्रदूषणाचा अहवाल २५ मार्च २०१४ रोजी प्रसिद्ध केला आहे. आरोग्य संघटनेच्या या अहवालात असे नमूद करण्यात आले आहे की, हवेच्या प्रदूषणामुळे २०१२ या वर्षात ७० दशलक्ष नागरिकांचा मृत्यू झाला आहे. तसेच २०१२ मध्ये घरगुती हवा प्रदूषणामुळे ४.३ दशलक्ष नागरिक मृत्यूमुखी पडले आहे. मृत्यूमुखी पडलेले नागरिक प्रामुख्याने अल्प आणि मध्यम उत्पन्न देशातील आहेत. तर ३.७ दशलक्ष नागरिक वातावरणातील प्रदुषणामुळे मृत्यू झाले.

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अमेरिकेतील येक आणि कोलंबिया विद्यापीठातील द येले सेंटर फॉर इन्व्हायरमेंटल लॉ ॲण्ड पॉलिसी ;जीम ल्ंसम ब्मदजतम वित म्दअपतवदउमदजंस सूं दक च्वसपबलद्ध आणि कोलंबिया सेंटर फॉर इन्टरनॅशनल अर्थ सायन्स इन्फोरमेशन नेटवर्क ;ब्वसनउइपंशे ब्मदजतम वित प्दजमतदंजपवदंस म्ंतजी बपमदबम प्दवितउंजपवदद्ध या दोन विभागांनी नुकतीच एक जागतिक पाहणी केली. त्या पाहणीनुसार हवा प्रदुषणाबाबत सर्वाधिक प्रदूषण असणारे देश प्रामुख्याने लिबीया (१२३), बोन्सीया आणि हरझे गोव्हिना (१२४), भारत (१२५), कुवेत (१२६), येमेन (१२७), दक्षिण आफ्रिका (१२८), कझाकिस्तान (१२९), उझबेकिस्तान (१३०), तुर्कमेनिस्तान (१३१), इराक (१३२) ही राष्ट्रे आहेत. तर स्वित्झरलॅंड (१), लाटविआ (२), नॉर्वे (३), लक्झेंबर्ग (४), कॉस्टारीका (५), ही राष्ट्रे सर्वाधिक कमी प्रदूषण असणारी राष्ट्रे आहेत. हवा प्रदुषणामुळे मानवजातीवर व संपूर्ण सृष्टीवर अनिष्ठ परिणाम होत आहेत. त्यामुळे हवा शुद्ध कशी राहील यासाठी जगातील सर्वच राष्ट्रांनी प्रामाणिकपणे प्रयत्न करणे गरजेचे आहे.

संपूर्ण जगाला भेडसावणारी आणखी एक महत्त्वाची समस्या म्हणजे जागतिक तापमानवाढ होय. दरवर्षी तापमानात वाढ होत आहे. २०१६ व २०१७ ही वर्षे आजपर्यंतची सर्वात जास्त तापमान असलेली वर्षे म्हणून ओळखली जातात. २०१५ मध्ये आंध्रप्रदेशात जवळपास १५०० लोक तापमानवाढीमुळे मृत्यू पावले आहेत. तापमान वाढीमुळे एकीकडे दुष्काळ पडतोय तर दुसरीकडे अतिवृष्टी होत आहे. बर्फ वितळून समुद्राच्या पाणीपातळीत वाढ होत आहे. जास्त लोकसंख्या असणाऱ्या व प्रदूषीत राष्ट्रांत ही समस्या गंभीर बनली आहे. एकूणच पृथ्वीवरील ऋतुचक्रच बदलुन गेले आहे. तापमानवाढीमुळे पृथ्वीची भूपृष्ठीय रचना, भौगोलिक आकारच बदलत चालला आहे. वाढत्या तापमानवाढीचा फटका अंटार्क्टिका सागराला बसत आहे. जुलै २०१७ मध्ये अंटार्क्टिका महासागरात वेगाने हालचाली झालेल्या आहेत. संपूर्ण बर्फाचे विभाजन दोन तुकड्यांत झालेले आहे. त्यामुळे अंटार्क्टिकात अतिशय प्रचंड वेगाने होणा–या बर्फाच्या वितळण्यामुळे समुद्राची पातळी वाढणार आहे

ब्रिटीश कोलंबिया विद्यापीठातील प्राध्यापक मिरोल कोपेस यांच्या मते, जगातील हवामान बदलास कार्बन डायऑक्साईड, क्लोरोफ्लोरो कार्बन, मिथेन नायट्रेट ऑक्साईड इ. हरित वायू कारणीभूत आहेत. हरित वायुंच्या निर्मितीमध्ये जगातील विकसीत व विकसनशील देश कारणीभूत आहेत. हवामान बदल निर्देशांक अहवाल २०१४ मध्ये जगातील सर्वाधिक कार्बन उत्सर्जन करणाऱ्या देशांची यादी जाहीर करण्यात आली आहे. ती यादी पुढील तक्त्यात दर्शविली आहे.

तक्ता क्र. ४ जगातील सर्वाधिक कार्बन उत्सर्जित करणारे दहा देश

अ.क्र.	देश	जगातील स्थूल देशांतर्गत उत्पादनातील हिस्सा	जागतिक लोकसंख्येतील हिस्सा	ज्गातील कार्बन डाय ऑक्साईड निर्मितीतील हिस्सा	जागतिक प्राथमिक उर्जा पुरवठयातील हिस्सा
१.	जर्मनी	४.०२:	१.१८:	२.२३:	२.३८:
२.	भारत	५.६६:	१७.८४:	५.१४:	२.७२:
३.	इंडोनेशिया	१.४१:	३.४८:	२.३०:	१.५९:
४.	ब्राझील	२.८७:	२.८३:	४.१२:	२.०६:
५.	युनाइटेड स्टेट्स	१८.८१:	४.४८:	१५.५०:	१६.७१:
६.	चीन	१४.६३:	१९.४२:	२२.९५:	२०.९१:

७.	ज्पान	५.५९:	१.८४:	३.५४:	३.५२:
८.	कोरिया	१.९५:	०.७२:	१.७६:	१.९९:
९.	रशियन फेडरेशन	२.९९:	२.०४:	४.९०:	४.३७:
१०.	कॅनडा	१.७५:	०.५०:	१.५८:	१.९२:

वनतबमरू ब्सपउंजम बींदहम च्मतवितउंदबम प्दकपंए २०१४ए च्व्छण्६ण

वरील तक्त्यावरुन असे दिसुन येते की, २०१४ मधील हवामानबदल निर्देशांक अहवालानुसार कार्बन डायऑक्साईड निर्मितीमध्ये सर्वाधिक हिस्सा चीनचा (२२.९५:) आहे. यानंतर अमेरिका (१५.५०:), भारत (५. १४:), रशिया (४.९०:), ब्राझील (४.१२:) यांचा क्रमांक लागतो. आकडेवारीवरुन जे देश प्रचंड वेगाने आर्थिक प्रगती साध्य करीत आहेत त्यांच्याकडून प्रचंड प्रमाणात कार्बन उत्सर्जन होवून हवामानात बदल घडून येत आहेत हे स्पष्ट होते.

जगातील हवामान बदल व तापमानवाढीची दाहकता अधिक जाणवू लागल्यामुळे आज सर्वच राष्ट्रे पर्यावरण संवर्धनासंदर्भात एकत्र येत असताना दिसून येतात. युनोनेही वेळोवेळी जागतिक हवामान परिषद व तापमान वाढीची कारणे शोधण्यासाठी परिषदांचे आयोजन करत आहे. ३० नोव्हेंबर ते ११ डिसेंबर २०१५ दरम्यानही फ्रान्समधील पॅरिस येथे हवामान बदल विषयक जागतिक परिषदेचे आयोजन करण्यात आले. या परिषदेत जगातील एकूण १९५ राष्ट्रांनी सहभाग घेतला. या परिषदेत भारताची भूमिका स्पष्ट करताना भारताचे पंतप्रधान नरेंद्र मोदी म्हणाले की, सन २०३० पर्यंत भारत हरितगृह वायुंचे उत्सर्जन ३५: पर्यंत कमी करेल आणि स्थापित उर्जा निर्मिती क्षमतेच्या ४०: उर्जा पुनर्विकरणीय उर्जास्त्रोतापासून मिळवली जाईल. तसेच वातावरणातील किमान २.५ अब्ज टन कार्बन डायऑक्साईड शोषून घेण्याची क्षमता असलेले वनीकरण तयार करण्याची भारताची योजना असल्याचे मोदी यांनी नमूद केले. भारतातील दिल्ली सरकारही हवेतील प्रदूषण कमी करण्यासाठी वाहनधारक चालकांसाठी 'ऑड इन वन' ही योजना राबवत आहे. एकुणच हवामान बदल व तापमान वृद्धीने मानव जातीवर विपरीत परिणाम होत असुन एकविसाव्या शतकात जगासमोर गंभीर आव्हान निर्माण झाले आहे. हवामान बदल व तापमान वृद्धीत घट करण्यासाठी युनोसहीत जगातील सर्वच राष्ट्रांनी प्रामाणिकपणे प्रयत्न करणे गरजेचे आहे.

सारांश:

वांशिक संघर्ष, अण्वस्त्रांची स्पर्धा, दहशतवाद, वाढती लोकसंख्या व गरिबी, प्रदूषण व तापमानवृद्धी या जगातील प्रमुख पाच समस्यांचे अध्ययन केल्यास असे दिसून येते की, या समस्यांची व्याप्ती खूप मोठी व दीर्घकालीन आंतरराष्ट्रीय राजकारणावर या समस्या परिणाम करणा–या आहेत. या समस्यांच्या बाबतीत जागतिक शिखर संघटना असणारी युनोने अधिक वेगाने व परिणामकारक कार्य करणे गरजेचे आहे. वरील समस्यांत लोकसंख्या हा मुद्दा सोडला तर इतर समस्येत जागतिक महासत्तांचा दुटप्पीपणा व राजकारण वेळोवेळी आडवे आलेले आहे. त्यामुळे महासत्ता व इतर राष्ट्रांनी समन्वय साधून जगाच्या व प्रादेशिक व राष्ट्राचे हित साध्य करण्यासाठी व जागतिक शांतता निर्माण करण्यासाठी प्रामाणिक प्रयत्न करण्याची आवश्यकता आहे.

उपाययोजना व शिफारशी:

१. जागतिक पातळीवर वांशिक संघर्ष रोखण्यासाठी युनोने कायमस्वरुपी उपाययोजना केल्या पाहिजेत.
२. वांशिक संघर्षासंदर्भात प्रादेशिक व राष्ट्रीय स्तरावर कायदा केला पाहिजे.
३. आण्विक शस्त्रास्त्रस्पर्धेस आळा घालण्यासाठी युनोच्या माध्यमातून कडक कायदे करावे.
४. दहशतवादी संघटनांचा बिमोड करण्यासाठी महाशक्ती राष्ट्रांनी एकत्र यावे.
५. लोकसंख्या वाढीस लगाम घालण्यासाठी जागतिक पातळीवर युनोने कायदे करावे.

६. पर्यावरणासंदर्भातील कायदे व कराराचे जगातील सर्व राष्ट्रांनी पालन केले पाहिजे.
७. जागतिक हवाप्रदूषण व तापमानवृद्धी रोखण्यासाठी अमेरिका, चीन, भारत यासारख्या राष्ट्रांनी एकत्रीत कार्य केले पाहिजे.
८. अमेरिका समवेत इतर महाशक्ती राष्ट्रांनी जागतिक समस्येबाबतीत दुटप्पी भूमिकेचा अवलंब करु नये.

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He / She presented a paper entitled "Role of online Banking System in Cashless Economy"

His / Her active participation in this seminar is deeply appreciated.

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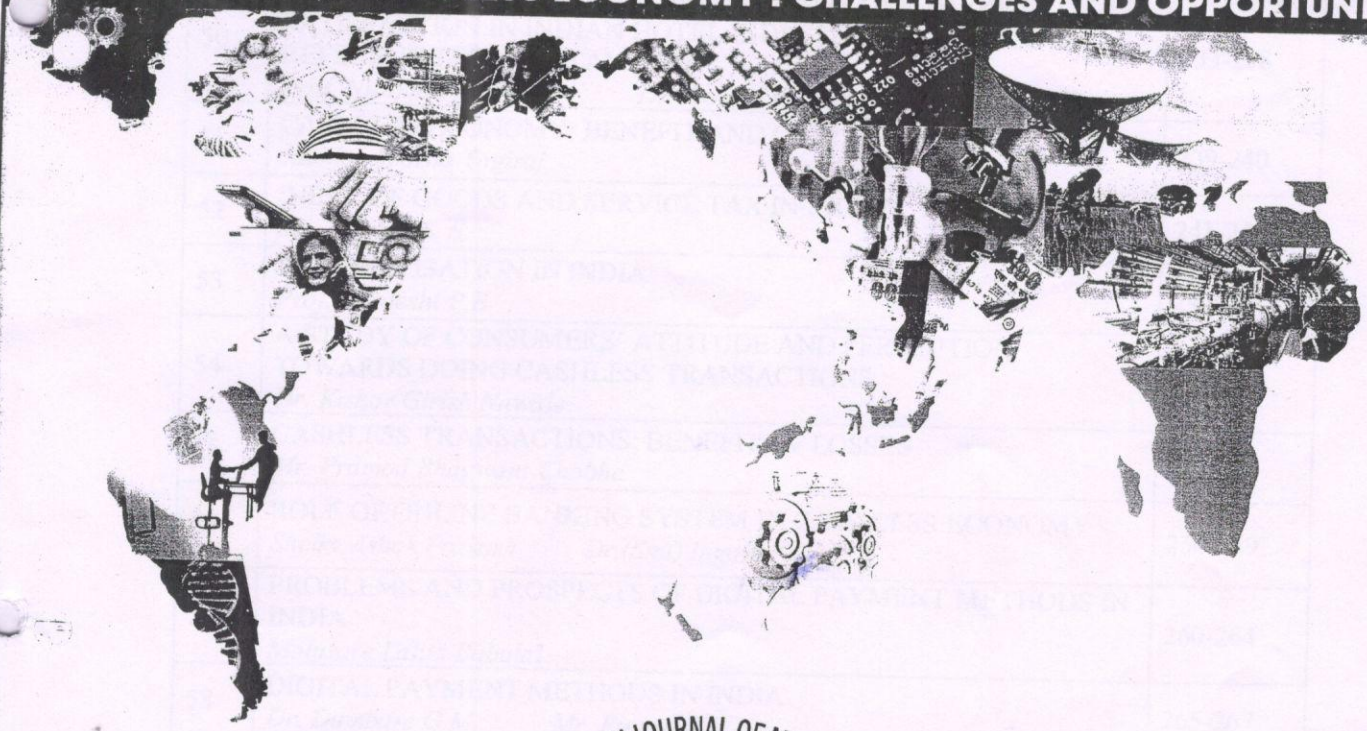

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ROLE OF ONLINE BANKING SYSTEM IN CASH LESS ECONOMY

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Abstract

Today traditional banking services based on lending and deposit taking operations only part of banking activities Indian banking industry touches the lives of millions of people and it is growing at a fast pace. This industry is facing number of challenges like changing needs and perceptions of customers, amendments in various laws, advancements in information and communication technology etc. The pressure of meeting these challenges have compelled banks to change the old ways of doing the business and in order to improve the quality of services, reduction in transaction cost and to bring transparency in transactions, banks have invested huge funds in ICT and have adopted ICT networks for delivering a wide range of banking products and services in recent past. This paper aims to provide an overview of the electronic banking services highlighting various aspects of e banking. E banking, a term used for new age banking represents an automated delivery of new and traditional banking products and services directly to customers through electronic.

Key Words :- *Banking Industry, Strengths of E Banking, Drawbacks of E Banking, E-Commerce Security Threats, E banking, Online banking and mobile banking.*

Introduction:

Banking in India has been through a long journey which has witnessed a number of changes which covers the traditional banking practices from British rules to independence, than up to nationalization of banks in 1969, Nationalization to privatization of banks and now increasing number of foreign banks. This sector has undergone a huge transformation especially in the last two decades when a number of innovations changed the way of banking. The banking sector is being reshaped by globalization, privatization, competition and customer needs Developments in the field of information and communication technology strongly support the growth and inclusiveness of the banking sector by facilitating inclusive economic growth. Technology in Indian banking has evolved substantially from the front end operations with back office automation to today's online, centralized and integrated solutions. with the development of information technology we have experienced following major events that took place in the banking business.

- Card based payments Debt / credit cards
- Introduction of Electronic Clearing Services (ECS)
- Introduction of Electronic Fund Transfer (EFT)
- introduction of National Electronic Fund Transfer (NEFT)

Strengths of E Banking:

Now a day's many banks have begun to offer customers the option of online-interne banking i.e. E banking, a practice that has advantages for both parties The convenience of being able to access the accounts at any time as well as the ability to perform transactions without visiting a local branch increases the popularity of e banking. Internet banking i.e. E banking has plenty of perks. These includes

1. Customers convenience Direct banks are for business there nternet connection. They are open 24 hours a day, 365 year. customer service is normally provided around the clock. Teal time

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account balances and information is available at the touch of a few buttons. This makes banking faster, easier, efficient and even more effective. Updating and maintaining a direct account is also easier

2. Services Direct banks typically have more robust websites that offer a comprehensive set of features that may not be found on the website of traditional banks. These include functional budgeting and forecasting tools, financial planning capabilities, investment analysis tools, loan calculators and equity trading platforms. In addition, they offer free online bill payments, online tax forms and tax preparation
3. Mobility Internet banking also includes mobile capabilities New applications are continually being created to expand and improve this capability on smart phones and other mobile devices
4. Transfer Accounts can be automatically funded from a traditional bank account via electronic transfer. Most direct banks offer unlimited transfer at no cost
5. Ease of use Online accounts is easy to set up and require no more information than a traditional bank account. Many offer the option of inputting the customers date online or downloading the forms and mailing them in. If the customer runs into a problem, he has the option of calling or e-mailing the bank directly
6. It provides various services to the businessmen at par with the international standards with low transaction cost
7. Speed and easiness of conducting the digital transactions compared to paper based dealing with walk in customers
8. E banking gives customers the control over nearly every aspect of managing his bank account. Besides, the customers can buy and sell securities, information, check currency rates, check balances, see which cheques are cleared transfer money, view transaction history and avoid going to actual bank .
9. Internet banking is also environmentally friendly, electronic transmissions requires no paper, reduces vehicle traffic and are virtually pollution free. eliminate need for buildings and office equipments

Drawbacks of E Banking:

Although the E Banking is advantageous not only to the banks but also to Although the E banking customers over traditional banking, it is associated with certain drawbacks which cannot be overlooked by the customers. Following are certain drawbacks of E banking

1) Traditional banking provides the opportunity to develop a personal relationship with that bank which is not possible in E banking.
2) Poorly delivered E banking services can be slow and time consuming.
3) it can be difficult for an average bank customer to get familiarized with the bank s website and E banking channel as each bank has its own unique website and methods.
4) There is a need to building up a pool of software application developers and database administrators who can handle E business application under proper supervision.
5) E banking could result in the siphoning off money by perpetrators of computer crime. Therefore, banks need to put place of computer security related hardware and software.
6) The technological transformation has also created a near among customers due to security, unawareness and unfamiliar with the use of technology.
7) Because the internet allows services to be provided from anywhere in the world, there is a danger that banks will try to avoid regulation and supervision.

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8) Traditional banks sometimes offer special services to loyal customers such as preferred rates and investment advice at free of cost. In addition, routine services required for many financial and legal transactions such as no bank guarantee etc is not , available on line

E-COMMERCE SECURITY THREATS

1) **Tricking the Shopper:** These attacks involve surveillance of the shoppers behavior, gathering information to use against the shopper. For example, a mother's maiden name is a giving away a password once the challenge question is provided, then not only has this been compromised, but it is also likely that the shopper used the same login ID and password on other sites
2) **Snooping the shopper's computer**: Millions of computers are added the Internet every month. Most users' knowledge to of security vulnerabilities of their additionally, software and hardware vendors, in their quest to ensure that their products are easy to install, ship products with security features disabled. In most cases, enabling security features requires a non-technical user to read manuals written for the technologist The confused user does not attempt to enable the security features. This creates a treasure trove for attackers.
3) **Sniffing the network**: In this scheme, the attacker monitors the data between the shoppers computer and the server. He collects data about shopper or steals personal information, such as credit card numbers. There are points in the network where this more practical than others. This style
4) **Guessing passwords**: Another common attack is to guess a user's password. as the of attack is manual or automated. For example, if the shopper uses their child's name of password. Automated attacks have a higher likelihood of success, because the probability guessing a user ID/password becomes more significant as the number of increases Tools exist that use all the words in the to test user combinations, or that attack popular user ID/password combinations. The attacker can automate to go against multiple sites at one time

Conclusion:

The Reserve Bank of India is doing its best to methods of payments which will bring security and efficiency to the payments system and make the whole process easier banks. The Indian banking sector been growing innovating and trying to adopt and implement electronic payments to enhance the system. Though the Indian payment systems have always been dominated by paper-based transactions, e-payments are not far behind. since the introduction of e-payments in India, the banking sector has witnessed growth like never before This has happened as a result of advances in technology and increasing consumer awareness of the ease and efficiency of internet and mobile transactions. In the case of India, the RBI has played a pivotal role in facilitating e-payments by making it compulsory for banks to route high value transactions through Real Time Gross Settlement (RTGS) and also introducing NEFT (National Electronic Funds Transfer) and NECS (National Electronic clearing Services) which has and businesses to electronic methods of payment. With the changing times and changed the methods of payments in India. E-payments in India have been growing at a fast rate of 60% last Due to the efforts of the RBI and the BPSS (Board for Payments and settlement system) now over 75% of all transaction volume are in the electronic mode, including both large- value and retail payments. Out of this 75%, 98% come from the RTGs (large-value payments) whereas a meager 2% come from retail payments. This means consumers have not yet accepted this as a regular means of paying their bills and still prefer conventional methods. Retail payments if made via electronic modes are done by ECS (debit and credit) EFT and card payments

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This is to certify that Mr. / Mrs. / Prof. / Dr. Ashok Prakash Shelke

of Mamasaheb Mohol College, has participated / presented the paper entitled

Foreign Direct Investment and Indian Economy

at the State Level Seminar on "Changing Economic Policies of India : It's Impact" held on 2nd February, 2018 at Mamasaheb Mohol College, Pune.

