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Preparation of Manuscript : Manuscript should be presented in as concise a form as possible. Pages should be numbered consecutively and arranged in following order.

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Abstract : The abstract, usually not exceeding 200 words, should indicate the scope and significant content of the paper, highlighting the principal findings and conclusion. It should be in such a form that abstracting can use it without modification.

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Tables : Tables should have short descriptive caption and numbered consecutively

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Message from Chief Editor

Dear Readers

We draw immense pleasure in presenting April 2016 issue of our Journal - Expression a Journal of Social Science. It continues to gain appreciation and accolades as it provides a platform that stimulates and guides the intellectual quest of scholar. Expression is a Refereed/ Juried International Journal that brings to the readers high quality research.

We would like to express our gratitude to our valued contributors for their scholarly contributions to the Journal. Appreciation is due to the editorial advisory Board, the panel of referees. The contributors of our team members are highly appreciated. On the behalf of EXPRESSION'S Editorial Team, I would like to extend a very warm welcome to the readership of EXPRESSION I take this opportunity to thank our authors, advisors, editors and reviewers, all of whom have volunteered to contribute to the success of the journal.

We wish to encourage contributions from the scholars to add value to the Journal. We have tried our best to put together all the research papers/articles. Coherently. Suggestions from our valued readers for adding further value to our journal are however, solicited

Dr. Nisha Singh
Principal
MCPS
Affiliated to CCS University

About the Journal

Founded in 2003, Modern College of Professional Studies, Ghaziabad has already established a reputation as a medium to expand one's knowledge & enhance skills to achieve success. The strength lies in the strong academic faculty, focus on research and collaboration with industry The publication of first International Journal of MCPS **"EXPRESSION - A Journal of Social Science"** proved to be a milestone in achieving academic expertise. Now, we are bringing the second issue of the journal.

The Volume-II, Issue-II of **EXPRESSION** covers finest peer-reviewed research in all fields of management, IT, Education, Commerce, Law and Social Science and taking contemporary issues and latest trends in the global village. It contains diverse collection of original articles and research work of researchers, academicians and scholars.

Through this journal, we would like to share globally our experiences and learning with other education assessors or evaluators. The basic objective is to provide opportunities for all those interested in learning more about in the field of Social Science.

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HUMAN RIGHTS AND GLOBALIZATION

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Abstract :
Globalization and Human Rights This process of globalization is part of an "ever more interdependent world," where political, economic, social, and cultural relationships are not restricted to territorial boundaries or to state actors and no state or entity is unaffected by activities outside its direct control. Developments in technology and communications, the creation of intricate international economic and trade arrangements, increasing activity by international organizations and transnational corporations (such as McDonald's), and the changes to international relations and international law since the end of the Cold War have profoundly affected the context within which each person and community lives as well as the role of the state
Keywords : Globaliation, Human Right, Poverty, Services, Policy.

I. INTRODUCTION

Would globalization enhance the implementation of human rights as stated in the Universal Declaration of Human Rights (1948) and the subsequent United Nations agreements , particularly the covenant on civil and political rights (1966) ,the covenant on economic, social and cultural rights (1966) and the declaration on the right to development (1986).

Attempting an answer to this question is not an easy task, mainly because of the different and contradictory connotations of the term globalization. If globalization is conceived as turning the whole world into one global village in which all peoples are increasingly interconnected and all the fences or barriers are removed, so that the world witnesses a new state of fast and free flow of people , capital , goods and ideas then the world would be witnessing unprecedented enjoyment of human rights everywhere because globalization is bringing prosperity to all the corners of the globe together with the spread of the highly cherished values of democracy , freedom and justice .

On the other hand if globalization is conceived as turning the world into a global market for goods and services dominated and steered by the powerful gigantic transnational corporations and governed by the rule of profit then all the human rights of the people in the world, particularly in the south would be seriously threatened.