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Foreign Direct Investment and Indian Economy

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[1]Research Scholar, [2]Asso.Professore
Prof. Ramkrishana More Arts, Commerce & Science Akurdi,

Abstract

Make in India was launched by Prime Minister, Narendra Modi on 25 September 2014, to encourage companies to manufacture their products in India. He has launched this ambitious campaign with an aim to turn the country into a global manufacturing hub. This study focuses on the changes in FDI rate after introduction of Make in India by Modi and growth due to increase in the FDI rate. In August 2014, the Cabinet of India allowed 49% foreign direct investment (FDI) in the defence sector and 100% in railways infrastructure. FDI inflows before and after the "MAKE IN INDIA" campaign were compared using the quantitative data which has been collected from various reports like Reserve Bank of India Ddtabase on Indian Economy, database of department of Industrial Policy and Promotion. It has been analyzed that there is high correlation between Industrial Production and FDI inflows. The effect of FDI on economic development ranges from productivity increased to enable greater technology transfer

Keywords: FDI, FDI Opportunities in Indian Economy, FDI. Challenges before Indian Economy

Introduction

FDI is now regarded as a important driver of a growth. Emerging market economics look upon as a one of the easiest means to fulfill their financial, technical, employment generation, competitive efficiency requirements This created opportunities for location advantages and the facilitated strategic alliances, joint alliances, joint ventures, collaboration over R & D. FDI is one example of international factor movements. A foreign direct investment is controlling ownership in business enterprise. A FDI is an investment in form of controlling ownership in a business one country by an entity based in another country. The organization of economic co-operation and development (OECD) define a control as a owning 10% or more of the business Business that make foreign direct investment are often called multinational corporation (MNC). With the initiation of globalization, developing countries, particularly those in a Asia have been witnessing immense surge of FDI in flows during the past two decades. Even though India has been a late comer to FDI scene compared to other east Asian countries.

The Indian Scenario:

With a contribution of 14% to the national GDP and employing 7% of the total work force (only agriculture employs more) in the country, the retail industry is definitely one of the pillars of the Indian economy. India being a signatory to world trade organizations General Agreement on Trade in services, which include wholesale and retailing services, had to open up the retail trade sector to foreign investment 51% investment in a single brand retail outlet was permitted in 2006. The Union Cabinet on 24 November 2011 approved 51% foreign direct investment (FDI) in multi-brand retail. The cabinet also decided to raise the cap on foreign investment in single-brand retailing to 100% from 51% An estimated Rs.30-lakh-crore retail sector was thus opened to foreign investors by clearing a bill that allows 51 per cent investment in multi-brand retail. India currently allows 51% foreign investment in single-brand retailers and 100 per cent for wholesale operations but no FDI in multi-brand retail.

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- shortage of desirable talent and lack of skilled manpower.
- The inefficiencies in the current supply chain and the presence of numerous intermediaries are difficult to curtail. Along with the above mentioned opportunities the following regarded as major challenges, Risk and Uncertain, Challenge to sovereignty of nation Workers are profit is not fixed.etc

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GLOBALIZATION AND INDIAN INDUSTRY

[1]Shelke Ashok Prakash, [2]Dr.(Smt) Ingole P.S
[1]Research Scholar, [2]Asso.Professore
Prof.Ramkrishana More Arts, Commerce & Science Akurdi,Pune

Abstract-

Globalization in India has been advantageous for companies that have ventured in the Indian market. By simply increasing their base of operations, expanding their workforce with minimal investments, and providing services to a broad range of consumers, la companies entering the Indian market have opened up many profitable opportunities. Indian companies are rapidly gaining confidence and a themselves now major players in globalization through international expansion. From steel to Bollywood, from cars to IT, Indian companies are setting themselves up as powerhouses of tomorrow's global economy.

Key words :- Indian Industries and Industrialization , Textile Industry, Food Processing Industry, Chemical Industry, Steel Industry, Software Industry, Mining Industry, Petroleum Industry, Effects of Globalization on Indian Industry

INTRODUCTION

India has been successful in achieving autonomy in producing different basic and capital products since independence. The productivity of the major Indian industries incorporates aircraft, vessels, automobiles, steam engines, heavy electrical equipment, construction machinery, chemicals, precision equipments, communication instrument, power generation and transmission tools and computers.

Indian Industries and Industrialization

since independence to 1980: During this period there was restrictive growth of private sector and government's permission was required to set up any private enterprise in India Despite this the GDP grew at a rate of 1.4% per annum from 1940-1970. other factors such as poverty and famine lowered India's economic growth rate during this period and with the presence of very few top producers of major industrial goods the absorption of was greater which lead to monopolistic pricing. India during this domestic productivity phrase lagged behind in terms of economic growth the rest as of world grew and flourished through overseas trade.

1980 to mid-1990s : Post 1980s India saw liberalization and achieved further impetus in mid-1991. The nation witnessed historical upsurge in per capita GNP in 199495 the industrial output growth registered 8.4% growth and the exports rose by 27%. This resulted in a 10%drop in inflation in the mid-1990s.

after 1990s: Since its liberalization policy, India has opened several public sector enterprises. The exports saw a 17% rise in 1994 and 28% in 1995-96, over 90% of India's imports are backed by export revenues. At present the current account arrears is less than 1% of GDP and foreign-exchange profits are soaring at $20 billion. The food stocks have witnessed an all-time increase of 37m tones.

The private sector, which was neglected by previous governments, contributes to two-thirds of India's GDP The shift of the state's responsibility from a chief investor to a catalyst of private enterprise has paved way to a new accord on liberalization. Experts believe that the contribution of India in the world GDP is estimated to increase from 6 to 11% by the year 2025,

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while on the flip side the contribution of us in world GDP is presumed to decline from 21% to 18%. This indicates towards the emergence o India as the third biggest global economy after US and China. The evaluation is supported by the overall development in all the sectors in India, in which the key sector is the industry sector.

Going by the past records the Industry sector in India registered a growth rate of 6.2 in October 2003, which further increased by 4% in the corresponding month of the next fiscal year.

List of major industries in India:

Textile Industry: This industry covers a wide range of activities ranging from generation of raw materials such as jute, wool, silk and cotton to greater value added goods such as readymade garments prepared from different types of manmade or natural fibres. Textile industry provides j opportunity to individuals, thus playing a major role in the nation's economy. It has 4 per cent share in GDP and shares 35% of the gross export income besides adding 14% o value addition in merchandizing sector.

Food Processing Industry: In terms of global food business, India accounts less than 1.5% inspite of being one of the key food producing nations worldwide. But this on the other hand also indicates the enormous possibilities for the growth of this industry. Supported by the GDP estimates, the approximate expansion of this sector is between 9-12% and during the tenth plan period the growth rate was around 6-8%, Food processing industry provides job opportunities to 1.6 mm people and it is estimated to expand by 37 mm by 2025

Chemical Industry: Indian chemical industry generates around 70,000 commercial goods ranging from plastic to toiletries and pesticides to beauty products. It regarded as the oldest domestic sector in India and in terms of volume it gives a sense of pride to India by featuring as the 12 largest producer of chemicals. With an approximate cost of $28 billion, it amounts to 12.5% of the entire industrial output of India and 16.2% of its entire exports. Under chemical industries some of the other rapidly emerging sectors are petrochemical, agrochemical and pharmaceutical industries Industry:

Cement industry : India has 10 large cement plants governed by the different State governments. Besides this India have 115 cement plants and around 300 small cement plants. The big cement plans have installed competence of 148.28 million 11.10 tons per annum whereas the mini cement plants have the total capacity of million tones per annum. This totals the capacity of Indian cement industry at 159.38 million tonnes. Ambuja cement, J K cement, Aditya cement and L & cement are some of the major steel companies in India.

Steel Industry: steel industry is 400 years old and has a past record of Indian registering 4% growth in 2005-06. The production during this period reached at 28.3 million tones. India steel industry is the 10th largest in the world which is evident from its Rs 9,000 crore of capital contribution and employment opportunities to more than 0.5 million people. The key players in steel industry are Steel Authority of India (SAIL), Bokaro Steel Plant, Rourkela Steel Plant, Durgapur Steel Plant and Bbilai Steel Plant.

Software Industry: Software Industry registered a massive expansion in the years. This industry signifies India's position as the knowledge based economy with a Compounded Annual Growth Rate (CAGR) of 42.3%, In the year 2008, the industry grew by 7% as compared to 0.59% in 1994-95.

Mining Industry: The GDP contribution of the mining sector industry varies from 2.2% it to 2/5% only but going by the GDP of the total industrial sector to contributes around 10% to 11%.

Even mining done on small scale contributes 6% to the entire cost of mineral production. Indian mining industry provides job opportunities to around 0.7 million individuals.

Petroleum Industry: Petroleum industry started its operations in the year 1867 and is considered as the oldest Indian industry. India is one of the most flourishing oil markets in the world and in the last few decades has witnessed the expansion o top national companies like ONGC, HPCL, BPCL and IOC.

Effects of Globalization on Indian Industry

Effects of Globalization on Indian Industry started when the government opened the country's markets to foreign investments in the early 1990s. Globalization of the Indian industry took place in its various sectors such as steel, pharmaceutical petroleum, chemical, textile, cement, retail, and BPO.

Globalization means the dismantling of trade barriers between nations and the integration of the nations economies through financial flow, trade in goods and services, and corporate investments between nations. Globalization has increased across the world in recent years due to the fast progress that has been made in the field of technology, especially in communications and transport. The government of India made changes in its economic policy in 1991 by which it allowed direct foreign investments in the country. As a result of this, globalization of the Indian Industry took place on a major scale.

The various beneficial effects of globalization in Indian Industry are that it brought in huge amounts of foreign investments into the industry, especially in the BPO pharmaceutical, petroleum, and manufacturing industries. As huge amounts of foreign direct investments were coming to the Indian industry, they boosted the Indian economy quite significantly. The benefits of the effects of globalization in the Indian Industry are that many foreign companies set up industries in India, especially in the pharmaceutical BPO, petroleum, manufacturing and chemical sectors, and this helped to provide employment to many people in the country. This helped reduce the level of unemployment and poverty are that in the country. Also the benefit of the effects of globalization on Indian Industry the foreign companies brought in highly advanced technology with them and this helped to make the Indian industry more technologically advanced.

The various negative effects of globalization on Indian Industry are that it increased competition in the Indian market between the foreign companies and domestic companies with the foreign goods being better than the Indian goods, the consumer preferred to buy the foreign goods. This reduced the amount of profit of the Indian industry companies. This happened mainly in the pharmaceutical, manufacturing, chemical, and steel industries The negative effects of globalization on Indian Industry are that with the coming of technology the number of labor required decreased and this resulted in many people being removed from their jobs. This happened mainly in the pharmaceutical, chemical, manufacturing, and cement industries.

The effects of globalization on Indian Industry have proved to be positive as well as negative. The government of India must try to make such economic policies are beneficial and not harmful.

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of Mamasaheb Mohol college, Paud Road.

participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Sports Policy for Disabled People in India.

Yogesh

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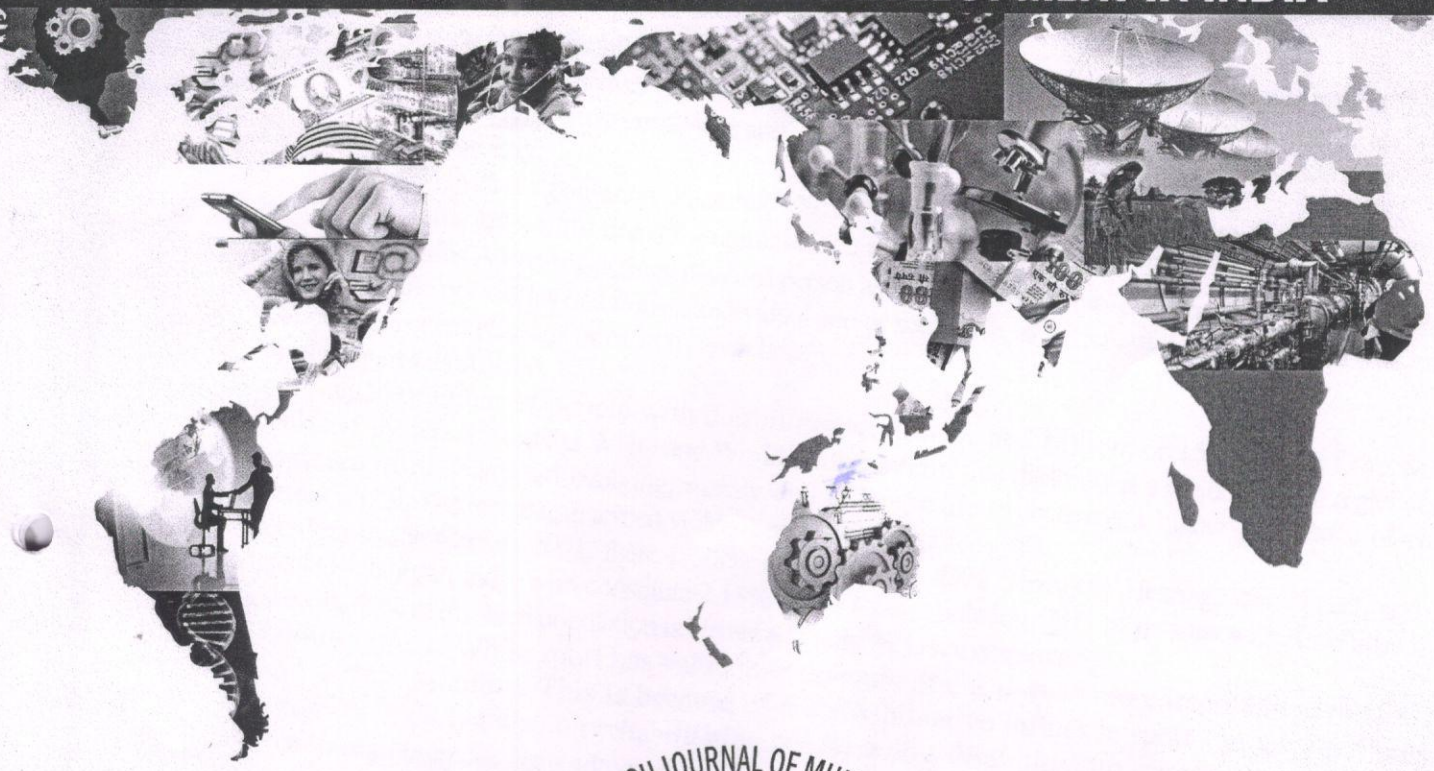
SPECIAL ISSUE ON SPORTS FOR SUSTAINABLE DEVELOPMENT IN INDIA



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Sports policy for Disabled People in India

Dr. Rupali P Shendkar
Mamasaheb Mohol college Paud road Pune

Introduction

Today, the idea of people with a disability being able to participate in sport and physical activity is not s uncommon. In many developed countries, opportunities exist from the grassroots to elite levels for people with disability to showcase their abilities in sport and physical activity. But this is not the case in all parts of the worl Whilst there has been progressive and positive change in quality of life for people with disabilities and the interest in participation in sport which is not only in many developed countries but in developing countries lik India also. Studying it therefore, will help us to better understand and appreciate the contribution of various earlie as well as latest policies and organizations for the promotion of disable sports in India.

What is Disability?

Anyone may experience disability at some point in his/her lifetime. Disability is a normal part of the human experience, and people with disabilities are part of all sectors of the community: men, women, and children; indigenous and non-indigenous; employers and employees; students and teachers; consumers and citizens.

Definitions of Disability:

- The World Health Organisation states that "disability is a restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being."
- United Nations Assembly defined disabled person as "any person unable to ensure by himself, wholly or partially, the necessities of a normal individual and/or social life, as a result of deficiency, either congenital or not, in his or her physical or mental capabilities".

Population of Disability:

Estimating the number of people with disabilities worldwide at 1 billion, or 15 percent of the world's population, the report from the WHO and World Bank confirms that disability is a major issue on a global scale. The causes of disability are evolving, mainly due to longer life expectancy, a higher prevalence of chronic illnesses, and also an increase in armed violence and natural disasters.

According to the Census 2001, there is 28% in Movement, 49% Seeing6% Hearing, 7%, Speech and 10% Mental Disability in India who constitute 2.13% of the total population. 75% of persons with disabilities live in rural areas, 49% of disabled population is literate and only 34 % are employed.

Disability Sport: While sport has value in everyone's life, it is even more important in the life of a person with a disability. This is because of the rehabilitative influence sport can have not only on the physical body but also on rehabilitating people with a disability into society. Furthermore, sport teaches independence. Nowadays, people with a disability participate in high performance as well as in competitive and recreational sport.

From the late 1980s, organizations began to include athletes with disabilities in sporting events such as the Olympic Games and Commonwealth Games. However, many sports are practiced by persons with a disability outside the formal sports movements, for example: Wheelchair basketball, Wheelchair dancing, Weightlifting, Swimming, and many other sporting activities you can join if you are mentally or physical disabled.

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Major disability sporting events include:

Disabled Veterans - The U.S. Department of Veterans Affairs' Adaptive Sports programs are dedicated to motivating, encouraging and sustaining participation and competition for disabled. Studies show that adaptive sports provide numerous benefits including:

- Less stress
- More independence
- Higher achievement in education and employment
- Reduced dependency on pain and depression medication
- Fewer secondary medical conditions (i.e., diabetes, hypertension)

Deaflympics - The Summer and Winter Deaflympics are among the world's fastest growing sports events.

Special Olympics - The global Special Olympics movement got its start on 20 July 1968, when the First International Special Olympics Games were held at Soldier Field, Chicago, Illinois, USA.

Disability Commonwealth Games - For the first time in the Games history a number of Para-Sports were included in a fully inclusive Sports Program in Manchester 2002 when 20 countries sent both male and female elite athletes with a disability to compete in 10 events across 5 different Para-Sports; Athletics, Lawn Bowls, Swimming, Table Tennis and Weightlifting. **Paralympic Games** - A multi-sport event for athletes with physical, mental and sensorial disabilities. This includes mobility disabilities, amputees, visual disabilities and those with cerebral palsy. The Paralympic Games are held every four years, following the Olympic Games, and are governed by the International Paralympic Committee.

The Role of Sport for People with Disabilities:

- Sport can play a key role in the lives and communities of people with disabilities, the same as it can for people without a disability. There is a wealth of evidence to support participation in sport and physical activity for people with a disability concerning trends, barriers and benefits of participation.
- Scientific research has been conducted across disability groups that make known participation in sport leads to improved levels of physical health and well-being. It has also been shown to improve physical fitness and general mood in psychiatric patients with depressive and anxiety disorders. Additionally, it has been linked to improvements in self-confidence, social awareness and self-esteem and can contribute to empowerment of people with disabilities.
- Sport can have a positive impact on the lives of people with disabilities but many face challenges to getting involved in sport.
- In article 30 of International Disability Alliance Guidance Document May, 2010regarding Participation in cultural life, recreation, leisure and sport clearly states about Access to culture, recreation, leisure and sport are also important areas to be taken into account for the full participation in society of persons with disabilities and create following questions:
  - Does public funding provided to cultural, leisure/touristic and sporting facilities and organizations require compliance with accessibility standards?
  - Do general accessibility plans include the elimination of barriers in culture, recreation, leisure and sport?
  - Is the State providing support to disability-specific initiatives in the area of sports and culture?
  - Is the State promoting and supporting deaf culture?

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National Policy for Persons with Disabilities

Objective: Provision will be made for special sports, cultural and recreation for physical, mental, intellectual, and social development of people with disability.

Policy: Sports, cultural and recreational activities will be carried out in accordance with the nature of disability and necessary human resources related to this will be developed for physical, mental, intellectual and social development of people with disability.

Appropriate provisions will be made to provide access to people with disability in entertainment sports, gardens etc.

Strategy:

- Trainers training program will be carried out to operate sports, cultural and recreational activities for people with disability.
- Provision will be made for an additional unit for development of sports related to people with disability in addition to provision for representation of people with disability in the National Sports Council.
- Provisions will be made for sports and recreation in educational institutions where children with disability study in accordance to nature, and necessary materials and assistance related to this will be provided

The National Disability Sports Organisations: The National Disability Sports Organisations are a good starting point for many disabled people who want to be more active. They provide advice, support and opportunities for people of all ages with specific impairments.

Achievements and Performance of Sports for Disable in India

- Handicapped sports are also included in prestigious ARJUNA AWARDS since1995.
- There are championships as Disabled cricket, blind cricket which are conducted every year
- There were more than 150 players from 14 countries participated in APC Badminton Cup which was held in December 2008
- In IWAS World Games more than 680 athletes from 43 countries took part and India stood 2ndin Medal Tally with a total of 110 medals which was hosted in the year 2009 at Bangalore.
- Gold Medal with the World Record at the 2004 Athens Paralympics Games.
- Special Olympics Bharat is a National sports Federation, recognized by the Ministry of Sports and Youth Affairs, Government of India. The team representing India at 2011 Special Olympics World Summer Games.

Other Special Events

- Special Olympics Bharat was given responsibility for the conduct of these inclusive sports programs in, two major inclusive schemes, one for the Disabled and other PYKKA which were activated in 2010.
- Specialist Trainers from the UK conducted two Trains the Trainer courses specifically for inclusive games for disabled through International Inspiration Program of the British Council. They trained 60 Master Tutors in two courses held in Goa and New Delhi. These Master Tutors conducted the training of the first 60 Master Tutors who trained the first 600 to top Trainees in the LNUPE University to conduct inclusive sports for all children with all disabilities.

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Special Awards / Recognition

- Mr. Satish Pillai was honored for his contribution to the promotion of sports in the country with the Dhyan Chand Life time award by the President of India .
- The De Rozio Award for excellence in Human Enrichment and Education.
- In the Special Educators Category was awarded to Ms.Lina Bardhan.
- Area Director SOBhara – West Bengal who has served the Special Olympics Program for more then20 years
- Rehabilitation Council of India has recognised training done by Special Olympic Bharat which is an organisation recognised by Government of India for approval of education method for the special educators.
- All the educators undergoing training will be accredited with 30 CRE points to fulfill the requirement of 100 points overperiod of 2 years for renewal of their education certificate for the training conducted by Special Olympic Bharat at Lakshmi Bai National University of Physical Education, Sports Authority of India and Community Coaches camps.
- National Trust felicitates 20 Special Olympians from different states who represented India at the 2007 Special Olympics Summer Games were awarded with a plaque, shawl and Rs. 25000/ -at the functions held in their respective states.
- Special Athletes participated in the Queen's Baton Torch run in several States during the Commonwealth Games Delhi 2010

Indian Blind Sports Association

The Association has always played a prominent role in promoting sports among the visually handicapped. It was the initiative of BRA that Indian Blind Sports Association was formed in 1986 as the national level body for the promotion of athletics and different sports for the blind. Indian Blind Sports Association is recognized by the Indian Olympic Association and is affiliated with the International Blind Sports Federation, the apex world blind sports organization, and with Paralympics Committee of India. BRA also hosts jointly with Indian Blind Sports Association, national-level Sports Meets for the Blind once every two years. The Sports Meet is the largest sports event for the visually impaired in the country which attracts hundreds of sports persons from institutions across the country from different states who compete in athletics, chess and swimming.

Conclusions

However, the situation on the ground remains mixed. Persons with physical disabilities are unable to enjoy leisure activities on an equal basis with others as long as transportation systems and public buildings continue to lack barrier-free access, a problem which has not been addressed on a consistent basis by the Government. However, organizations and establishments like the Wheelchair Sports Federation of India, the Indian Blind Sports Association, and the Special Olympics Bharat do provide opportunities for physically and mentally differently-able athletes to participate in sporting activities. Unfortunately, there remains no institution available to coach elite differently-able athletes in India, leaving a gap in attainment of the goals outlined in State policy. In order for persons with disabilities to be able to participate in leisure activities at the level described in government policies, stricter enforcement of these laws is needed.

Under the Constitution of India, there are certain fundamental rights that can be enforced in courts of law. These fundamental rights include the right to equality (Article 14) and the right to live in dignity (Article 21).Disabled citizens have the same rights as other citizens and should be given the opportunities to participate effectively in society.

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Recommendations and suggestions

- Increase support and funding to conduct empirical studies on topics of disability sport and adapted physical activity including, participation levels, attitudes, legislation, barriers and benefits of sport and physical activity.
- Develop further studies of mental health and psychological well-being as an outcome of sport participation for people with a disability.
- Affordable technologies, and increasing accessibility and universal designs in both the environment and the structures/rules of sports.
- Produce inclusive coaching manuals and educational material in multiple languages and formats to make it accessible to developing countries
- Research and develop monitoring and evaluation tools to ensure quality sport programmes are being implemented effectively and meeting target outcomes.
- Create opportunities to share knowledge, experiences and best practice.
- Utilise new technologies and online communication to enhance collaboration between development organisations, researchers and programmed staff.

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Dr. Shendkar R.P.

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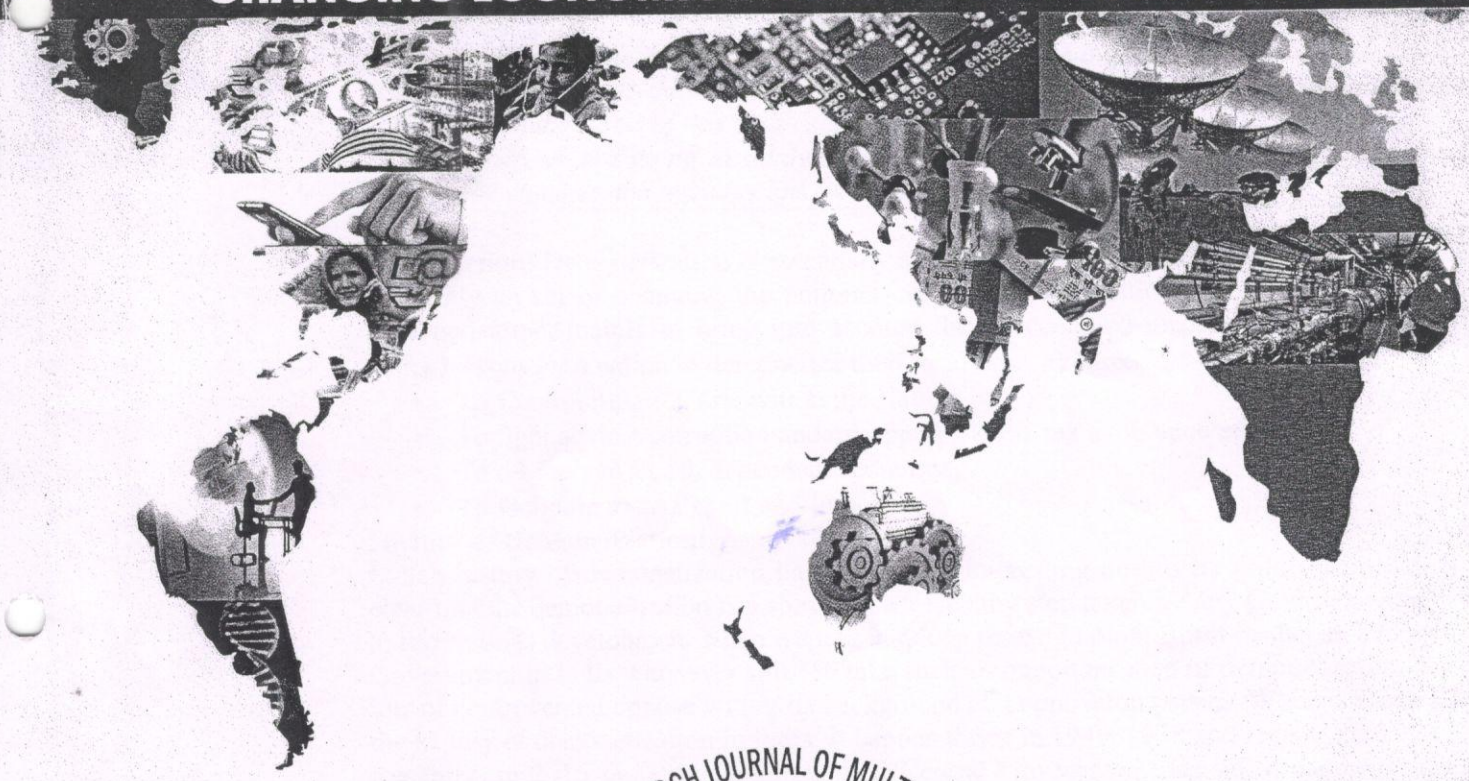
SPECIAL ISSUE ON CHANGING ECONOMIC POLICIES OF INDIA: IT'S IMPACT



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IMPACT

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Demonetization: Impact on Small Scale Industries

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Abstract:
Demonetization is one of the important tools used by the government of India to deal w barrier mainly named as black money as well as the other reason as to increase the im plastic money and E-Transaction within the business and for other activities. Indian economy of the fastest growing economies in the world and the policies and norms being footstep up government held quite responsible for the any extreme change in the growth of economy scale industries act as the backbone Nation. The economic development of the Nation ge depends upon the status of this Small scale Unit.
In this paper we are going to analysis the impact of demonetization on Indian economy analyze the changes and agendas link with the demonetization.

Introduction: Demonetization is essentially an act of band the currency unit from its legal s is mainly an act of changing the national currency of any nation. There may be any re demonetization, mainly to bring into account the unaccounted income of the Nation. Th many reasons for a nation to demonetize their local units of currency:–

- To Control inflation rate within the Nation.
- To fight against corruption and misappropriation, tax avoidance etc.
- To discourage a cash dependent economy.
- To facilitate trade Export and Import.

History of Demonetization:
Indian history of demonetization has been quite interesting due to its political impact. It clear that the demonetization has show to be a Healthy step taken by any Govt. which only l to the Nations development when we talk in a long term situation. But it is also an interestin Government in India whenever spirit to take such an important Step of demonetization has l lots of controversial oppose within its background and opposition parties. When we took a l the history of demonetization in India, It happen thrice in 1946, 1978 and recently in 2016.
Recently, in 2016 our prime minister and Central Government has taken a courageous demonetization, with effect to which all the 500/- and 1,000/- Rs currency has been demo from the immediate effect. The main reason behind this step is to fight against the black mo to bring into account the ban accounted currency spread over the nation. Though due to t many effects has been taking place some positive some negative but it is one of the e necessity of the nation.
The worst hit sector due to its effect has been SSI who is completely depends upon the r currency and investment which get blocked due to the step of demonetization. Considera effect has been only for the shorter period of time, its long term impact can be easily qui coming future.

SSI (Small Scale Industries):
In Indian economy small-scale and cottage industries take up an important place, because employment potential and their contribution to total industrial output and

Characteristics of Small-Scale Industries:
1) Technology

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2) Management and control
3) Area of operation
4) Ownership
5) Dispersal of units
6) Flexibility

In Indian economy small-scale and cottage industries occupy an important place, because of their employment prospective and their contribution to total industrial output and exports. Government of India has been quite actively working in promoting this sector as this sector has a big impact over the development of the nation.

Summary Results of Third Census with Respect SSI

Registered	Un–Registered	Total
25.39	6.86	32.25

Table 1: No of Units (In Lakhs Nos.)

1) Table showing the Small Scale Industries Status in India

2) Details of Coverage

Total no. of units surveyed	**22,62,401**
Number of working units	**3,74,974(61%)**
Number of closed units	**8,87,427 (39%)**

Table 2 Registered SSI Sector

No Of Village / Urban Blocked Surveyed	**19,579**
No. of unregd. SSIs/ SSSBEs selected for survey	**1,68,654**
No. of unregd. SSIs/ SSSBEs actually surveyed	**1,67,6665**

Table 3: Unregistered SSI Sector

Not aware of the provisions for registration	**53.13%**
Not interested	**39.86%**
Complicated procedure	**3.87%**
Local laws/ regulations do not permit	**1.76%**
Clearance not available from Municipality etc	**1.38%**

Table 4: Estimated no. of units and reasons for non-registration
(Ref:dcmsme.gov.in)

Impact of Demonetization on Small Scale Industries:

Small scale industries is the backbone of the Indian economy development and Demonetization is an remedial measure taken by the central Govt. to cure and boost the economy of the nation, still the sector which is most negatively affected by this action is SSI, Its impact on small Scale industries are :

1) **Slowed Down Progress Rate:** SSI units mainly required lots of working capital and transaction of money from various entities to the target entity but due to demonetization the market lacked the sufficient amount of currency which is essential for these units to run fluently and smoothly.
2) **Dip in Revenue:** the revenue generation Of SSI has been highly affected by the demonetization. As the working required get ostentatious, it directly resulted in the revenue generation get cut down and hence completely affected the growth rate of units. As per All India Manufacturing Organization Report, a dip in 50% revenue generation has been viewed in SSI units due to demonetization.

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3) **Cut Off in Jobs:** The Most Adverse effect that could have been avoided or needs to be rec in the future is the cut off the job in this units, As per the All India Manufacturing Organiz Reports , In the first 34 days small scale industries has losses 35% of the Job. The All Manufacturing Organization report has criticized the government for not anticipating repercussions of demonetization. It says the government was "not prepared for such a jo industries even after one month."
4) **Plunge GDP:** a dip in GDP has been immediately observe in the fourth quarter of 2016-17 first quarter of 2017 -18 GDP Growth rate, though this is just an temporary effect due to impact of demonetization on Indian industrial sector and will be move up soon as the Govt. predicted a high increase in GDP in December 2017.

Effect of Demonetization Over The Nation:

Demonetization is an bold step taken by the Govt. of India for the future benefits and prospect the Nation, Though it bring vast complications and some uneasy periods at the starting but as time gone pass it will bring stability and balance with its penalty. Shortage of currency at the sta period is one of the most equal sign of demonetization during its starting phase. One thing tha needed to be criticized a bit is the policies and preparation prior to the announcement of monetary action, but it is hard to predict is there any proper channel or any preparation can be d prior to the demonetization. It can be said that with time the demonetization will bring lots positive with the accounted no of currency and by removing the other causes which are affect the growth of the Nation.

Conclusion:

- The Small Scale units are the most adversely affected unit due to Demonetization because its working nature mainly revolves around the monetary system. And demonetization i curative measure mainly deals with the monetary system of the Nation.
- As per the acchotam survey Demonetization would leave a negative effect on the small a medium enterprises, job creation and rural consumption in the short-term whereas the lar and well-organized sectors stand to benefit in the long-term, according to a rece ASSOCHAM Bizcon Survey.
- The contrast in perception pointed out by the survey is quite severe. According to t survey, 81.5% of the participants felt that Small and Medium Enterprises have be impacted and would still suffer the remaining impact for one more quarter. However, an equal number of respondents said that for big enterprises, the extraordina measure of demonetization impact would be positive. But its effect and impact are on temporary in nature as soon as the money supply get normal in the market the negative impa get neutralize and the action of demonetization taken by the government only boost th performance of this unit.

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"Sports for Sustainable Development in India"

2nd-3rd February, 2018

Organized by

Department of Physical Education and Sports

in association with

Savitribai Phule Pune University, Pune

Certificate

This is to certify that Prof. / Dr. SHINDE SHIVAJI B

of Research schallar, T.M.V. PUNE

participated and presented a research paper in the National level conference on ***"Sports for Sustainable development in India"*** *jointly organised by Savitribai Phule Pune University and Department of Sports and Physical Education, Mamasaheb Mohol College on 2nd and 3rd Feb. 2018.*

He / She has presented a paper entitled Importance of adventure sports and tourism potential of forts in Pune District.

Yogesh

Dr. Yogesh Pawar
Co-ordinator

Dr. Mahendra Avghade
Vice Principal

Bhosale

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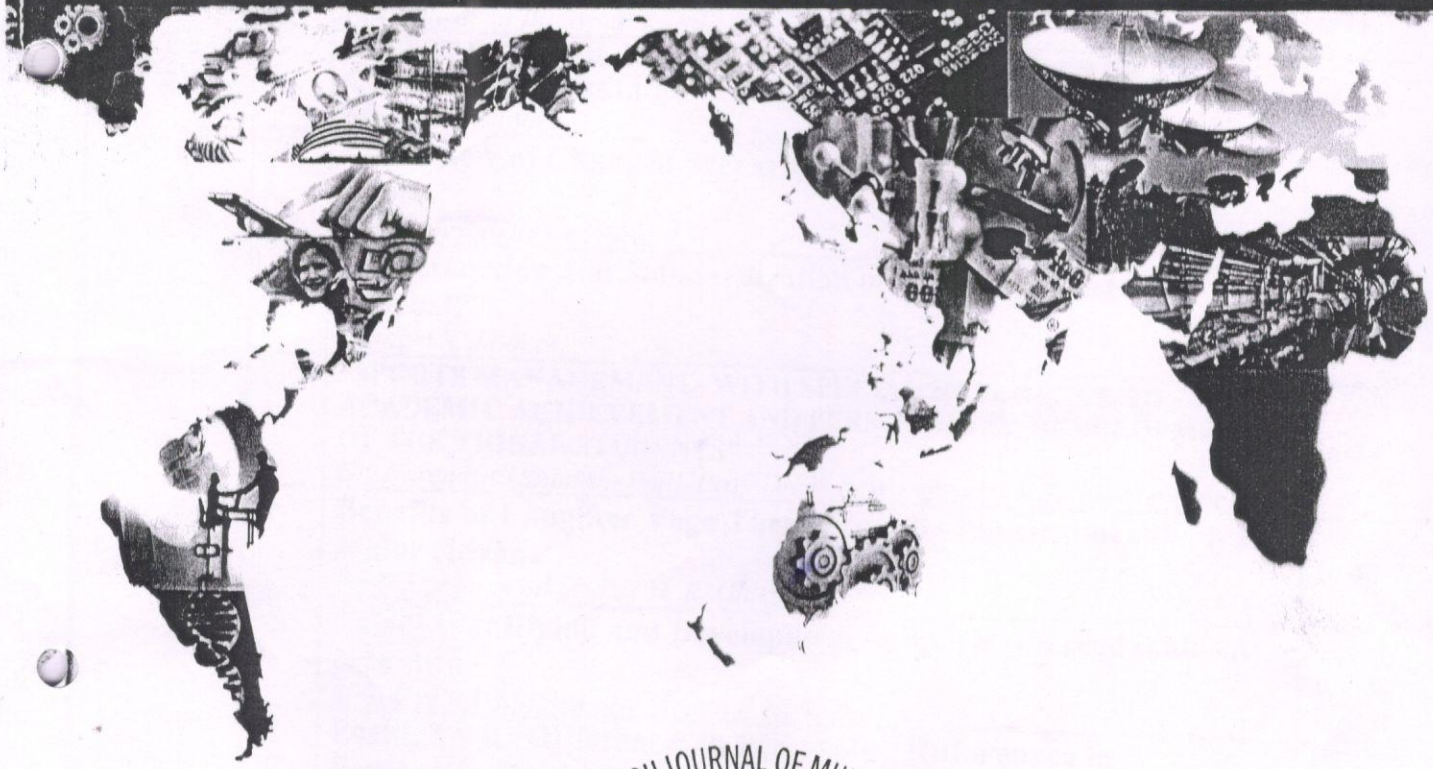

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Importance of adventure sports and tourism potential of forts in Pune District

Shivaji B.Shinde
Research Scholar, T.M.V., Pune.

ABSTRACT

Geographical information is necessary for the sustainable planning and management of the resources in the area. The area selected for proposed research is Pune District. Such study would be helpful to Government for planning and making strategic planning for District. Moreover, such study may provide potentiality to increase at glance current information of whole district. Besides this planners, administrators, layman and those who are interested in research in the field of economic and social planning, strategic study and social and economic development may get the benefit. In this present study try to provide an integrated plan for tourist places forts in the Pune district with some special case studies. Also, importance of adventure sports is stated. To give attention towards man power development and training through such study can be done by this project. It brings socio-cultural benefits to the local community in terms of employment opportunities, environmental and health awareness.

Key: Tourist Information System (TIS), sustainable planning, adventure sports.

INTRODUCTION

Tourism is considered as one of the world's largest industry. India is a developing nation. The Government and their agencies as well as private sector units and individuals are taking various measures to promote tourism. Promotion of tourism can contribute immensely to our economy. Many years tourism was neglected at various levels but now a day's concentrated effort are being made to improve the position and standard of tourism and for also the social benefit of the people. Pune district is highly rich by its scenery, spiritual base and its culture. Tourism industry will change the future of the district and will improve the social, cultural, economic status of the district; this was the main motive behind selection of this study area.

Pune district lies in the Western Ghats or Sahyadri mountain range and it extends on to the Deccan plateau on the east. With its physiography it has abundance of forts and fortress located in it. With the long-standing bastion of the maratha empire and home to the legendary King Shivaji, the Pune district is marked by magnificent land forts, testimony to its glorious past. Every taluka in Pune district has significant forts located in the district. It is necessary to preserve and conserve them, as well as it can be great potential for creating job opportunities for the local people. Most of the forts in Maharashtra are in dilapidated condition. It represents history, they must be preserved. The study will help to aware people to conserve these sites. Tourism is the major subject of job and other means of subsistence for the local people at fort sites increasing number of tourists will surely be beneficial to the local people. They can earn some amount by providing meals and other things needed by the visitors. Business and jobs for locals will be created due to conservation of forts.

STUDY AREA

The study area, Pune district, usually termed as the cultural capital of Maharashtra. It situated at 559 m ASL and lies between 17° 54' to 19° 24' N Latitude and 73° 33'to 75° 10' Longitude. The total geographical area of the district is 15643sq.km. The district headquarters

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the district place is Pune. The district consists of 14 tahasils. The area of district is surrounded by Thane district in the north and northwest, Raigarh district in the west, Satara district in south, Solapur district in the south and southeast and Ahmadnagar district to the east. (Fig. 1)

OBJECTIVES

Against the above background, the present work attempts to study the Tourist Information System for tourism development in the Pune district. The broad objectives of the proposed study are:

1. Assessment of site and situation of forts in Pune district.
2. Assessment of present day fort tourism in Pune district.
3. To identify and examine the tourism potential of the forts in Pune district.
4. To identify the importance of adventure tourism sports.

Location Map

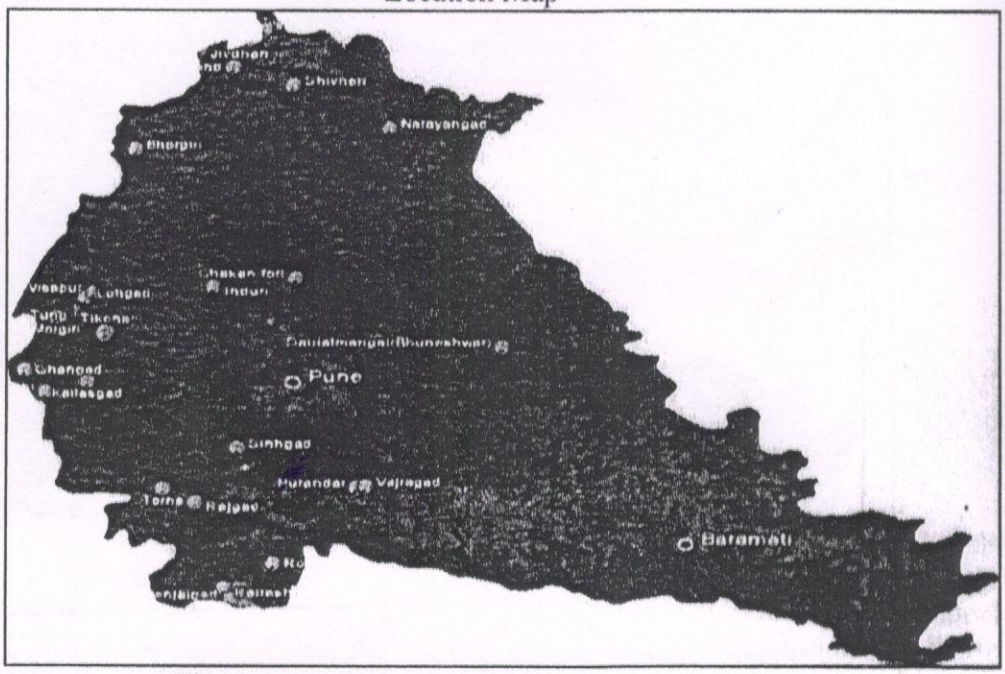

Fig. 1

METHODOLOGY AND DATABASE

In order to understand for the sustainable development and planning of forts in Pune district the methodology adopted for the present study is divided into three phases are namely pre-field work phase, field work phase and post field work phase.

In the first phase i.e. pre-field work phase literature review i.e. previous work carried out by other researchers are obtained from various journals, internet, visit to the MTDC resort to know about annual tourist flow, collection of survey of India toposheet (SOI) having scale 1:250000 (47/E,47/F,47/I,47/K,47/M,47/N,47/O), Atlas, Gazetteers, District Census Handbook, Tourist maps, etc. use for collection of information, District Resource map of Pune district published by

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Geological Society of India, Government published map of Pune district P.W.D. map, and other were completed with help of S.O.I. toposheets (Fig. 2).

In the second phase i.e. fieldwork phase extensive field surveys were undertaken, to existed tourist places and newly found tourist places. The questionnaire filled in this phase. During this field surveys tourist facilities regarding destination photographs, GPS reading altitude and the related information is noted which were also useful to site suitability study.

Digital Elevation Model

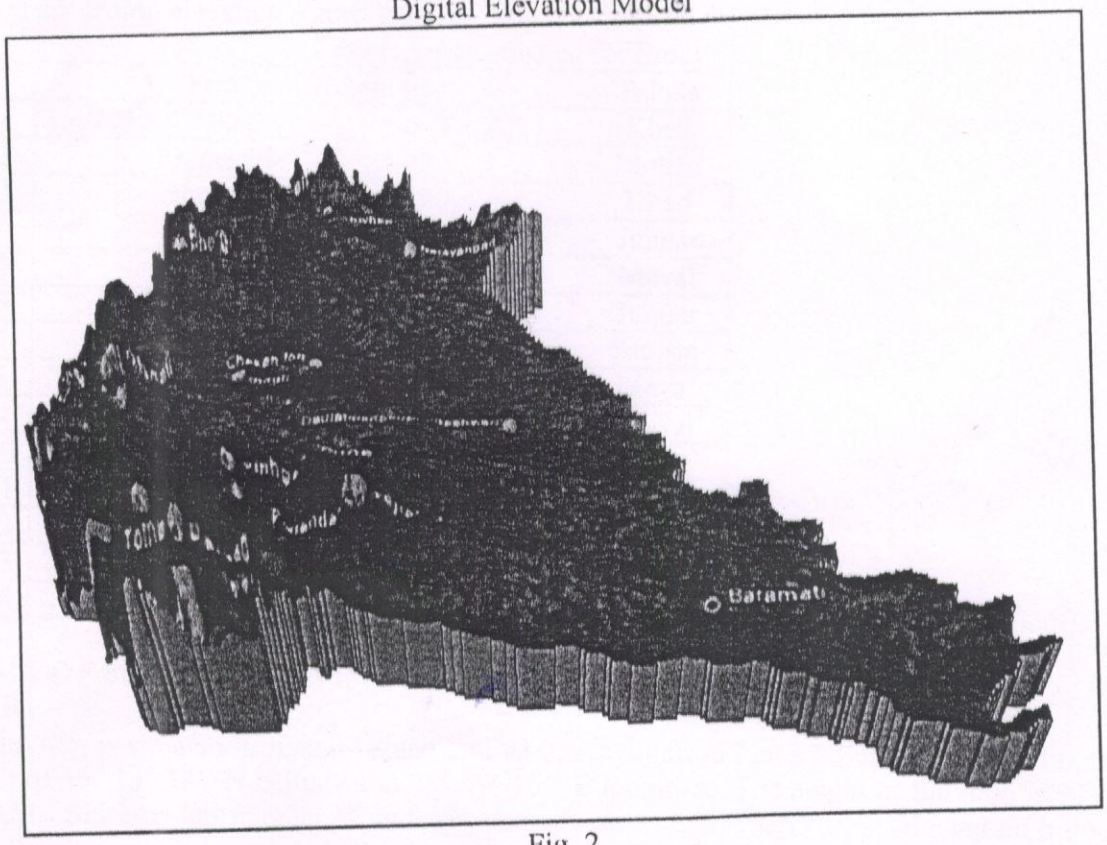

Fig. 2

In the third phase i.e. Laboratory worked is carried out. Government published map then digitization to generate thematic layer i.e. point layer- tourist places, tahasil headquarter, line layer- roads, railways, rivers and polygon layer- dams, reservoirs etc. and map were georeference same time. Integrating all above information and maps with help of GIS software. Finally these thematic layers are analyzed to demarcate tourism potential zones.

POTENTIAL TOURIST CENTERS FORTS IN PUNE DISTRICT

The term potential means something existing but not yet fully exploited. There are various criteria to selecting new potential suitable sites i.e. on the basis of phsiography, climate, and purpose of visit, on the basis of natural and cultural resources. The district has vast and rich tourism resource potential of different cultural background in all its 14 tahsils. We classified potential suitable sites forts on the basis of natural and cultural resources, i.e. Pune, Haveli, Junnar and Baramati. Potential tourist centers are selected in this manner they represent the entire Pune and same problem found in similar type of tourist centers in throughout the district.

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Potential suitable sites are very rich in natural and cultural resources, these tourism resources are not fully utilized because inadequate tourist facility, lack of information regarding this centers. New potential suitable sites forts can provide more scope for a generation of employment opportunities due to increases tourist facilities in terms of different socio economic and marketing indicators also bring money and reducing the regional disparities in Pune district. New potential suitable sites forts will be reducing the pressure on existed tourist centers and also reducing the migration of local peoples towards the Pune city.

There are 32 forts in Pune district. Every fort has its own importance and uniqueness. The forts are selected according elevation controlled sampling.

Table1: Forts selected for Study

Sr. No.	Fort	Height (m)	Taluka
1	Chakan	618	Khed
2	Rajmachi	692	Mulshi
3	Bhorgiri	735	Khed
4	Shivneri	998	Junnar
5	Tung	964	Maval
6	Nimgiri	980	Junnar
7	Ghangad	982	Mulshi
8	Tikona	988	Maval
9	Lohgad	1016	Maval
10	Rajgad	1307	Velhe
11	Sinhgad	1308	Haveli
12	Purandar	1320	Purandar
13	Torna	1358	Velhe
14	Raireshwar	1375	Bhor

Source: Author Compile

ANALYSIS OF SHIVNERI FORT

SHIVNERI

Shivneri is situated in Junnar tahasil and 93 km away from Pune. Shivneri is located at the intersection of 19° 13' 38'' N latitude and 73° 49' 15'' E longitude. The height of Shivneri is 914.4 m above ASL. Shivneri has number of underground caves. The Shivneri fort is situated on hillock and hence the various parameters of climate become the resource of tourist activity. Shivneri offer more prospects with its combination of cool pleasant summer climate along with its enchanting natural settings.

State highway No. 52 and Main District highway No. 3 and 1 connect the Junnar which provides excellent road network so that tourist can reach easily to the Junnar by metal road. MSRTC buses that operate on the Pune – Junnar routes, will take Shivneri. There is no state transport for the last 3 km, but local transport will reach to the foot hill of the Shivneri also, helipad facility available on Shivneri. There are a quite number of hotels, restaurants and lodges available for accommodation in Junnar. Other than several private hotels there is a PWD and Forest Dept. rest house available for accommodation in Junnar.

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Present Status

The present status of Shivneri as a tourist centre come under developing category. Shivneri has a great potential for tourism development. Archeological Department of India, Government of Maharashtra and MTDC give more attention to provide funds, donation and subsidy for infrastructure development on Shivneri forts. However serious attempts are needed to develop tourism in this region.

Major problems faced by tourists

The tourist opinions, complaints were collected during the field work. From Junnar to Shivneri fort there are no MSRTC buses, buses frequency is very less and buses are not in good condition, there is load shedding problem of electricity, hardly get pure quality drinking water and tourist guide on fort, accommodation charges in hotel quite expensive, parking, sewage and drainage system, toilets, communication, medical facility are not in well condition. etc. are major problem faced by tourist during visit of the Shivneri fort.

Important Tourist Centers in and around Shivneri

The Shivneri fort was the birth place of Maratha Empire Shri Chhatrapati Shivaji Maharaj. Shivneri has number of under ground caves. In the upper and lower scarps are two irregular lines of Buddhist caves all of them small and some more like dwellings of vultures than of monks. In the Shivneri fort most important tourist places are the birth place of Shivaji, statues of Shivaji and Matoshri Jijabai, the Ganga – Jamuna reservoir, and the Idgah at the central square of the fort and Shri Shivai temple also, newly created lawn and garden etc. A week would be ideal to cover these interesting tourist centers.

Remedies to overcome the problem – In the absence of basic facilities and amenities tourism activity at the resort cannot be undertaken. Therefore, there must be metal roads, drinking water, 24 hours electricity, frequency of mode of public transport, communication, sewage and underground drainage system, entertainment and recreation, market, health care facility etc. should be provided to tourists. In this way every attempt should be made to attract the tourist from within the country and other countries of the world.

CONCLUSION

Present study tries to provide an integrated plan for tourist places forts in the Pune district with some special case studies. If someone wants to know the forts along the Mumbai-Pune Expres way map can be displayed. Also encouraged and facilitated youth geographers to travel and foste national integration. As far as potential places are concerned, after field work it is observed that fe people only visited these forts who know about the places, but other have no any informatio about the places which should be published or advertised or marketing and the information shou be reached to the tourists and they can visit the places. Also take an account of domestic needs the Pune district by giving information such as cheap accommodation, easy way to transportation.

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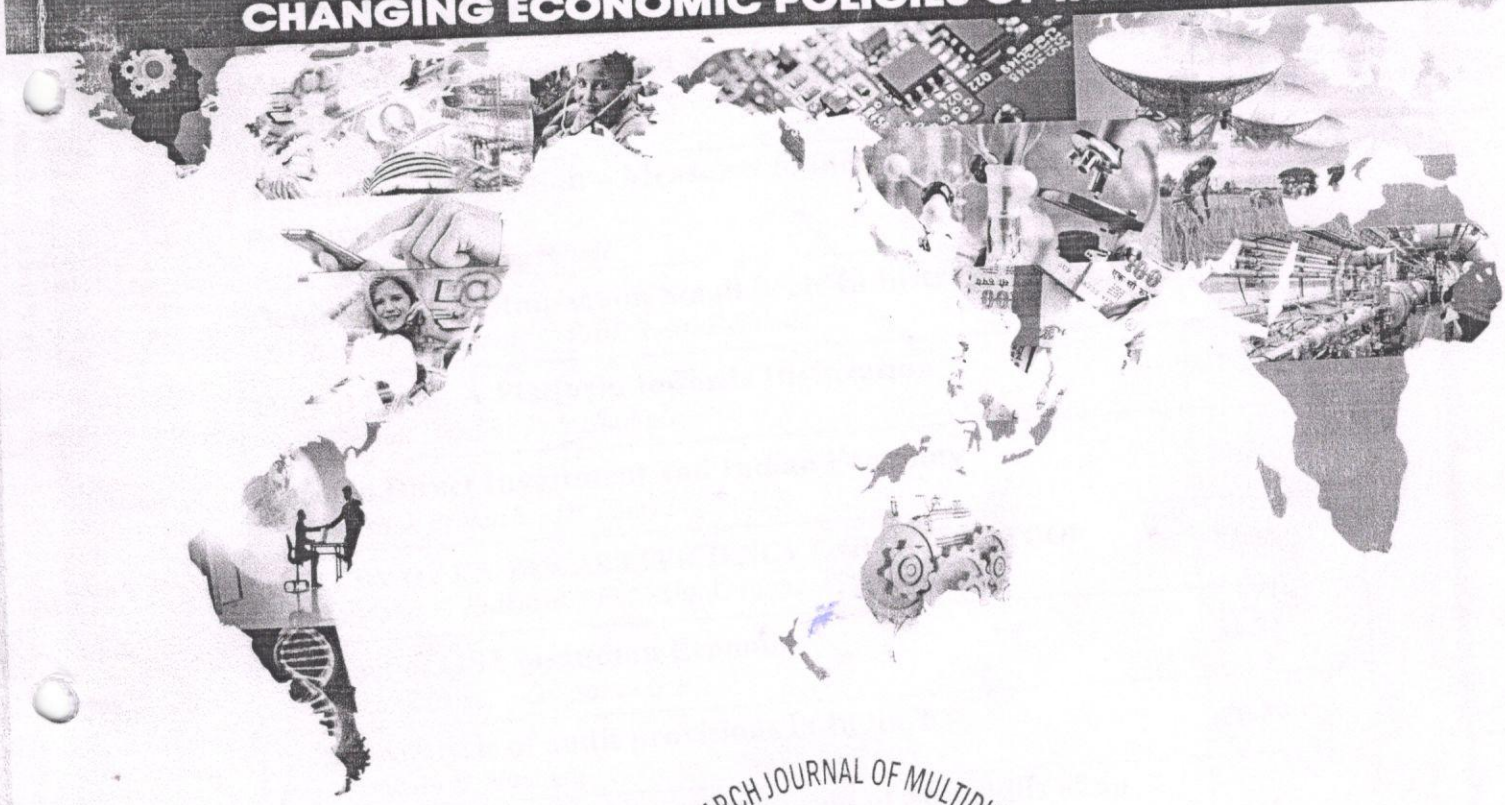

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Indian Agriculture Development And Recent Trends In Agriculture.

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Introduction:

India has been experiencing the increase in the production of food grains particularly after the introduction of new agricultural strategy (i.e., Green Revolution) in agricultural practices. Annual growth rate of 2.08 per cent was recorded during 1970s. Annual growth rate of 3.5 per cent in food grains in 1980s is the hallmark of the green revolution that enabled India to become self sufficient in food grains and even a marginal exporter. As per the latest estimate it is found that by 2010, the demand for food grains is likely to rise at the rate of 2.6 per cent. If the country can maintain 4 per cent growth rate in agricultural production then after meeting its domestic demand, the country can export the surplus amount of food grains to the foreign countries in which it has favorable position.

Agriculture is not only meeting the demand for food grains but also other needs of development. In recent years, agricultural sector has been diversified to produce commercial crops and horticultural crops viz., fruits, vegetables, spices, cashew, areca nut, coconut and floricultural products like flowers, orchids etc.. dairy and other animal husbandry products. The demand for these products has also been increasing. Liberalization of the economy has created ample scope for the development of agricultural sector both in terms of increased production and trade.

Education.

Now there are many agricultural universities and colleges in India. In this institutes develop new trends of agriculture. With the rapid advances in computers and communication, it has become increasingly difficult for anyone in the agricultural community to keep pace with technical changes impacting field production. From understanding the genetics of seed relative to an environment, evaluating the best fertilizers, selecting the right combination of pesticides, or just understanding the day-to-day logistics of a farm operation, education is paramount for success.

Floricultural:

Presently about 31,000 hectares of land spread over Karnataka, Tamil Nadu, Andhra Pradesh and West Bengal are under flower production. Since the inception of liberalization, commercial farming of floricultural activities has been increasing gradually. The demand for Indian cut flower is increasing continuously in the international market.

Horticultural:

The diversity of physiographic, climate and soil characteristics enables India to grow a large variety of horticultural crops which includes fruits, vegetables, spices, cashew-nut, coconut, cocoa, areca-nut, nuts and tuber crops, medicinal and aromatic plants etc. India is the largest producer of fruits, and second largest producer of vegetables. Total production of fruits 63.5 million tonnes in 2007-08. Total production of vegetables 125.9 million tonnes in 2007-08. India is the largest producer of cashew. Total production of cashew 6.0 lakh tonnes in 2003-04. Total value of exports of fruits, vegetables and pulses Rs. 5,650 crore in 2008-09. Thus horticultural exports of the country contribute nearly 25 per cent of the total agricultural exports.

Free Trade:

Liberalization has removed all restrictions on the movement of agricultural produce within the country. This has facilitated expansion of trade in agricultural products, especially of food grains.

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Agricultural Exports:

Agricultural exports are playing an important role in expanding the activities of agricultural secto along with generating increasing number of employment opportunities and also in diversifying agricultural operations. The Export Import Policy (Exim) 1992-97 has provided ample opportunities for increasing the volume of agricultural exports. The policy has permitted exports of agricultura goods like oilseeds, edible oil, sugarcane, pulses, coconut, etc. A number of Export Oriented Units (EOUs) in the floriculture sector has already been set up. To facilitate export of perishable products, subsidy on air freight is being provided for specified items. Another important emerging trend of agriculture under liberalization is the increasing volume of agricultural exports and its increasing prospects in near future under the WTO regime. India is favorably placed in respect of agricultural exports as the agricultural sector is subjected to low import content, low cost of labor, favorable climatic conditions, and low unit cost of inputs.

Developing Agriculture in Backward Areas:

In the post-Green Revolution period, application of new agricultural strategy, research and technology was very much restricted in the production of food grains, i.e. only wheat and rice. But under the liberalization wave, with the growing demand for agricultural exports, many new areas of agricultural operations have become favorable and lucrative. In the agriculturally backward areas, having no irrigation system, dry land farming has been initiated. The other activities like horticulture, floriculture, animal husbandry, fishery etc. have been encouraged. Application of modern improved techniques in these areas has resulted in the development of many backward areas which were previously subjected to wide spread poverty.

Food Processing:

Economic liberalization has made ample scope for the development and expansion of food processing industry in India. Fruits and vegetables being perishable in nature are facing a huge loss worth Rs. 3,000 crore every year. In order to prevent such loss, the National Horticulture Board is making necessary steps for providing infrastructure and for the packaging, storage and transportation of horticultural products. The production of processed fruits and vegetables are providing huge number of employment and improving agricultural productivity by raising the prospects of agricultural exports. The Government is also offering necessary incentives by exempting the industry from excise duty. In order to invite foreign capital into this industry the Government has permitted 51 per cent foreign equity partnership and also offered prompt approval of foreign technology transfer to the food processing industry of the country.

Market Feedback

Market feedback can be in two forms: quantity and quality. Market prices fluctuate based on the real or perceived quantities of produce available for purchase in the marketplace. It is the traditional supply and demand. If there is less produce for purchase, prices go up. If there is more produce, prices go down. Retailers have always been aware of the importance of quantity. However, quality is a little trickier to track. Like a fine wine, it is the combination of the choice of variety, soil, weather and practices. While many times, the quality of a crop is a function of weather, understanding the impact of seed, soil, and practices can give a producer an edge in the marketplace. More oil or protein in beans can translate into more rupees . Market feedback can help define the end goal for a set of production practices. If the goal is higher protein in a crop, then

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special attention would be paid to those materials and practices and environmental conditions that meet this goal. As discussed in an earlier topic, evaluative metrics would come in to play to ensure that day-to-day decisions follow a production plan that would realize high-protein yields. Savvy retailers have long realized that while the market is the end point in production, it is the starting point in planning. In a world of better informed buyers, market feedback needs to be front and center for everyone involved in production.

Developing New Biological Techniques:

During the period of green revolution, increasing application of chemical fertilizers and pesticides were encouraged extensively in order to meet the growing demand for food required to feed the rising population. Rising population, ever-increasing demand for food and unlimited exploitation, of natural resources have created a grave threat to the environment as well as to the agricultural sector. In order to save and protect the environment as well as the agricultural sector from any further damage, increasing use of biological technology for agricultural operation has been emphasised and more emphasis is being given to develop new biological technology.

Subsidies to Agricultural:

In India, the volume of subsidies granted to agriculture, in respect of fertilizer, irrigation and electricity charges etc. has been increasing. Aggregate subsidies provided by the Central Government and also state government. Out of total amount about 75 per cent is allotted in the area of fertilizer and food grains.

Growing Trend of Unemployment in Agricultural Sector and Its Solution:

Green revolution and increasing mechanization of agriculture have resulted fall in employment opportunities, resulting in a serious problem in the rural areas. Although many special employment programmes have been introduced to serve as a security net but increasing potentiality of the agricultural sector as emerged from the liberalisation wave should be exploited properly.

The growing trend in agricultural exports, increasing demand for horticultural and animal products in the export market has created ample opportunities and scope for employment of huge number of population. This allied sector being labour intensive can provide a lasting solution to the rural unemployment problem of the country.

Findings:

- Agriculture Education is developing the Indian agriculture sector.
- Food processing industry helping increase the economic condition of the farmers.
- Biological technology for agricultural operation has been emphasised and more emphasis is being given to develop new biological technology.
- Floricultural and Horticultural is the most important emerging and profitable industry in India.
- Study of Agriculture market and export of agriculture product is assisting development of agriculture.

Conclusion:

Agricultural sector is experiencing a growing trend in the volume of its investment during the post-liberalization period. Now in India privet sector investing in the agricultural sector with big budget like investing in agricultural product processing units and develop new ideas about agriculture. And public sector also investing in this sector and helping to the farmers with starting so many schemes

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like Kisan Credit Card for giving credits to farmers Croup insurance is also important schem Government also provide subsidy for electricity, seeds, fertilizer, drip irrigation, live stock and al provide fund for agriculture allied activities. Now a days in India rapidly growing industry Floricultural. Food processing industry also play most important role in developing agricult sector. Agriculture education assist to develop new technics in agriculture sector and devel Biological Techniques and study of market. New trends in agriculture useful to development agriculture sector.

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Accelerated publication

Optical fiber based humidity sensor using Ag decorated ZnO nanorods

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ABSTRACT

This paper describes the fabrication of fiber optic humidity sensor based on silver decorated ZnO nanostructures. The synthesized powders were characterised by X-ray diffraction, field emission scanning electron microscopy and transmission electron microscopy. The composite mixture of ZnO and Ag-ZnO were coated on plastic optical fiber by brush coating method. Povinyl alchol (PVA) was used as a temporary binder for the coating. The humidity sensing behavior of the fabricated sensors were studied by exposing it to different humidity levels ranging from 20 to 95%RH at room temperature. The optimised nano composite shows better responsivity and recovery time.

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1. Introduction

In recent years, the use of humidity sensors has significantly increased due to various applications in industries, meteorology, health science, civil engineering, solid state electronic devices etc. [1–4]. Therefore, the development of low cost humidity sensors with better performance is of prime importance. Over many years, extensive study of the relative humidity measurement has been done and there is a significant progress in the development of relative humidity sensors [2]. Commercial humidity sensors are mainly comprised of porous ceramics, polymer films etc. These sensors are based on the principle of change in electrical resistance as a function of relative humidity. Furthermore, optical fiber based chemical sensors have attracted increasing interest because of their intrinsic characteristics such as resistance to electrical noise, possibility of real time monitoring and remote sensing [5]. Nanomaterials have also been a subject of intense research in the recent years due to its excellent properties in the area of sensors. There are number of scientific papers are available on nanomaterial based humidity sensors. David et al. [6] have explored low-cost polymeric optical fiber humidity sensor. Cubic Ag dendritic nanostructure with ordered branches was investigated by Juncui et al. [7] for optical humidity sensor application. Optical fibers are the potential candidate for realizing sensing in optical domain because of its very high responsivity to external perturbation [8]. In the present study, plastic optical fibers (POFs) is taken into consideration because of its various advantages over glass fibers such as flexibility, resistant to damage, shorter bend radius, ease of handling, mechanical strength, disposability, easy mass production of components and system etc. [9]. Among different types of nanostructures, ZnO nanoparticles [10], ZnO nanorods [11], Ag-ZnO and Au-ZnO has showed promising properties in the field of sensors and polymers. Further these composites are considered to be a good candidate for practical applications because of its compatibility with ceramics and oxides. Along with this, generally polyacrylamide (PAM) and Polyvinylpyrrolidone (PVP) and poly-vinyl alcohol (PVA) have been used as a polymer matrix to improve the responsivity, operating range, and response time. Hence the aim of the present study is to fabricate the optical fiber relative humidity sensor based on Ag-ZnO composite for better responsivity and operational range. Here ZnO nanostructures were synthesized by solvothermal method and silver was decorated on ZnO nanostructures using photochemical deposition techniques. The phase purity and crystallanity of the prepared Ag-ZnO nanomaterial were investigated using XRD, TEM techniques and the humidity sensing properties of the coated composite nanostructures on optical fibers were studied.

2. Experimental

2.1. Preparation of composite paste

Firstly, appropriate amount (2.5 wt%) of PVA (polyvinyl alcohol) was dissolved in distilled water. This solution was then used as a temporary binder for making the composite paste formulation. A composite paste of ZnO and Ag-ZnO using PVA solution were prepared.

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2.2. Fabrication of optical humidity sensor

The Ag-ZnO based optical humidity sensor having 25 cm in length was fabricated by using plastic optical fibers (POFs). The core of plastic optical fiber having thickness of 980 μm is made of polymethyl methacrylate (PMMA). The cladding is made up of fluoride containing carbon polymer with thickness of 20 μm. To coat the optical fiber using the above prepared composite, initially the central portion i.e. the insulating layer of the optical fiber and thin layer of clad were carefully removed using isopropyl alcohol. The length of the central portion was varied viz. (2 to 12 mm). The central portion of the fiber was then manually coated with the above prepared Ag-ZnO paste using brush and then dried under IR lamp. The schematic of the fabricated sensor is shown in Fig. 1. This coated fiber was then bent to U shape with the bent radius of 8 mm. The ends of the optical fiber were connected to the transmitter and receiver. Power supply of + 5 V was used to power the transmitter and the detector. The experimental set up is shown in Fig. 2. For the sensing experimentations, the set up consisting electrical connections inside the glass dome having capacity of 6 *l* was used. The transmitted output light intensity was measured with respect to change in relative humidity. The change in relative humidity was measured with pre-calibrated standard HANNA Instrument (HI 9565) humidity meter (range: 20–95%RH, accuracy: ± 3%RH. The output voltage from the detector was measured using 4.5 digit multimeter (Model U1252A, Agilent).

3. Results and discussion

3.1. X-ray diffraction analysis

The phase purity and crystallanity of the prepared Ag-ZnO sample were investigated using the XRD technique and the diffractograms are shown in Fig. 3. The sharp and intense diffraction peaks confirmed the formation of highly crystalline ZnO. The diffraction peaks at 2θ = 31.7, 34.4, 36.2, 47.6, 56.7, 62.8 and 67.9° attributed to hkl planes (100), (002), (101), (102), (110) (103) and (112) respectively indicate the formation of hexagonal phase in all the prepared compositions. The XRD pattern of ZnO is well matches with the standard ICDD pattern no. 36-1451, this shows that the prepared ZnO is having hexagonal crystal structure. Additionally, in case of Ag-ZnO samples with 1 and 10 mol% of Ag, the reflection peaks observed at 2θ = 38.1, 44.2 and 64.4° corresponds to cubic metallic Ag. The XRD pattern Ag well matches with the reported ICDD pattern no. 36–04-483 respectively confirming formation of cubic metallic Silver. The presence of Ag and ZnO diffraction peaks in 1 and 10 mol% ZnO XRD pattern (Fig. 3) depicts the presence of Ag in prepared compositions. Also the intensity of Ag peak at 2θ = 38.1° is more in 10 mol% Ag-ZnO than that of 1 mol% Ag-ZnO. This difference in peak intensity also validates the presence of Ag having different amount i. e. 1 and 10 mol%.

3.2. Micro/nanostructure analysis

The synthesized ZnO and Ag-ZnO samples were analysed with FE-SEM and FETEM in order to study the micro and nanostructures. The shape and size of silver and ZnO can be studied using FE-SEM and FETEM analysis and the micrographs of pure ZnO and Ag-ZnO nanostructures are shown in Fig. 4. The FE-SEM revealed the formation of nano as well as sub-micron sized rod like morphology (Fig. 4a, b, c).The nano sized rods have length around 50 to 200 nm and diameter of 30 nm whereas the submicron sized rods are having length and diameter more than 2 and 0.2 μm respectively (Fig. 4b and c). FETEM images of ZnO, Ag decorated ZnO nanorods with 1 mol% Ag and 10 mol% Ag are depicted in Fig.4a',b',c'. The spherical shaped Ag particles are attached to the surface of ZnO nanorods. Overall the FESEM and TEM analysis depicts the presence of Ag nanoparticles on the surface of ZnO nanorods.

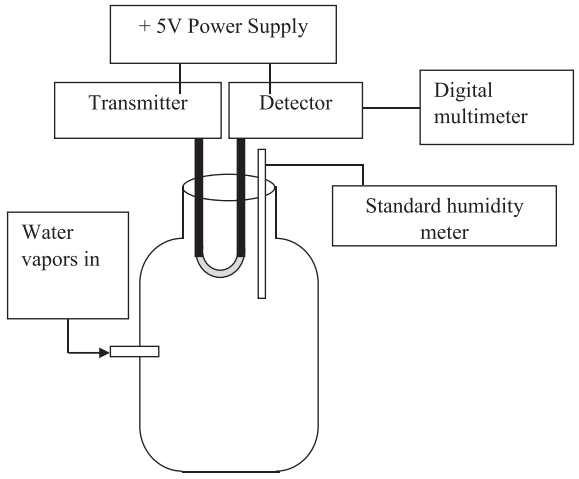

Fig. 2. Schematic of the humidity measurement set-up.

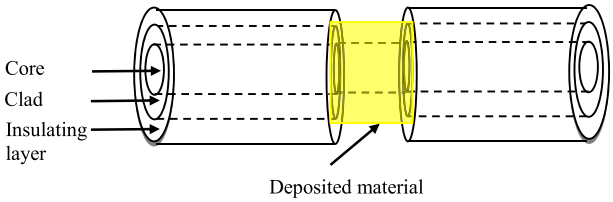

Fig. 1. Schematic of fabricated optical fiber humidity sensor.

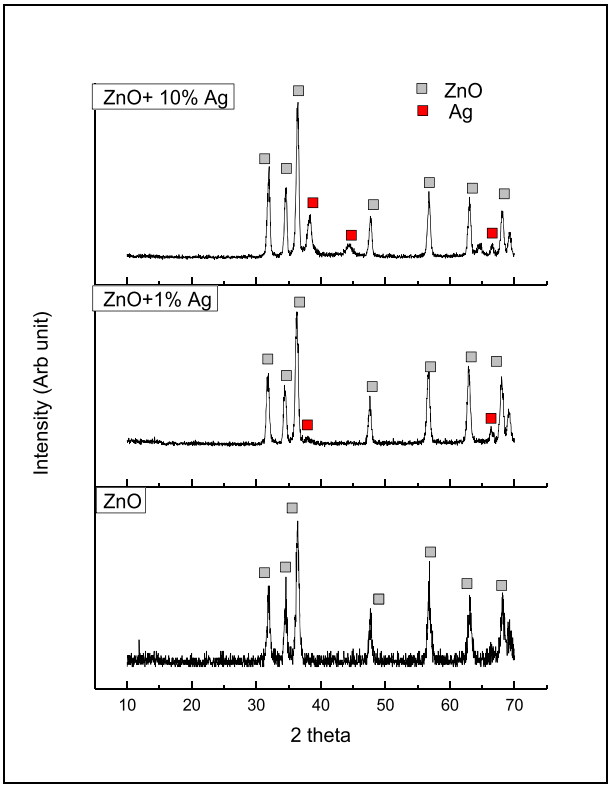

Fig. 3. X-ray diffractogram of the pure and Ag doped (1 and 10 mol%) ZnO powders.

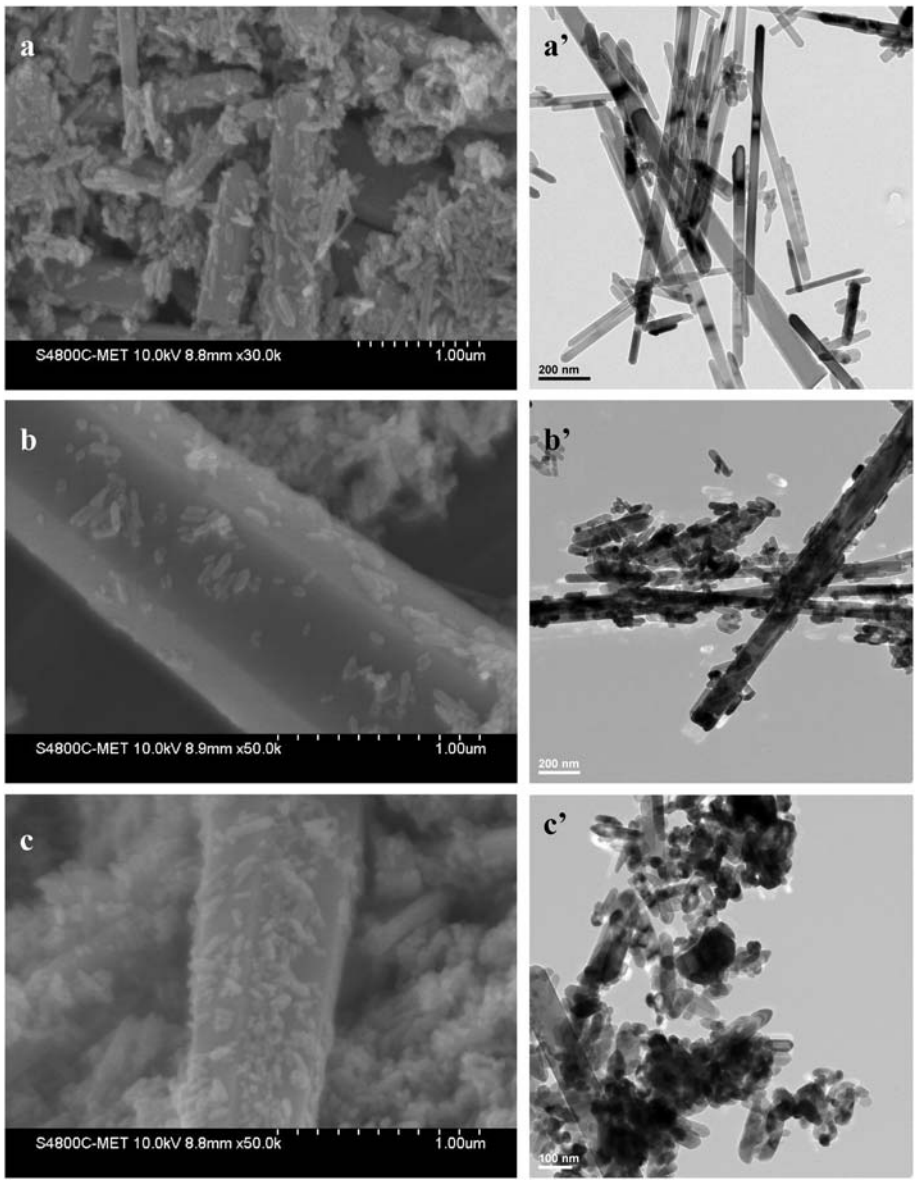

Fig. 4. Microstructure (FE-SEM, a, b, c) and nano structure (TEM, a', b', c') images of pure and Ag doped ZnO nano-composites where a, a') ZnO, b, b') 1%Ag-ZnO and c, c') 10% Ag-ZnO.

3.3. Humidity sensing measurement

3.3.1. Effect of variation of Ag-ZnO composition on the responsivity

Several experiments were carried out to study Ag-ZnO based optical humidity sensor. In the first experiment, various mole percentages of Ag-ZnO composites were coated on plastic optical fiber having clad length of 4 mm. The composite layer thickness was around 10 μm. Fig. 5a shows the graph of responsivity (% normalized output) versus relative humidity (%RH) for different Ag-ZnO composites. Here the output is measured in terms of voltage (typically in mV) and then the normalized output is calculated.

$$\%\ \text{normalized output} = \frac{\text{Observed output voltage at particular Humidity (\% RH)}}{\text{Maximum output voltage observed}} \text{X } 100$$

It is seen from the Fig. 5a that as the responsivity is dependent on the Ag doping in the ZnO. The 5 mol% Ag-ZnO nano composite showed maximum responsivity; the responsivity decreased for other compositions. However, Ag-ZnO composites are more sensitive to humidity than that of ZnO alone. This clearly indicates that Ag nanoparticles play an important role in enhancing the humidity sensing. As the 5 mol% Ag-ZnO nanocomposite showed optimum response, further experimentations were carried out for this optimized composition.

3.3.2. Effect of variation of clad length on the responsivity

Fig. 5b show the graph of responsivity (% normalized output) versus relative humidity (% RH) for different clad length of the optical fiber. It is seen from the Fig. 5b that the responsivity of the sensor increase with respect to the clad length up to 10 mm and beyond it starts decreasing. The highest responsivity was observed for 10 mm clad length. Hence clad length of 10 mm is considered as a best possible length for maximum confinement to the transmitting beam for this particular study. The decrease in responsivity for higher clad length may be due to the decrease in confined light through the fiber. This might be due to the absorption of transmitted light by cladding material. Some researchers have optimized the clad length for 10 mm for Co-polyaniline and 6 mm for Ag-polyaniline based sensors. The variation in the clad length must be due the different material properties, morphologies and their interactions [12,13]. The increase in responsivity with length of clad is

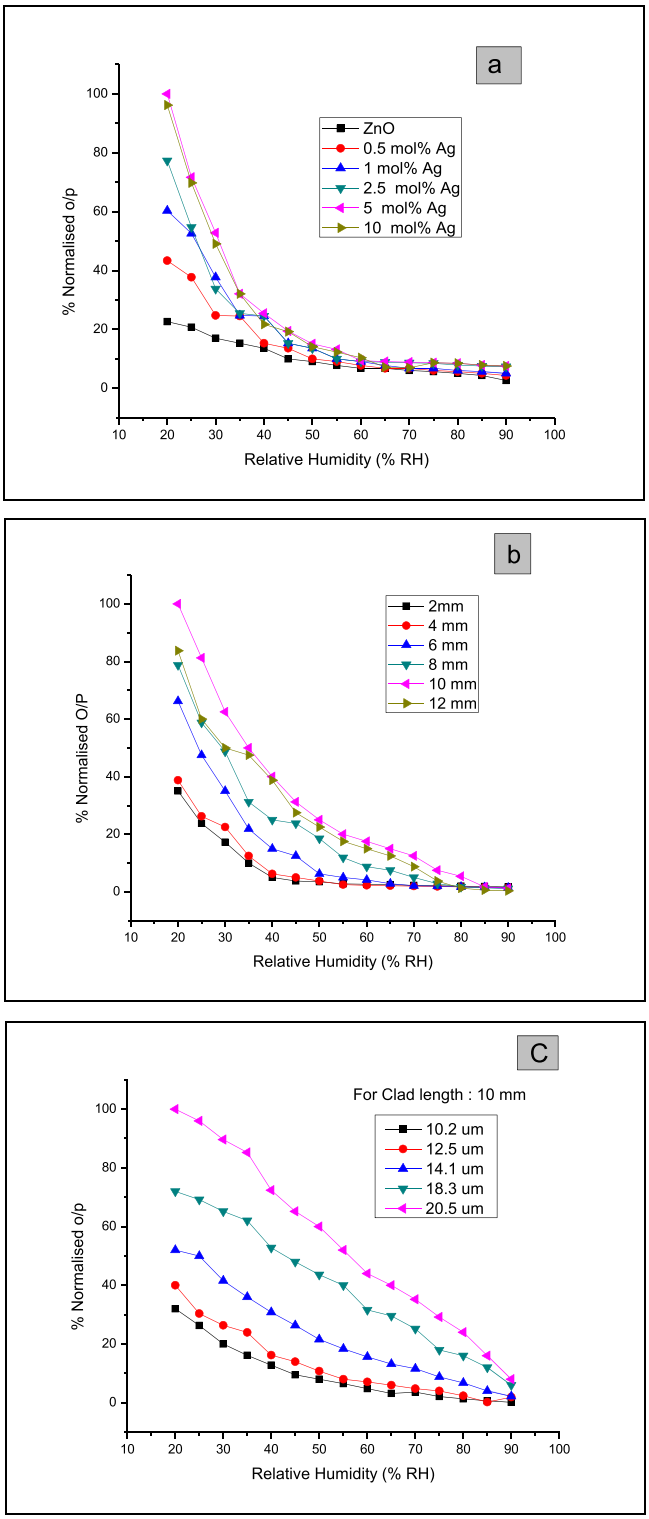

Fig. 5. (a, b, c): Responsivity (% normalized output) versus relative humidity for different Ag-ZnO composites (a), optical fiber clad length (b) and thickness of Ag-ZnO (c).

may be due to the increase in large interacting area. This leads to more adsorption of hydroxyl ion which results in changes in the optical properties resulting in higher responsivity.

3.3.3. Effect of variation of material thickness on the responsivity

The effect of material thickness on the optical fiber was studied for the optimized clad length of 10 mm. Fig. 5c. depicts the graph of responsivity (% normalized output) versus relative humidity (% RH) for different Ag-ZnO thickness over the optical fiber. It was observed from the Fig. 5c that as the relative humidity increases, the responsivity decreases irrespective of material thickness on the optical fiber. The maximum response was obtained for 20.5 μm of thickness. The refractive index may contribute here as it may get increase with respect to thickness leading to decrease in the transmission of light through the films. The thickness of 20.5 μm show maximum responsivity (25.2 mV/%RH) having a fairly linear response over the range of 20–90%RH.

3.3.4. Response and recovery time

The response/recovery time of the fabricated sensor was calculated by considering the time taken by the fabricated humidity sensors to attain 90% of the total output change. The response and recovery time of the sensor was observed to be 10 s (20–90% RH) and 1 min (90–20% RH) respectively. Therefore, we can say that the response of the optical fiber sensor to relative humidity is quite fast but the recovery is comparatively very slow.

3.3.5. Repeatability and reproducibility tests

In the present study, 1% uncertainty from cycle to cycle and uncertainty of about 2% from sample to sample was observed which indicate better repeatability and reproducibility.

3.3.6. Sensing mechanism

The sensing occurs due to the adsorption of water molecules on the surface of the sensing layer. The dissociation of water molecule can be considered as surface reaction which leads to the formation of surface oxides and hence this will effectively change the boundary conditions at cladding-guide interface, this results in increase in beam confinement in the guide. Hence this is responsible for increase in the output intensity. It was observed that the output intensity through the cladded guide was highest for low humidity however it decreases with increase in humidity levels. Hence the humidity phenomenon can be described as, at a low humidity when adsorption starts on the surface, a layer of hydroxyl groups is formed. The water molecules are chemisorbed through a dissociative mechanism by which two hydroxyls per water molecules are formed [13,14]. In intermediate RH range, mono layers of water molecules get adsorbed along sites available due to the thickness of the material on the fiber. At higher RH, water adsorption by the cladding becomes multilayer adsorption in the pores of the cladding and the water molecules will be penetrating deeper up to the cladding guide interface. The refractive index of the clad may get increase and therefore transmitted output is minimum and thus giving lowest responsivity.

4. Conclusion

Ag-ZnO nanocomposites were successfully coated on plastic optical cable which is useful for the construction of an optical sensor for determination of relative humidity. The fabricated sensor is sensitive in the range of 20–90% RH. Its performance is repetitive and the response time and recovery time is considerably good making this sensor useful for RH monitoring in many applications.

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Tourism Potential Suitable Forts Sites in Pune District

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ABSTRACT

In the recent years tourism has grown in India from local economic activity to a major global industry giving employment to a large number of peoples at various levels. Pune district is one of the India with a great potential for tourism. Thus, Pune is rich in physical, cultural, historical, archeological, heritage and religious sites. Even though there is a great potential for tourism in Pune district, the district lacks planning for tourism and supporting infrastructure. In this paper an attempt is made to study the GIS will be as a tool for site suitability for known as well as unknown places in the Pune district of Maharashtra. With considering gravity of this subject, the research has under taken Pune district. Moreover, such study may provide potential suitable sites to increase the tourist to be visited, to boost tourism in the Pune to its full potential.

INTRODUCTION

Tourism is considered as one of the world's largest industry. India is a developing nation. The geographical variations from north to south and east to west in India are favorable for tourism. Maharashtra has different geographical regions such as Konkan, Western Ghat and Plateau region i.e. Desh. These geographical differences produce lots of places of interest in the state.

The geographical environment provides a greater scope for tourism potential. For instance mountains, rivers, waterfalls, forests and wild life etc. act as center of tourist attraction. The potential for tourism development in any area largely depends on the availability of recreational resources such as mountain peaks, rivers, lakes, waterfalls, reservoirs, forts, historical monuments, an object of art fair or festival, also a person can be a tourist resource in addition to factor like climate, accessibility, attitude of local people, towards the nature and the extent of tourism development.

STUDY AREA

The study area, Pune district, usually termed as the cultural capital of Maharashtra. It is situated at 559 m ASL and lies between 17º 54' to 19º 24' N Latitude and 73º 33'to 75º 10'E Longitude. The total geographical area of the district is 15643sq.km. The district headquarters or the district place is Pune. The district consists of 14 tahasils. The area of district is surrounded by Thane district in the north and northwest, Raigarh district in the west, Satara district in south, Solapur district in the south and southeast and Ahmadnagar district to the east. (***Fig. 1)***

OBJECTIVES

Against the above background, the present work attempts to study the Tourist Information System for tourism development in the Pune district. The broad objectives of the proposed study are:

1) To collect the information about tourism facilities available in the study region.
2) To find out potential tourist forts sites and their suitability in the study area.

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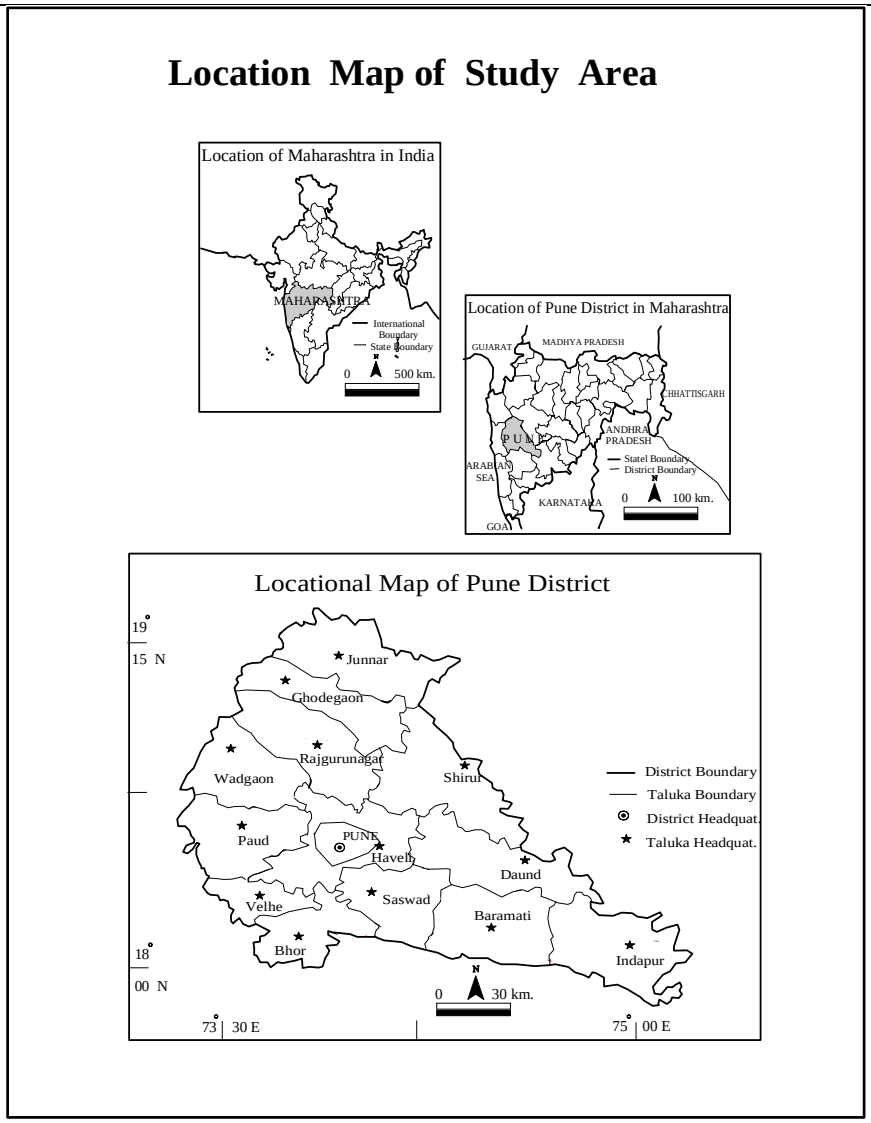

Fig. 1

METHODOLOGY AND DATABASE

In order to understand the potential suitable forts sites in Pune district, the methodology adopted for the present study is divided into three phases are namely pre-field work phase, field work phase and post field work phase.

In the first phase i.e. pre-field work phase literature review i.e. previous work carried out by other researchers are obtained from various journals, internet, visit to the MTDC resort to know about annual tourist flow, collection of survey of India toposheets, Atlas, Gazetteers, District Census Handbook, Tourist maps, etc. use for collection of information, District Resource map of Pune district published by Geological Society of India, Government published map of Pune district P.W.D. map, Digital Elevation Model (DEM) and other were completed with help of S.O.I. toposheets ***(Fig. 2)***.

In the second phase i.e. fieldwork phase extensive field surveys were undertaken, to existed forts. The questionnaire filled in this phase. During this field surveys tourist facilities regarding

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destination photographs, GPS reading altitude and the related information is noted which were also useful to site suitability study.

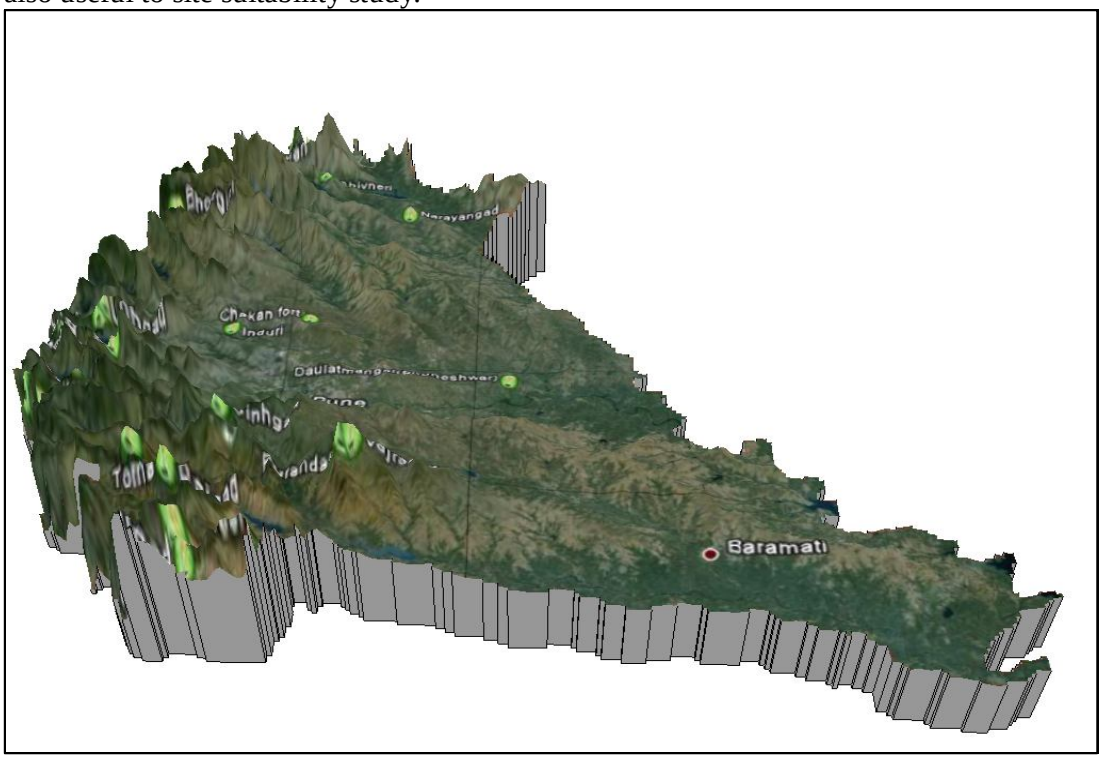

Fig.2

In the third phase i.e. Laboratory worked is carried out. Government published map of (PWD) Pune district is scanning, then digitization to generate thematic layer i.e. point layer- tourist places, tahasil headquarter, line layer- roads, railways, rivers and polygon layer- dams, reservoirs etc. and map were georeference same time. Integrating all above information and maps with help of GIS software various thematic layers were generated. Finally these thematic layers are analyzed to demarcate tourism potential zones and site suitability.

NEW POTENTIAL SUITABLE FORTS SITE

The term potential means something existing but not yet fully exploited. There are various criteria to selecting new potential suitable forts sites i.e. on the basis of phsiography, climate, and purpose of visit, on the basis of natural and cultural resources. The district has vast and rich tourism resource potential of different cultural background in all its 14 tahsils. We classified potential suitable forts sites on the basis of elevation (***Table 1***).

Table 1: Tourism potential fort sites in Pune district

Sr. No	Name of fort	Name of tahasil	Elevation Class (m)	Elevation (m)
1	Chakan	Khed	400-800	618
2	Rajmachi	Mulshi	400-800	692
3	Tung	Maval	800-1200	964
4	Shivaneri	Junnar	800-1200	998
5	Rajgad	Velhe	1200-1600	1307
6	Purandar	Purandar	1200-1600	1320

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Potential suitable forts sites are selected in this manner they represent the entire Pune and same problem found in similar type of tourist centers in throughout the district (***Fig. 3***). Potential suitable forts sites are very rich in natural and cultural resources, these tourism resources are not fully utilized because inadequate tourist facility, lack of information regarding this centers. New potential suitable forts sites can provide more scope for a generation of employment opportunities due to increases tourist facilities in terms of different socio economic and marketing indicators also bring money and reducing the regional disparities in Pune district. New potential suitable forts sites will be reducing the pressure on existed tourist centers and also reducing the migration of local peoples towards the Pune city. The development of tourism of any region may be defined as the creation provision or addition of facilities, amenities and services to meet the needs of the tourist. The facilities such as accommodation, transportation, roads, communication, entertainment and recreation, natural attraction, vegetation, natural attraction and other infrastructural facilities etc. constitute the basic parameter of suitable forts site. An attempt has been made to analyze 11 micro aspects for potential suitable forts sites in Pune district.

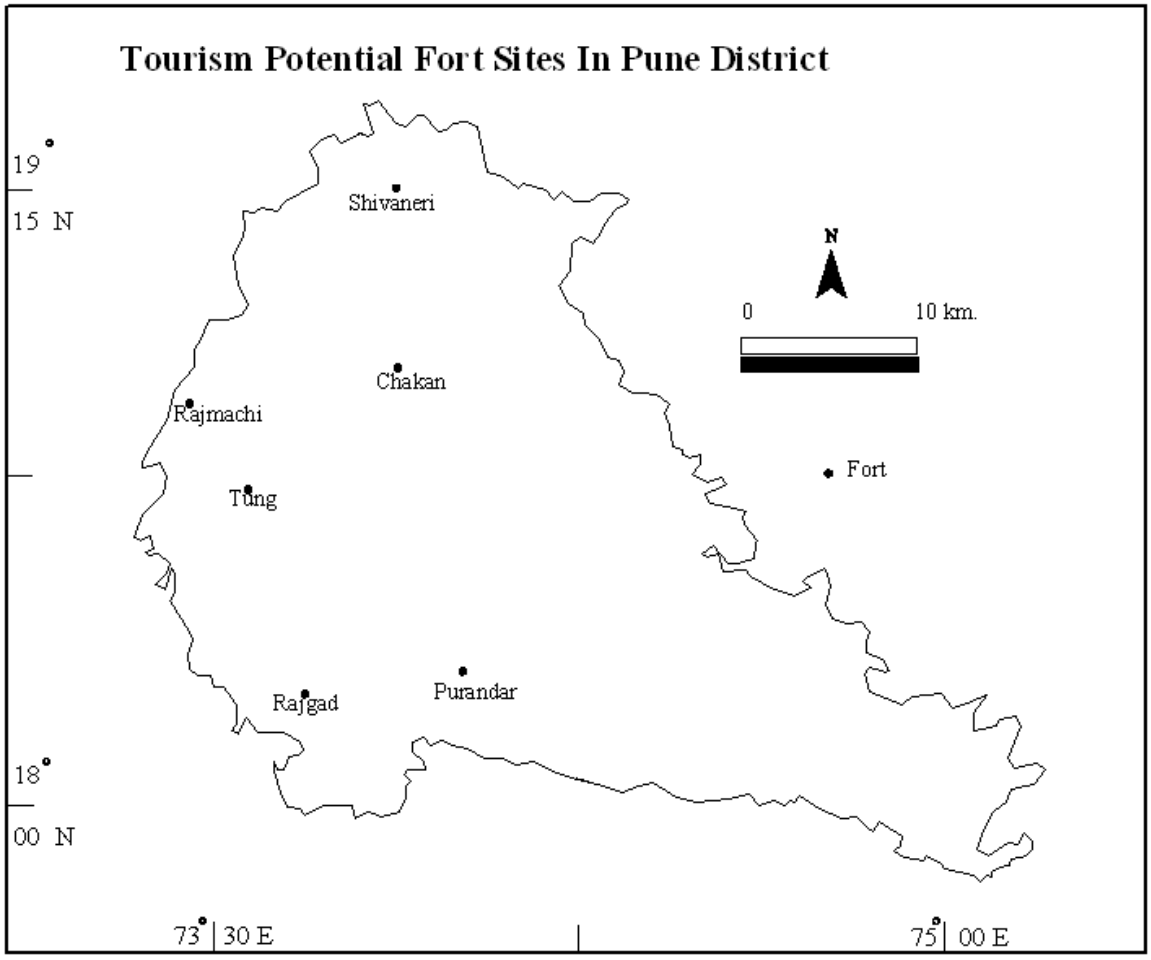

Fig. 3

MATRIX ANALYSIS FOR NEW POTENTIAL SUITABLE FORTS SITE

The potential suitable sites have been analyzed on the basis of above mention parameters so as to judge qualitative and quantitative aspects of tourist infrastructure at these sites. These are natural attraction, vegetation, roads, public transport, and accommodation,

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parking facilities, adventure tourism, recreation facility, drinking water, communication and medical facility. The matrix has been prepared based upon the weighted index method. The various parameters are given weightage on a 1 to 5 scale to find out overall tourist convenience at the potential suitable sites.

Table 2: Matrix analysis for tourism potential fort sites in Pune district

Suitable Site Parameter	Purandar	Chakan	Rajgad	Rajmachi	Tung	Shivaneri
Natural attraction						
Scenic attraction	5	1	5	5	5	4
pleasant weather	5	1	5	5	5	4
Vegetation						
Evergreen	-	-	-	5	-	-
Dry deciduous	4	-	4	-	4	
Shrub/bushes	-	1	-	-	-	3
Roads						
Metalled	-	5	-	-	-	5
Unmetalled	3	-	2	1	1	-
Public Transport	3	5	1	1	2	5
Accommodation	4	4	2	1	2	4
Adventure tourism	5	1	5	5	4	4
Recreation	3	3	3	2	1	3
Parking facility	4	3	3	3	2	5
Drinking water	1	3	4	1	1	5
Medical facility	1	4	1	1	2	3
Communication	4	4	3	1	1	3
Total weight	**42**	**35**	**38**	**31**	**30**	**48**

Source: Field survey 2014-16 **Scale:** 1(Low poor condition), 5(High condition)

CLASSIFICATION OF TOURISM POTENTIAL FORT SITES

The tourism potential fort sites have been analyzed on the basis of their total weight. They are classified such as highly suitable, moderately suitable, suitable, and least suitable. So, from the table 2 it is clear that only Purandar and Shivaneri scores high i.e. 42 and 48 respectively are highly suitable fort sites to be good tourism potential fort sites. Chakan and Rajgad score 35 and 38 respectively are moderately suitable fort sites. Rajmachi score is 31 as suitable fort site. On the other hand certain site like Tung score 30 is least suitable site on most counts. Most of the parameters can be improved immediately, without disturbing the environments of these forts to increase the tourism potential of these fort sites.

Table 3: Classification of Tourism potential fort Sites in Pune District

Sr. no.	Name of fort	Weight	Remark
1	Purandar	42	Highly suitable
2	Chakan	35	Moderately suitable
3	Rajgad	38	Moderately suitable
4	Rajmachi	31	Suitable
5	Tung	30	Least suitable
6	Shivaneri	48	Highly suitable

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CONCLUSION

It is observed that in the present spatial distribution and patterns of tourist places in Pune district, physical factors (topography, climate) play an important role. Present study tries to provide an integrated plan for tourist places in the Pune district with some special case studies. Most of the parameters can be improved immediately without disturbing the eco-system, to increase the tourist potential of these new tourist centers. There are certain proposals for planning these new potential suitable sites to development the infrastructural facility which will boost the local employment generation in this region e.g. Chakan Purandar, Shivaneri Rajgad, Tung and Rajmachi etc. To give attention towards man power development and training through such study can be done by this project.

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SWOT Analysis of Goods and Service Tax and It's Impact on Indian Economy"

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Abstract:

GST means Goods and Services Tax. Goods and Services Tax (GST) is a comprehensive tax levy on manufacture, sale and consumption of goods and services at a national level. One of the biggest taxation reforms in India the (GST) is all set to integrate State economies and boost overall growth. Previously, companies and businesses pay lot of indirect taxes such as VAT, service tax, sales tax, entertainment tax, octroi and luxury tax. After implementation of GST all these taxes are ceased to exist. There is only one tax, that too at the national level, monitored by the central government. GST is also different in the way it is levied — at the final point of consumption and not at the manufacturing stage. Previously, separate tax rates were applied to goods and services. Under GST, there is only one tax rate for both goods and services. The goods and services Tax is indeed a further significant improvement towards a comprehensive indirect tax reforms in the country. Integration of goods and services taxation would give India a world class tax system and improve tax collections. It would end distortions of differential treatments of manufacturing and service sector. GST is expected to create a business friendly environment, as price levels and hence inflation rates would come down overtime as a uniform tax rate is applied. It will also improve government's fiscal health as the tax collection system would become more transparent, making tax evasion difficult. An attempt is made in this paper to study SWOT Analysis, the concept of goods and service tax and its impact on Indian economy. The study also aims to know the advantages and challenges of GST in Indian scenario.

Keywords: Goods and Services Tax, Indian Economy, Central Government, State Government, SWOT, value added tax.

Introduction

GST means Goods and Services Tax. A very significant improvement over the local sales tax system is Goods and Services Tax (GST). GST, one of the biggest taxation reforms in India is all set to assimilate Economies of the State and boost up the overall economic growth More than 150 countries have implemented GST so far. However, the idea of GST in India was mooted by Vajpayee Government in 2000. GST was contemplated in 2004 by the Task Force on implementation of the Fiscal Responsibility and Budget Management Act, 2003, named Kelkar Committee. The Kelkar Committee was convinced that a dual GST system shall be able to tax almost all the goods and services and the Indian economy shall be able to have wider market of tax base, improve revenue collection through levying and collection of indirect tax and more pragmatic approach of efficient resource allocation. Under the Goods and Service Tax mechanism, every person is liable to pay tax on output and shall be entitled to enjoy credit on input tax paid and tax shall be only on the amount of value added. Accordingly, the constitutional amendment for the same was passed by the Lok Sabha on 6th may,2015. GST system was launched at a function in Central Hall of Parliament on 1st July ,2017 (Friday midnight). GST, which embodies the principle of "one nation, one tax, one market" is aimed at unifying the country's $2 trillion economy and 1.3 billion people into a common market. Under GST, goods and services fall under five tax categories: 0 %, 5 %, 12 %, 18 %and 28 %. For corporate, the elimination of multiple taxes will improve the ease of doing business. And for consumers, the biggest advantage would be in terms of a reduction

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in the overall tax burden on goods. "Inflation will come down, tax avoidance will be difficu India's GDP will be benefitted and extra resources will be used for welfare of poor and weake section," Finance Minister Arun Jaitley said at GST launch event in Parliament. The Lok Sabha ha finally Passed Thus, there would be only one tax, at the national level, and it will be monitored b Central Government of India. After the implementation of GST there is only one tax for every goo and services. Assimilation of taxation of goods and services would be a great move by the India Government and would also help them in tax collections. The expectations from GST is to create business-friendly environment, as cost price and henceforth, rate of inflation would fall over period of time as a uniform tax rate would be applicable. GST Bill and it is expected to have significant impact on every industry and every consumer.

Research Methodology

The Research paper is descriptive type and is based on empirical study. Secondary data coll from various books, National & international Journals, government reports, publications various websites which focused on various aspects of Goods and Service tax.

Objective of study:

- To highlight Impact of GST on Indian Economy
- To know the advantages and challenges of GST in Indian context.
- To understand SWOT analysis of GST

Importance of the Study:

1. The study will highlight the effect of GST on Indian Economy.
2. It will prove to be of great help to a common man to understand the concept the GST.
3. It will remove the morbid fear of GST from among the business community members.

Need for GST:

- The main reason behind introducing GST is to improve the economy of the nation.
- VAT rates and regulations differ from state to state. It has been observed that states ofte resort to slashing these rates for attracting investors. This results in loss of revenue for bo the Central as well as State government.
- On the other hand, GST brings in uniform tax laws across all the states spanning acro diverse industries. Here, the taxes would be divided between the Central and Sta government based on a pre-defined and pre-approved formula. In addition, it would becom much easier to offer services and goods uniformly across the nation, since there won't any additional state-levied tax.
- GST rollout missed several deadlines due to disagreement among many states over certa important issues on the new tax reform. However, GST is scheduled for a nation-wi rollout on July 1st, 2017

Features of GST

1. GST is one indirect tax for the entire nation, which will make India "one unified com market".
2. It will replace multiple taxes like VAT, CST, Excise Duty, Entry Tax, Octroi, LBT, Luxu Tax etc.
3. There are four types of GST namely:
   a) SGST – State GST, collected by the State Govt.
   b) CGST – Central GST, collected by the Central Govt.
   c) IGST – Integrated GST, collected by the Central Govt.
   d) UTGST – Union Territory GST, collected by the Union Territory

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4. Tax Payers with an aggregate turnover in a financial year up to [Rs. 20 Lakhs &Rs. 10 Lakhs for North Eastern Sates and Special Category States] would be exempted from tax.
5. GST slabs are pegged at 5%, 12%, 18% & 28%.

Impact of GST in India:

Positive Impact of GST in India:

- GST is a single taxation system that will reduce the number of indirect taxes. From now, a single taxation term would cover all of those indirect taxes.
- The prices of products and services would reduce; thus this system would prove to be beneficial for the people who are fed up of paying high prices.
- This would reduce the burden from the state and the central government. With the introduction of GST, all indirect taxes would come under a single roof.
- GST would not be charged at every point of sale like other indirect taxes so in this way, market would be developed.
- Corruption-free taxation system. GST would introduce corruption-free taxation system.
- Less tax compliance.
- Removes cascading effect of taxes.
- Manufacturing costs will be reduced, hence prices of consumer goods likely to come down.
- Due to reduced costs some products like cars, FMCG etc. will become cheaper.
- A unified tax regime will lead to less corruption which will indirectly affect the common man.

Negative Impact of GST in India:

1. The introduction of GST in the country will impact real estate market. This would increase new home buying price by 8% and reduce buyers" market by 12%.
2. GST is a mystifying term where double tax is charged in the name of a single tax.
3. Most of the dealers don't pay central excise tax and cheat the government by simply giving the VAT. But all of those dealers would now be forced to pay GST.
4. The short-term impact of GST is expected to be neutral-to negative for the broader economy.
5. Production processes are likely to take some time to align with the new framework as firms adjust to the input tax credit system and better manage working capital requirements.
6. For consumers, it will be a mixed bag as some goods become cheaper while others will be expensive.
7. Services will become expensive e.g. Telecom, banking, airline etc.
8. Being a new tax, it will take some time for the people to understand it's implications.
9. There are always some complications attached. It is a consumption based tax, so in case of services the place where service is provided needs to be determined.
10. If actual benefit is not passed to consumer and seller increases his profit margin, the prices of goods can also see a rising trend.

However, GST is a long term strategy and the positive impact shall be seen in the long run only. Let us hope GST proves to be a game changer in a positive way and proves to be beneficial to the common man.

Impact of GST on Indian Economy

The Goods and Service Tax (GST) bill is expected to have wide ranging ramifications for the complicated taxation system in the country. It is likely to improve the country's tax to GDP ratio

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and also inhibit inflation. However, the reform is likely to benefit the manufacturing sector but m make things difficult for the services sector. Though there are expectations that the GDP growth likely to go up by 1 to 2 %, the results can only be analyzed after the GST implementation. Wh the New Zealand economy had a higher GDP growth, it was lower in case of Canada, Australia an Thailand after the GST was implemented. The one per cent tax that has been proposed as a sop appease the States for compensating their loss of revenue from the interstate CST is likely to play spoil sport. It is probable that it may affect the GDP adversely. The congress is already oppos the 1 per cent tax. The GS Tax rate ranges from 0% to 28%. This tax rate is not likely to give a incremental tax revenue to the government. The rate will prove beneficial for the manufacturin sector where the tax rate is around 24% at present. The major manufacturing sectors that w benefit the most are FMCG, Auto and Cement. This is because they were previously reeling unde 24 to 38 per cent tax. The sector which is going to be adversely affected is the services secto Already there has been a hike from 12 to 14% from the 1st of June last year. Another 4 per cent increase will break their backs. The uniformity in the taxation rate is fine but it should not result disparity for the goods and services sectors. Nobody has thought of the implications it will have the services sector if the government moots a higher GS Tax rate like20% or 24%. The higher GS rate will definitely boost the tax to GDP ratio, while giving financial muscle to the government increasing the capital expenditure.

There is definitely a silver lining to the whole exercise. The unorganized sector which enjo the cost advantage equal to the taxation rate can be brought under the GST bill. This will bring a of unorganized players in the fields like electrical, paints, hardware etc.
under the tax net. It is easier said than done. It will take a lot of meticulous planning in t implementation of the GST reform for capturing the unorganized sector under its ambit. For one will widen the tax reach and secondly it will benefit the organized players who lose out revenue the unorganized sector at present. There are still a lot of unchartered territories which need to looked into through parliamentary discussions in the sessions. This will bring sanctity to t taxation system with out hurting any of the sectors adversely. To The Individuals and Compan with the collection of both the central and state tax is proposed to be made at the point of sale, bu components will be charged on the manufacturing costs and the individual will benefit fro lowered to increase in consumption thereby profiting companies

SWOT Analysis of GST

Strengths of Goods and Service Tax in India

1) It will be dropping out the cascading effects of tax on production and distribution of goo and services which will competitiveness and consequently, GDP will increase.
2) It will apply all goods and services except some exempted products
3) Tobacco is not exempted from the area of GST. It is treated as Sin goods and come und the taxation with central excise tax.
4) Natural gas, Aviation Turbine Fuel (ATF), High Speed Diesel (HSD), Crude oil, Pe products are exempted till the GSTC (Goods and Service Tax Council) discloses date their formation.
5) Alcohol, real estate, custom duty and electricity are exempted from GST. (Proposed artic 366 (12A).
6) GST would be dual taxation system. It would be charged intra-State by Central and St Governments. It would be called CGST (Central Goods and Service Tax) and SGST (St Goods and Service Tax).

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Weaknesses of GST System in India

1) The doorstep goal is very ground level for traders and service providers. It will raise appropriation of government ways and means which are costlier than government's revenue.
2) GST is a subsume of various States and Central taxes like excise duty, cess, service tax, countervailing duty etc., but many more are left which should be included like electricity, alcohol etc.
3) GST for States and Central (SGST, CGST) seems to be different, further it can be diversified on the basis of location, geographical structure etc.
4) The tax rate is depending upon availability of fund in States. The States has power to increase the rate according to their need.
5) This system is very fond of technology, but India is a developing country where people are not habitual of technology.

Opportunities of GST in India

1) The rates of tax are set at ground level which will help States and Unions to collect more revenue.
2) It will reduce the transaction costs and wastages of scare resources because at a one registration people can do transactions from States and Unions. So, it will connect the whole nation from a single click.
3) In indirect tax structure multiple taxes were charged from taxpayers. But GST will eliminate the taxes on chain of transactions.
4) GST is also known as "One Point Single Taxation System". This is a helping hand for businessman's, they can come to agreement on price modalities, supply chain etc.,
5) GST will reduce average tax burden of consumers. They will be certain about their taxes which will reduce evasion of taxes.
6) GST can provide the opportunity of Corruption Free Indian Revenue Services. The root of corruption found in political system. It will bring transparency in Indian political system.

Threats of GST in India

1) Inter-States supply of goods and services are considered as import and IGST will be applied(1%) in addition to custom duties.
2) The Central government promised for compensation to loss making States for a period of5 years. The compensation will be as; 100% for first 3 years, 75 % for 4th year and 50% for 5th year. So, it is possible that all States does not implement it in effective manner to get compensation.
3) GST is not friendly with banking sector. Because the cost of goods become cheaper after GST and it will promote export. Previously, 14%service tax was levied on baking transactions. GST will make these transactions costlier. Overland above, in most of countries banking sector is excluded from GST.
4) GSTC (Goods and Service Tax Council) will set the benchmark for resolving the dispute on recommendations of GSTC. It means GSTC will lay down the criteria for GSTC itself. It is against the principle of natural justice.
5) GST is not a guarantee in itself that it would not be influenced by political parties and politicians will not use it as a win-loss game.

Conclusion

Tax policies play an important role on the economy through their impact on both efficiencies and equity. A good tax system should keep in view issues of income distribution and, at the same time, also endeavor to generate tax revenues to support government expenditure on public services

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and infrastructure development. The ongoing tax reforms on moving to a goods and services ta would impact the national economy, International trade, firms and the consumers There has been good deal of criticism as well as appraisal of the proposed Goods and Services Tax regime. It considered to be a major improvement over the previous central excise duty at the national leve and the sales tax system at the state level, the new tax will be a further significant breakthrough a the next logical step towards a comprehensive indirect tax reform in the country. GST is not simp VAT plus service tax, but a major improvement over the previous system of VAT and disjointe services tax a justified step forward. A single rate would help maintain simplicity and transparenc by treating all goods and services as equal without giving special treatment to some 'special' good and/or services. This will reduce litigation on classification issues.

It is also expected that implementation of GST in the Indian framework will lead commercial benefits which were untouched by the VAT system and would essentially lead t economic development. Hence GST may usher in the possibility of a collective gain for industry trade, agriculture and common consumers as well as for the Central Government and the Sta Government. Sooner or later, the GST will surely knock the doors of India. And when that happe we as future torch bearers of the profession are required to be prepared and fully equipped with o knowledge regarding GST. Forewarned is forearmed. Thus, we must be ready to deal with GST a many other changes that are going to take place in India. Slowly, India shall move to join the wo wide standards in taxation, corporate laws and managerial practices and be among the leaders these fields. In short GST is at the infant stage in Indian economy. It will take some time experience its effects on Indian economy. GST mechanism is designed in such a way that it expected to generate good amount of revenue for both central and state government. Regardi corporate, businessmen and service providers it will be beneficial in long run. It will bri transparency in collection of indirect taxes benefiting both the Government and the people of Indi

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Types of Cyber Crimes and Cyber Law

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Abstract:
WHY CYBER CRIMES? Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of online banking; shopping through which bank accounts can be hacked and financial motive of the person committing fraud can be achieved. Terrorize create social instability in the country, by targetting specific youth to engage into unlawful activities and spoil the energetic resourceful force of the nation. India ranks 11th in cyber crimes in the world, The main reason is wide availability and use of computers and internet in India. Also wide user base results in increased crime rate. Many crimes get registered with the Police authorities, but almost 50% of the cyber crimes go unreported.

Keyword: Cyber Crime, Law, Protection, Information Technology

Introduction:

Increased use of computers in every field is the main cause for cyber crimes. Personal information is available because of we shop online. We work online. We play online. We live online. As our lives increasingly depend on digital services, the need to protect our information from being maliciously disrupted or misused is really important. This free online course will help you to understand online security and start to protect your digital life, whether at home or work. You will learn how to recognise the threats that could harm you online and the steps you can take to reduce the chances that they will happen to you. With cyber security often in the news today, the course will also frame your online safety in the context of the wider world, introducing you to different types of malware, including viruses and trojans, as well as concepts such as network security, cryptography, identity theft and risk management.

Objectives:

1) To find out how Crime is an illegal activity which leads to destruction?
2) To understand how Cyber crime is a serious emerging threat to society, entire nation and world and how to take steps to be safe.

Research Methodology:

Secondary data in the form of Books, Internet and Web sites are used to collect information on the topic also interview with Ms.Sweta Verma crime reporter of Maharashtra state.

Hypothesis:

1)Introduction of strict laws will help to control crimes.
2)Proper care by the individuals will definitely reduce the cyber crimes.

Cyber Crimes:

- Computer or Cyber Crime refers to a crime that involves a computer and network.
- Unauthorized access to computer systems.
- A Computer can be used to create nuisance and disturbance in society
- Pornography, Threatening emails, Sexual Harassment, Spam, Phishing, Hacking , Worms, Viruses etc are some examples of Cyber crimes.

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- Cyber Squatting, Cyber Stalking, Phishing are some more emerging crimes in today's world.

Protection of Cyber crimes:

- As rightly said prevention is better than cure, we must also take steps to prevent this crime from taking place.
- Various measures have been taken even by the governments of various countries to encounter threats arising out of cyber crime.
- Also technical help is offered to protect computers from being hacked and misused.

Technical Help Components:

- Keeping the computer up-to-date with latest patches and software versions.
- Choosing of strong passwords & keeping them safe.
- Protecting the data in the computer by use of software security like quick heal, avast etc.
- Make proper privacy settings for social media applications
- Do not visit untrusted websites or hyperlinks that look visually attractive but are usually formed to let the virus creep in once u click on it.
- Ignoring pop ups
- Keep different passwords on different websites and for different purposes (Shopping, banking different passwords)

The main provisions that govern cyber law are contained in Information Technology Act, 2000

- It covers the following aspects:
- Cyber crimes
- Electronic and digital signatures
- Intellectual Property
- Data protection and Privacy.
- Punishments for committing cyber crime
- Government authorities to monitor cyber crimes

Top 10 Steps To Help Stop Cybercrime

You've probably heard the adage "information is power," and that is certainly true when it comes to cyber crime. Access to your personal information is what gives hackers the power to tap into you accounts and steal your money or your identity. But the right information can also empower you to protect yourself from being caught up in the thriving industry that is cybercrime.

With that in mind, here is our Top 10 list of steps you can take to avoid becoming a victim of cybercrime.

1) Education - Hackers aren't the only ones who can gain power from information. By educating yourself about the types of scams that exist on the Internet and how to avert them, you are puttingyourself one step ahead of the cybercriminals.Since phishing is prevalent, read up on the latest phishing scams and learn how to recognize a phishing attempt. Remember, phishing is when hackers attempt to lure you into revealing personalinformation by pretending to be a legitimate organization or person. These scams often play off major new stories, so keep informed on the latest news-related scams.

2) Use a firewall - Firewalls monitor traffic between your computer or network and the Internet and serve as a great first line of defense when it comes to keeping intruders out. Make sure to use the firewall that comes with your security software. And if you have a home wireless network, enable the firewall that comes with your router.

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3) Click with caution - When you're checking your email or chatting over instant messenger (IM), be careful not to click on any links in messages from people you don't know. The link could take you to a fake website that asks for your private information, such as user names and passwords, or it could download malware onto your computer. Even if the message is from someone you know, be cautious. Some viruses replicate and spread through email, so look for information that indicates that themessage is legitimate.

4) Practice safe surfing - When navigating the web, you need to take precautions to avoid phony websites that ask for your personal information and pages that contain malware. Use a search engine to help you navigate to the correct web address since it will correct misspellings. That way, you won't wind up on a fake page at a commonly misspelled address. (Creating a phony site at an address similar to the real site is called "typosquatting," and it is a fairly common scam.) You may also want to use a product like McAfee® SiteAdvisor® software to help you navigate.

Site Advisor software is a free browser tool that tells you if a site is safe or not right in your search results, so you are warned before you click.

5) Practice safe shopping - In addition to practicing safe surfing, you also need to be careful where you shop online. Be cautious when shopping at a site that you've never visited before and do a little investigation before you enter your payment information. Look for a trustmark, such as McAfee SECURE™, to tell you if a site is safe.

And when you're on a payment page, look for the lock symbol in your browser, indicating that the site uses encryption, or scrambling, to keep your information safe. Click on the icon to make sure that the security certificate pertains to the site you are on. When it comes time to pay, use a credit card instead of a debit card. If the site turns out to be fraudulent your credit card issuer may reimburse you for the charges, but with a debit card your money is gone.Finally, evaluate the site's security and privacy policies in regards to your personal data.

6) Use comprehensive security software and keep your system updated - Because hackers have a wide variety of ways to access your system and information, you need comprehensive security software that can protect you from all angles. Software like McAfee® SecurityCenter, available preloadedon Dell™ PCs, can help protect you from malware, phishing, spyware, and other common andemerging threats.Just make sure that you keep your security software up to date by selecting the automatic update function on your security control panel. And don't forget to perform regular scans.You also want to update your operating system (OS) and browser with the latest security patches. Ifyou are a Microsoft Windows user, you can enable automatic updates to keep your OS safe.

7) Secure your wireless network - Hackers can access data while it's in transit on an unsecured wireless network. You can keep the hackers out by enabling the firewall on your router and changing the router's administrator password. Cybercriminals often know the default passwords and they can use them to hack into your network. You may also want to set up your router so it only allows access to people with passwords that are encrypted. Check your owner's manual for instructions on setting up encryption.

8) Use strong passwords - Although it may be easier for you to remember short passwords that reference your birthday, middle name, or pet's name, these kinds of passwords also make it easy for hackers. Strong passwords can go a long way in helping secure your information, so choose a password that is at least 10 characters long and consists of a

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combination of letters, numbers and special characters. Also consider changing your password periodically to reduce the likelihood of it being compromised.

9) Use common sense - Despite the warnings, cybercrime is increasing, fuelled by common mistakes people make such as responding to spam and downloading attachments from people they don't know. So, use common sense whenever you're on the Internet. Never post personal information online or share sensitive information such as your social security number and credit card number. Exercise caution when clicking on any links or downloading any programs.

10) Be suspicious - Even if you consider yourself cyber savvy, you still need to keep your guard up for any new tricks and be proactive about your safety. Backup your data regularly in case anything goes wrong, and monitor your accounts and credit reports to make sure that a hacker has not stolen your information or identity.

Cyber Laws:

Sections 65 to 74 are the penal provisions

- Imprisonment up to 10 years provided

Section 65 – Source CodeMost important asset of software companies

Imprisonment up to 3 years and / or fine up to Rs 2 lakh

- Knowingly or intentionally –Concealing- Destroying- Altering
- Knowingly or intentionally causing another to do so

Section 66 -Covers the following in relation to information:

- Unauthorised access-Downloading, -copying or extracting information
- Introducing viruses and contaminants (worms, trojans)-Damaging a computer-Disruption of a computer-Denial of access-Assisting in illegal access
- Tampering or manipulating computer-Destroys, deletes or alters information-Steals, conceals or alters source code

- Imprisonment up to 3 years and / or fine up to Rs 5 lakh
- Knowledge or intention must be proven

Section 66

Sending offensive messages through communication service-3 years and fine

Dishonestly receiving stolen computer resource or communication device-3 years and / or fine of 1 lakh

Cheating by personation -3 years and fine of 1 lakh

Violation of privacy -3 years and / or 2 lakhs

Cyber Terrorism -Life imprisonment

- **Section 66A** – Sending offensive messages through communication services
- **Section 66B** – Dishonestly receiving stolen computer resource or communication device
- **Section 66C** – Identity theft
- **Section 66D** – Cheating by personation by using computer resource

  Publishing or transmitting obscene material in electronic form -3 years and 5 lakh; 5 years and 10 lakh

Section 67A -Publishing or transmitting sexually explicit material in electronic form - 5 years and 10 lakh; 7 years and 10 lakh

Section 67B - Publishing or transmitting depicting children in sexually explicit material in electronic form -5 years and 10 lakh; 7 years and 10 lakh

Section 67C -preservation aSection 69B

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- power to authorise to monitor and collect traffic data or information through any computer resource for cyber security
- Section 72A -punishment for disclosure of information in breach of lawful contract
- Section 79 -exemption from liability of intermediary in certain cases

Section 85 -Offences by companies-Holds that a company and its directors can be held accountable for crimes

Types of cyber crime

Cybercrime is a type of crime done by the help of computer and internet. It is basically extension of traditional crime with the help of new technology. The nature of cybercrime is virtual because in this crime there is no need to involve manually, but effects are the same as traditional crime. Today the use of computer and internet are growing very fast. We use them for doing important works of our daily life. In fact we cannot live without computer and internet and so, the chances of being a victim of cyber crime is increasing fast. The cyber criminals target our information which we provide them accidentally while using computer and internet. There are so many types of cyber crimes which can harms a person.

1) Hacking Hacking is a type of cyber crime. In simple words Hacking is an act by which a person accesses a computer system or network without permission of the owner. The person doing the hacking is called Hackers. They have best knowledge and understanding of computer and computer program. They misuse their knowledge and commit the crime of hacking. Hackers are also called crackers. There are many types of hackers like White Hat Hackers, Black Hat Hackers, Grey Hat Hackers etc. Among all of them, White Hat Hackers are the persons who use their knowledge for good purpose and check the security of any system or software.

2) Online Identity Theft Online theft is also a major type of Cybercrime. Nowadays, people using the Internet frequently use their sensitive data like. Bank details, credit card details, etc. on the Internet and cyber criminals target these data and commit online theft. Cyber criminals also target copyrighted content on the Internet and download and distribute it. This is a one part of Online Theft on the other hand there is an advanced stage of online theft that is called Identity Theft. We all know that a normal internet user has many online account including many social networking accounts and they all have their username and password. Cybercriminals target that username and password and use the account behalf of original owner of the account. It damages the online presence and reputation of owner of account holder. It may also cause financial loss sometimes.

3) Denial-of-Service Attack In simple word Denial-of-Service referred the act by which a user of any website or service denied to use the service or website. In this type of cyber crime criminals target the web server of the websites and flow a large number of requests to that server. This causes the use of maximum bandwidth of the website, and it goes slow down or not available for some times

4) Phishing Phishing an act by which cyber criminals attempt to know the confidential data of any internet user. The Data may be the credit card number or username and password of any account. The main purpose of Phishing is to steal money or acquired other important data of any person, which causes financial loss.

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The act of Phishing done by sending e-mail or websites in which cyber criminals ask about your personal information or there is a link, and they tell click on it. After clicking on that link the person may be the victim of Phishing.

5) Spamming and Email Bombing Spam is a message also known as junk mail, send with a web link or business proposal. Clicking on this link or responding to business proposal send to a phishing website or install a malware in your computer. The sender of these emails are always unknown. You must aware to responding these type of spam mails because it tends towards some financial and data loss.
On the other hand in email bombing an abuser sending huge numbers of email to target address and due to this that email address or mail server crashed. It feels like Denial-of-service impact. It says that spamming is a variant of Email bombing.

6) Web Jacking The world Web Jacking comes from Hijacking. In this type of cybercrime the cybercriminals hacks the control of a website. They may able to change the content of that website. They use that website as like owner and the real owner of website has no more control on the website. Sometime attackers asks for ransom to the owner of the website

7) Data Diddling Data Diddling is unauthorised altering of data. When a person enter some data to his computer and output is different from input then he may victim of data diddling.It is done by a virus progarm that change the entered data.

8) Software Piracy Software Piracy is also a type of cybercrime and unfortunately most of Computer user are part of this crime. In this era of the Internet, you can easily download a movie or software via many websites or torrents. People often use a software without proper permission from the copyright holder of the software. They normally download the software and crack the code and use the software without buying that. This act is also a part of software
piracy.
The following type of work constitute a cyber crime of Software Piracy.
1.Crackingthekeyofanysoftware.
2.Usingunlicensedsoftwareinyourpersonalcomputer.
3.Usingsinglelicensedsoftwaretomultiplecomputer.
4. Distributing such type of software to other persons.

Conclusions (or) How Can You Stay Safe?

- Keep your operating system updated/patched. Set it to "auto update".
- Use anti-virus and anti-spyware software and keep them updated.
- Do not visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Secure your transactions. Look for the "lock" icon on the browser's status bar and be sure "https" appears in the website's address bar before making an online purchase. The "s" stands for "secure" and indicates that the communication with the webpage is encrypted.
- Be cautious about all communications you receive including those purported to be from "trusted entities"and be careful when clicking links contained within those messages.
- Do not respond to any unsolicited (spam) incoming e-mails.
- Do not open any attachments contained in suspicious emails.
- Do not respond to an email requesting personal information or that ask you to "verify your information" or to "confirm your user-id and password."
- Beware of emails that threaten any dire consequences should you not "verify your information".

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• Do not enter personal information in a pop-up screen. Providing such information may compromise your identity and increase the odds of identity theft.
• Have separate passwords for work related and non-work related accounts.

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"GST-Input credit and set off Mechanism in India."

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Mamasaheb Mohol Mahavidalaya, Puad Road, Pune-38.

"ABSTRACT"

"GST is called as one nation, one tax.This is a major indirect tax reforms after the independence of India. India is under developing country, therefore this type of reforms is the necessity of the time. Under GST Input tax credit and set off mechanism play a vital role. Under the old system of indirect taxation, some of the taxes cannot be set off. There was cascading effect.it was also creating pressure on the dealers' solved all the issues"

Introduction and Meaning: -

Due to Liberalisation, Privatisation and Globalization (LPG) policy, there are tremendous changes in the operation of Business in India. After demonetization of Indian currency by The Honourable Prime Minster, Shri Narendra Modiji, has made many changes under direct and indirect taxes. One major change in Indirect Taxes was the introduction of GST.

The single GST(goods and service taxes) replaced several former taxes and levies which included: central excise duty, services tax, additional customs duty, surcharges, state-level value added tax and Octroi. Other levies which were applicable on inter-state transportation of goods have also been done away with in GST regime. GST is levied on all transactions such as sale, transfer, purchase, barter, lease, or import of goods and/or services. India adopted a dual GST model, meaning that taxation is administered by both the Union and State Governments. Transactions made within a single state are levied with Central GST (CGST) by the Central Government and State GST (SGST) by the State governments. For inter-state transactions and imported goods or services, an Integrated GST (IGST) is levied by the Central Government. GST is a consumption-based tax; therefore, taxes are paid to the state where the goods or services are consumed not the state in which they were produced. Under the previous system, a state would only have to deal with a single government in order to collect tax revenue.

Input Tax Credit. -

Input tax means tax paid on purchase of goods and services. Input tax credit means credit of taxes paid on material and services procured. Input Tax Credit means reducing the taxes paid on inputs from taxes to be paid on output. When any supply of services or goods are supplied to a taxable person, the GST charged is known as Input Tax. The concept is not entirely new as it already existed under the pre-GST indirect taxes regime (service tax, VAT and excise duty). Now its scope has been widened under GST. Earlier, it was not possible to claim input tax credit for Central Sales Tax, Entry Tax, Luxury Tax and other taxes. In addition, manufacturers and service providers could not claim the Central Excise duty. During pre-GST era, cross-credit of VAT against service tax/excise or vice versa was not allowed. But under GST, since these taxes will be subsumed into one tax, there will not be restriction of setting off this input tax credit. The conditions to claim Input Tax Credit under GST is a very critical activity for every business to settle the tax liability. Input Tax Credit can't be applied to all type of inputs, each state or a country can have different rules and regulations. Input Tax Credit is also available to a dealer who has purchased good to resale. Tax Credit is the backbone of GST and for registered persons is a major matter of concern. This is majorly in line with the pre-GST regime. These rules are quite stringent and particular in their approach. Say for instance that you are a manufacturer. The tax to be paid on the final product is INR 1550. The purchase tax paid is INR 1300. The input credit you claim is INR 1300, and the final taxes you will pay is INR 250.

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Objectives: -

1) To know the provisions of GST.
2) Understand the impact of the provisions GST on Input Tax Credit.
3) To study the mechanism of credit.

Research Methodology: -

ITC can be availed by a registered taxable person in a specific manner and within a specified time frame. The table below shows the different situations wherein the inputs can be claimed for semi-finished goods or stock or finished goods.

Situation	ITC claims day for semi-furnished goods/stock/finished goods (held on immediate preceding day)
If a person has applied for registration or is liable to register or is granted registration	Day from when he is liable to pay taxes
When a person takes voluntary registration	Registration day
When a taxable registered person stops paying taxes in composition levy scheme	Day from when he is liable to pay tax normally u/s 7.

Input tax credit for the above-mentioned situations can be claimed only if it does not exceed one year from the tax invoice date of issue related to supply.For any other cases, ITC must be claimed:

- Before you file a valid return for the September month u/s 27 days after the end of financial year to which the invoice is related, or
- Before you file the annual return, as u/s 30 days, the due date to file the annual return is December 31 after the end of the financial year.

How to calculate Input Tax Credit?

Suppose you have a business. The service or product you sell attracts a tax of 18%. You use input services or goods during your business. The tax due from you (of 18%) can be adjusted to the taxes paid already by you on the purchase of such inputs. The manufacturers add taxes only for the value addition done and not on the total product value. Let's consider an example of a utensils manufacturer who manufactures utensils like spoons, plates, etc. Assume that the manufacturer had bought an INR 15000 worth raw steel to make a pressure cooker and INR 10000 worth other raw materials. Let's assume that the GST for steel is 18%. Also, assume that the GST he paid is 28% of other raw materials. Hence, the manufacturer has paid Rs. 28 00 on other raw materials and Rs. 2700 on raw steel which he used as inputs. So, the total input tax paid was INR 5500 by the manufacturer. Now, after considering the cost of manufacturing steel pressure cooker using the raw materials and including a decent profit, he decided to sell the pressure cooker to a distributor at INR 35000 + GST. Assume that the steel utensil attracts a GST of 18%. Now the tax on it will be INR 6300. So, the manufacturer will invoice the pressure cooker for INR 41300. Hence, the manufacturer is collecting INR 6300 as GST on sale from the distributor. The manufacturer had paid INR 5500 towards GST during the purchase of his input raw materials. Hence, out of INR 6300 of GST, the manufacturer can now claim a credit of INR 5500 which he already paid towards GST for inputs and deposit the difference of INR 800 with the government. This tax credit is available at all succeeding stages, retailers and distributors charge GST and can claim the Input Tax Credit.

How to claim Input Tax Credit (ITC)?

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The following conditions have to be met to be entitled to Input Tax Credit under the GST scheme:

1. One must be a registered taxable person.
2. One can claim Input Tax Credit only if the goods and services received is used for business purposes and furtherance of business.
3. Input Tax Credit can be claimed on exports/zero rated supplies and are taxable.
4. For a registered taxable person, if the constitution changes due to merger, sale or transfer of business, then the Input Tax Credit which is unused shall be transferred to the merged, sold or transferred business.
5. One can credit the Input Tax Credit in his Electronic Credit Ledger in a provisional manner on the common portal as prescribed in model GST law.
6. Supporting documents – debit note, tax invoice, supplementary invoice, are needed to claim the Input Tax Credit.
7. If there is an actual receipt of goods and services, an Input Tax Credit can be claimed.
8. The Input Tax should be paid through Electronic Credit/Cash ledger.
9. All GST returns u/s 27 such as GST-1, 2, 2A, 6, 6A, 7, 7A needs to be filed
10. During bulk receipt of goods, one can claim Input Tax Credit only once the final lot is received.

How Input Tax Works Under GST. Suppose Mr. A is a seller. He sells goods to Mr. B. The buyer Mr. B is now eligible to claim the purchase credit using his purchase invoices.

This is how it works:

1. A uploads all his tax invoices details as issued in GSTR-1.
2. The details uploaded by Mr. A is automatically populated or reflected in GSTR-2A. This same data will get reflected when Mr. B files the GSTR-2 returns which are nothing but the details of his purchase.
3. The details of the sale are then accepted and acknowledged for by Mr. B, and subsequently, the purchase tax is credited to Mr. B's 'Electronic Credit 'He can use this to adjust it later for future output tax liability and receive a refund.

How to set off Input tax credit.

Tax credit to be set off	Available Input Tax credit (on the order of utilization)		
IGST	IGST	CGST	SGST
CGST	IGST	CGST	
SGST	IGST	SGST	

Under what situations one CAN NOT claim Input Tax Credit (ITC)?

Input Tax Credit (ITC) is unavailable for claim u/s 16(9) under the following circumstances:

1. If goods and services are acquired for personal use.
2. In thecase of goods and services acquisition on acontract which may result in areduction of immovable property apart from plant & machinery.
3. If one has paid tax in GST composition scheme for goods and services received.
4. In case an immovable property is built apart from plant and machinery using the goods and services and this immovable property is not transferred.
5. In thecase where employees have used the goods and services for personal purposes.
6. When thecost of capital goods depreciation is claimed, then Input Tax Credit cannot be claimed.

What are the documents and forms required to claim Input Tax Credit?

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The input tax credit shall be availed by a registered person, including the InputService Distributor, on the basis of any of the following documents, namely: -
(a) an invoice issued by the supplier of goods or services or both in accordance withthe provisions of section 31;
(b) an invoice issued in accordance with the provisions of clause (f) of sub-section(3) of section 31, subject to payment of tax;
(c) a debit note issued by a supplier in accordance with the provisions of section 34;
(d) a bill of entry or any similar document prescribed under the Customs Act, 1962 orrules made thereunder for assessment of integrated tax on imports;
(e) an ISD invoice or ISD credit note or any document issued by an Input ServiceDistributor in accordance with the provisions of sub-rule (1) of rule invoice.7.
(2) Input tax credit shall be availed by a registered person only if all the applicableparticulars as prescribed in Chapters.
(3) No input tax credit shall be availed by a registered person in respect of any tax that has been paid in pursuance of any order where any demand has been confirmed on account of any fraud, wilful misstatement or suppression of facts.
The above documents prepared as per the GST invoice rules should be furnished while filing the GSTR-2 form. Failure to present these forms can lead to either rejection or resubmission of the request. For taxes paid on goods and services or both due to any fraud or due to order for the demand raised, suppression of facts or willful misstatement, Input Tax Credit cannot be claimed. Since input credit will be available to the seller at each stage, the input tax credit is expected to bring down the overall taxes charged on the product at present. So, if input credit mechanism works efficiently, final consumers may see cost reduction.

Conclusion: -

GST is a major tax reforms in India. There are more than 196 countries in world which levy GST. This tax will be beneficial to dealers as well as consumers. Input tax credit mechanism and set off provisions is helpful to all the dealers and manufacturers.

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Banking Finance through Self Help Groups (SHGs): A Tool For Socioeconomic Growth of Rural Area.

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Abstract :
Poverty is a term with which many developing countries are suffering. The financial requirement is one of the basic needs of the poorer section of the society for socio-economic development.
The present research paper is an attempt to study the role of Banking-Finance and Self-Help-Groups (SHGs) for the socio-economic development of poor people in rural area.

Methodology: A survey on the social, psychological and economic impact of SHGs of the selected respondents was conducted at both the rural district of Pune. For the purpose of the study both the primary and secondary data have been used. For collecting primary data 10 development blocks have been purposively selected. Again from each development block 10 SHGs and from each SHG, 5 members have been randomly selected to make the total respondents as 500 respondents.

Research limitations:
Since respondents have been in a tight work and the majority of the respondents' educational background is low creates some negligence in filling the questionnaire. Therefore, these conditions might affect the quality of the paper to some extents.

Practical limitations:
The result of the present study would help the Governmental, semi-governmental and non-governmental agencies in formulation of policies and strategies aiming at poverty alleviation, income generation and socio-economic up gradation through Banking finance and SHGs for the poor people living in the rural areas. It would also be an added to the existing literature and the researchers can use the results for further works.

Hypothesis:
The results of the study offer a beneficial source of information for the policy makers in formulation of policies and strategies for removal of poverty and development of socio-economic conditions in the rural areas.

Introduction:
The overall development of a nation is closely depends on the development of the rural economy. During the last few decades it has been seen that due to the vicious cycle of poverty these overall development cannot be achieved. Poverty is a term with which many developing countries are suffering. In India, most of the people lives in the rural areas are below the poverty line and finance to these indigenous peoples is considered as important issues for the Government of India.
There are still around 200 million people in rural areas that live below the poverty line and for whom banking access is still not a reality. The financial requirement is one of the basic needs of the poorer section of the society for socioeconomic development. Banking finance to Self Help

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Groups (SHGs) may be considered as a vital option for meeting the financial needs of those poorer sections of the society. Banking finance is the form of financial development that has its primary aim to alleviate the poverty. Governments, donors and NGOs around the world responded enthusiastically with plans and promised to work together towards the realization of these goals.

The present research paper is an attempt to study the role of Banking-Finance and Self-Help-Groups (SHGs) for the socio-economic development of poor people living in the rural area.

Concept of Self-Help-Groups (SHGs):

The SHG is an informal organization of persons from the homogeneous poor section of the society and it is controlled and managed by the members itself. It is an association of 10 to 20 local individual members who are financially weak and from the same socio-economic backgrounds. These groups start with saving and not with credit; the group then uses its savings to give loans to members to meet their emergency and other needs. The members decide on savings per members, maximum size of loans with and without guarantee.

The SHG is the platform or forum to the members to come together for emergency, disaster, social reasons, economic support to each other have ease of conversation, social interaction and economic interactions. The Self-Help Group (SHG) is a viable organized setup to disburse Banking credit to rural women for the purpose of making them enterprising for enabling them into various entrepreneurial activities.

Objectives of the study:

The main objective of the present study was to study the role of Banking finance through Self-Help-Groups (SHGs) for socio-economic development of the rural people . In order to achieve the main objective the present study was also carried out with the following specific objectives:

1. To study the socio-economic background of respondents.
2. To examine the Pre-SHG and Post-SHG status of SHG members.
3. To study the impact of SHGs on the respondents.
4. To study the benefits received by the respondents through various income generating activities.
5. To study the various problems faced by the SHG members in the rural area.

Methodology adopted for the study:

The paper was an attempt to make a study on the socio-economic development of the rural people through Banking finance and Self-Help-Groups in Rural area. For the purpose of the present study both the primary and secondary data have been used. The primary data were collected from field survey through filled in questionnaire and direct interview method.

The secondary data were collected from different journals, books, relevant documents, news papers and magazines, records of Non Governmental Organisations (NGOs), Institute of Co-operative Management (ICM) etc.

Ten SHGs were randomly selected from each of the sample development blocks. From each sample SHGs five members were randomly selected. Thus 500 respondents were selected for the purpose of the present study.

For analyzing the data, tools, like percentages, simple average, have been used.

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Results from the study:

Findings of the present investigation on the topic entitled 'Banking finance through Self Help Groups (SHGs): A tool for socio-economic development of Rural Pune were presented under the following heads.

A.1 Socio-economic characteristics of the respondents.
A.2 Pre-SHG and Post-SHG status of the respondents.
A.3 Social impact of SHG activities on the respondents.
A.4 Economic impact of SHG activities on the respondents.
A.5 Problem faced by the respondents in functioning of the SHGs.

A.1 Socio-Economic characteristics of the respondents:

The socio-economic characteristics of the respondents were analyses in Table A.1 as follows:

Sr.no	Categories	No.	Percentage(%)
1	**Age**		
	18 to 30 years	170	34
	31 to 50 years	320	64
	Above 50 years	10	2
	Total	500	100
2	**Education**		
	Illiterate	40	8
	Functionally Illiterate	130	26
	Primary	196	19.2
	Middle school	188	17.6
	High school	112	22.4
	Graduate	34	6.8
	Total	500	100
3	**Marital status**		
	Unmarried	32	6
	Married	378	75.6
	Widow	30	6
	Separated	60	12
	Total	500	100
4	**Caste**		
	SC	54	10.8
	ST	70	14
	OBC	264	52.8
	OPEN	112	22.4
	Total	500	100

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5	**Type of family**		
	Nuclear	428	85.6
	Joint	72	14.4
	Total	500	100
6	**Land holding**		
	Land less	278	55.6
	Land owners	222	44.4
	Total	500	100
7	**Family size**		
	Small family	362	72.4
	Big family	138	27.6
	Total	500	100
8	**Family Income**		
	Low Income	46	9.2
	Semi medium	150	30
	medium	146	29.2
	High income	158	31.6
	Total	500	100
9	**Social participation**		
	Low	352	70.4
	Medium	18	3.6
	high	130	26
	Total	500	100
10	**Mass media participation**		
	Low	226	45.2
	Medium	204	40.8
	high	70	14
	Total	500	100
11	**Trainings**		
	No training	72	14.4
	One training	140	28
	Two trainings	136	27.2
	Three and above trainings	152	30.4
	Total	500	100

(Ref: Field Survey.)

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From the above Table A.1.1 it has been observed that majority of the respondents i.e. 64.0 percent were middle aged, while 34.0 per cent were young and remaining i.e. 2.0 per cent were old aged.

The education level of the respondents showed that 26.0 per cent of them were functionally literate, 22.4 per cent had received high school education, 19.2 per cent of the respondents had education up to primary school, 17.6 per cent received middle school education, and 8.0 per cent were illiterate and only 6.8 per cent of them received college level education.

The marital status of respondents indicated that majority i.e. 75.6 percent of the respondents was married, 12.0 per cent were separated, 6.4 per cent of the respondents were unmarried and 6.0 per cent were reported as widows. On the other hand 85.6 percent of the respondents had nuclear family while 14.4 per cent had belonged to joint family. More than half of the respondent's families were land less (55.6%) and remaining 44.4 per cent were landowners.

Economic position of the family of the respondents indicated 9 that 31.6 per cent of them belonged to high income category, followed by respondents belonging to semi-medium income category (30.0%), medium income category (29.2%) and only 9.2 per cent of them belonged to low income category. It is revealed from the data presented in Table 6.1.(i) that nearly two-thirds (i.e. 74.0%) of the respondents had low and medium social participation while 26.0 per cent of respondents belonged to the high social participation category. Mass media participation of 45.2 per cent of respondents was low, followed by 40.8 per cent of the respondents belonging to medium mass media participation category and only 14.0 per cent had high mass media participation.

It has been also observed from the study that more than one-fourth of the respondents (i.e. 28.0%) had received one training, followed by 27.2 per cent who received two trainings, 30.4 per cent received three and above trainings and remaining 14.4 per cent did not receive any training on income generating activities.

A.2 Income status of the respondents in Pre-SHG and Post-SHG stage:

The SHG members involved in activities which yield income to them. The income of the respondents in pre-SHG and post-SHG stage is analyses in table A.2.1 as follows.

Income status of the respondents

Monthly income	**Pre SHG**	**Post SHG**
No income	77 (15.4)	Nil
Nil Up to 1000	145 (29.0)	170 (34.0)
1001-1500	195 (39.0)	187 (37.4)
1501-2000	83 (16.6)	110 (22.0)
Above 2000	Nil	33 (06.6)
total	500 (100)	500 (100)

(Ref: Field survey.)

It is inferred from the above Table A.2.1 that before joining SHG 15.4 percent of the respondents were no income and none of the respondent had income more than 2000/-. But after joining SHG there is no respondent without any income and 6.6 percent 10 of the respondents crossed their income level above 2000/-. 187 of the respondents out of 500 representing 37.4 percent have monthly income of 1001-1500 after joining the group.

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A.3 Social impact of SHG activities on the respondents:

Efforts were made to assess the social impact of the respondents during the Pre-SHG and Post-SHG stage and the data relating in this regard is presented in Table A.3.1 as under:

Social impact of the respondents

Social impact of the respondents	Pre-SHG stage	Post-SHG stage
Well Socially recognition	126 (25.2	328 (65.6)
Equally participated with husband in family decisions	146 (29.2)	268 (53.6)
Active participation in social services	50 (10.0)	168 (33.6)
Better contact (network) with outsiders	25 (05.0)	270 (54.0)
Immense in Literacy (e.g. able to read, sign etc.)	77 (15.4)	450 (90.0)
Active participation in organized actions/activities	26 (05.2)	314 (62.8)
Gained Self dependence	158 (31.6)	334 (66.8)
Better schooling of the children	138 (27.6)	356 (71.2)
Improved inter-personal relationships	186 (37.2)	386 (77.2)
Active Institutional participation	84 (16.8)	266 (53.2)
Awareness regarding new Govt. schemes	100 (20.0)	466 (93.2)
Better standard of living	82 (16.4)	212 (42.4)

(Ref: Field Survey)

On the issue of recognition respondents stated that after joining the group many people have come to know about them and their activity and show more interest in interacting with them. More than fifty percent i.e. 53.6 percent of the women respondents felt that they were equally take important decisions and issues connecting with their family with their husbands.

After joining the group 90 percent of the respondents have immense their literacy and with this literacy the respondents were able to provide better schooling and better health to their children. The study disclosed that the participation of the women respondents in social services like raising funds for girl's marriage, settling family disputes, encouraging people to 11 send their children to schools etc. have increased. After joining the groups, 66.8 percent and 77.2 percent of the respondents were felt self dependent and improved their inter-personal relationship.

The respondents were more aware of the new developmental schemes introduced by the government. A huge number respondent i.e. 93.2 percent had opined that they were aware about the various developmental programmes such as the LIC scheme for the poor, NREGA etc. Their standard of living had also increased from 16.4 percent to 42.4 percent after joining the group. They were now improved their houses, sanitation conditions etc. and better access to medical facilities after joining the group.

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A.4 Economic impact of SHG activities on the respondents:

An effort were also made to access the economic impact of the respondents through Banking finance and the data relating in this regard is presented and analysed in Table A.4.1 as under:

Economic impact of the respondents

Economic impact of the respondents	Economic impact Pre-SHG stage	Economic impact Post-SHG
Better access to the credit facility	62 (12.4)	418 (83.6)
Minimized family dependence to money lenders	466 (93.2)	148 (29.6)
Economically independent	64 (12.8)	216 (43.2)
Better access/control of financial resources & households	88 (17.6)	333 (66.6)
Improved the food consumption pattern	122 (24.4)	376 (75.2)
Increased savings	94 (18.8)	338 (67.6)
Minimized family indebtedness	354 (70.8)	168 (33.6)
Asset creation	72 (14.4)	262 (52.4)

(Ref: Field Survey)

It has been observed from the above Table 6.4.(i) that 83.6 per cent of the respondents were better access to the credit facilities after joining the group which was only 12.4 per cent before joining the group. Family dependence on moneylenders was also reduced from 93.2 percent to 29.6 percent after joining the group. After joining the group the number of respondents had also increased their savings from 18.8 percent to 67.6 percent. Economic 12 independence from the family members, relatives etc. was also found to be encouraging as 43.2 percent of the respondents were feeling economically independent. The results of the study indicate that 66.6 percent of the respondents were better control of their financial resources and households and with this financial control they were improved their food consumption pattern also. 52.4 percent of the respondents felt that they were able to create assets under various schemes of banking finance.

A.5 Problem faced by the respondents in functioning of the SHGs:

An effort was also made to identify the types of problems that were faced by the respondents in the study area. The data relating to this regard is presented and analysed in Table A.5.1 as follows:

Type of problems faced by the respondents

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Problem	Frequency	Percentage
Lack of training programmes	178	35.6
Improper utilization of funds	356	71.2
Improper accounts keeping	342	68.4
Formulation of group	206	41.2
Inequality in issuing loans	184	36.8
Repayment of loan	126	25.2
Establishing the activity	206	41.2
Running the groups	144	28.8
Excessive stress and tension in women	402	80.4
Lack of guidance and support from supporting agency	134	26.8
Misunderstanding among group members	286	57.2
Pressure from the family to go for loan	192	38.4
Poor output from the group activity	102	20.4
Marketing problem	96	19.2
High rate of interest	84	16.8
Non-cooperation of banks	92	18.4
Too many formalities	222	44.4
Lack of support from family members	128	25.6

(Ref: Field survey)

From the above Table A.5.1 it has been found that the majority of the respondents i.e. 80.4 percent had stress and tension because of the dual responsibility of the group as well as of home. By playing the dual role, one as a homemaker and the other in the group, they were facing problems in maintaining a balance between these two roles. Improper utilization of funds was also another problem faced by the respondents as 71.2 percent of the respondents had complained about that. Another problem faced by the SHG members (68.4 percent) was the improper recording of accounts. That was because of lack of training 14 programmes organized for the groups at regular intervals as there were 35.6 percent of the respondents had complained about that. 38.5 percent of the respondents said that their families pressurized them into taking loans for family needs and when the members were taking loans for consumption purposes rather than starting an economic activity, it affects the repayment of the loan. 26.8 percent of the respondents had problems with the promoting agencies, as they did not guide them properly. 36.8 percent of the respondents felt that there was an inequality in issuing the loans. The result also revealed that 20.4 percent of the respondents had a problem of poor output from the selected economic activity due to lack of raw materials, lack of required skill in the particular activity and problems relating to marketing of the output produced. They had good produce but did not have a proper market to sell it so that they can earn enough money. 18.4 percent of the respondents said that bank employees were not always cooperating; they were rude to the members. 16.8 percent of the respondents felt that some banks were charging higher interest rate than the usual rate for the SHG members. To many formalities were the main reasons for difficulties faced by the respondents in operation with the banks as 44.4 percent of the respondents were reported in this regards.

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Interpretation:

The major interpretations from the study were reported as under:

1. Nearly two-third (64.0%) of respondents belonged to middle age group where three-forth of the respondents (i.e. 75.6%) were married.
2. More than one-third (40.0%) of respondents were middle and high school passed.
3. More than half of the respondents (52.8%) belonged to backward caste.
4. Majority (85.6%) of respondents belonged to nuclear family.
5. More than half (55.6%) of respondents were landless.
6. 15 Nearly one-third (31.6%) of the respondents belonged to the high income category followed by semi-medium income category (30.0%).
7. Nearly three-fourth (70.4%) of the respondents belonged to low social participation category.
8. Regarding mass media participation, 45.2 per cent of the respondents belonged to low level of mass media participation.
9. After joining SHG there is no respondent without any income and 6.6 percent of the respondents crossed their income level above 2000/-.
10. 93.2 percent of the respondents were aware about the new govt. schemes
11. Around 90 percent were capable of being read, sign. etc after joining the group.
12. Majority of the respondents (83.6%) had economically benefited and better access to the credit facilities, followed by their better saving habits
13. (67.6%). Nearly three-fourth of the respondents (72.4%) were getting monetary benefits up to 1500 from income generating activity followed by medium monetary benefit which ranged between 1501 to 3000 (22.8%).
14. Majority of the respondents (95.6%) felt Improvement in their communication ability followed by increased confidence level
15. (83.6%), respect from the society (76.4%) and respect from the family member (67.2%) by taking up of income generating activity.
16. The major problem faced by the respondents was excessive stress and tension in women (80.4%) followed by improper utilization of fund (71.2%), improper accounts keeping (68.4%) etc.

Suggestions:

Based on the present study the following suggestions have been made for future line of work.

i) Special training programmes should be provided regarding the proper accounts keeping and accounting experts should be invited as a resource person so that the beneficiaries can enhance their accounting knowledge and maintain their cash book and other necessary books of accounts accurately.

ii) For better functioning of the groups women should be properly educated and periodical training at regular intervals may be made and also a study on the respective field may be conducted to outcome the findings.

iii) The study was conducted in only two rural district of Pune with reference to socioeconomic development through Banking finance, it is necessary to have studies in other areas also in order to generalize the findings.

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Conclusions:

1. Finance is an element which everyone needs. Regular and immediate finance can play an important role for development of socio-economic conditions of the people particularly the rural poor.
2. Banking finance is expected to play a significant role in poverty alleviation and rural development particularly the rural women.
3. The potential for growing Banking finance institutions in India is very high. Major cross-section can have been benefited if this sector will grow in its fastest pace.
4. From the analysis of data it can be concluded that numbers of members have started savings only after joining the groups while majority of the members have no savings in the pre-SHG era. After joining the groups most of the members solved their problems alone.

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