Literature on globalization, in general, by both the so called advocates and opponents of globalization is abundant. However the critics of globalization lay much more emphasis on its impact on human rights, particularly of the poor people and of the developing countries. Their analysis and conclusions are usually supported by facts and figures drawn from international reports and statistics to prove that human rights have been adversely affected by globalization. They usually relate one or the other aspect of human rights to one or the other aspect of globalization, such as relating poverty in developing countries to debt or relating unemployment to privatization, or relating health deterioration to the monopoly of medicine patents. Or they enumerate the aspects of deteriorations in human rights, such as impoverishment and lowering standards of living , increasing inequality discrimination , deprivation of satisfaction of basic needs such as food clean water and housing , illiteracy ..etc and explain these facts by globalization in general through making comparisons between the state before globalization (usually before the 1990s) and after it , such as stating that " progress in reducing infant mortality was considerably slower during the period of globalization (1990-1998) than over the previous two decades.

The advocates of globalization do not deny the fact that in some regions basic human rights are not respected during the past decade but they explain this by the resistance of some countries and peoples to globalization and they claim that globalization must have winners and losers. The losers resistance to globalization is attributed to their state of stagnation and rigidity or to their traditional culture or even to the nature of their religions which is anti democratic and anti modernization.

So both advocates and critics of globalization agree on the fact that human rights are in some way or the other adversely affected by globalization particularly in the south , but they differ in their explanation of this fact and hence in their prescription for the remedies . While the advocates prescribe more absorption of peoples and countries in the global system, the critics of globalization prescribe opposition and resistance of the hegemony of the transnational corporations and the injustice inherent in the globalization process. Who is right to answer this question we need, as I think, to examine the

underlying basic assumptions of both the human rights agreements and the globalization agreements, particularly the economic, which I believe are contradictory as far as human rights are concerned.

II. CONTRADICTORY BASIC ASSUMPTIONS OF HUMAN RIGHTS AND GLOBALIZATION

The underlying basic assumption upon which all UN human rights agreements were based was governments' responsibility while globalization basic underlying assumption has been from the very beginning government relief from any responsibility regarding human rights.

All human rights agreements were discussed , negotiated and signed by governments and all the declarations were addressed to governments who were held responsible for either their implementation or violations .Governments were asked to take whatever political , economic, social , cultural and legislative measures to enhance the implementation of human rights in their countries . All human rights annual reports on the state of human rights in countries of the world published by UN, human rights societies or some countries such as USA held government responsible for violations of human rights. Governments were assumed to be policy and decision makers for all economic, political and social domains in their countries.

Since the Universal declaration of Human rights in 1948 many countries of the world ,whether in the north or the south succeed in enhancing the implementation of human rights , particularly in the economic, social and cultural domains simply through policies of subsidizing food, housing and services such as health care , transportation ,sanitation, culture and education . Many countries, particularly in the south made considerable achievements in the field of the right to work simply by taking decisions to protect local industries from competition and thus creating job opportunities for their population.

Onthe contrary g lobalization agreements require governments to abide by the global market mechanisms and to follow the advices (instructions) of the international agencies such as WTO, IMF, and the World Bank.

So governments have to be decision takers rather than decision makers particularly in the economic domain and they have to make all necessary adjustments and restructuralisations in their societal systems. They have to issue new laws in every sphere to facilitate the operations of the free market mechanism and to cancel any existing laws which hamper this operation. They may even have to change articles in their constitutions , such as those related to public and private sectors .Many of those changed laws are related to human rights particularly the economic, social and cultural rights . The most important of these changes are related to taxation, worker-employer relations, owner-renter relations , government subsidization of basic needs goods such as food , water and housing and services such as education , health , transportation , and even mass communication and cultural services (such as telephones, newspapers, theatres , books and television) . Everything has to be dealt with as a market commodity judged by its economic value rather than its social value.

The adoption of the wide open door policy by governments requires issuing laws which impedes another fundamental human right declared by UN that is the right to development. Laws allowing the free flow of capital and goods with almost no restrictions on imports through tariffs adversely affect local developmental projects.

So governments find themselves in a very paradoxical situation. If they try to abide by UN human rights agreements which they signed they would be violating the globalizations agreements, which they also signed ! and they would be criticized or even penalized for this violation (by cutting the aids offered to them by international institutions) , and if they try to abide by globalization agreements they would be necessarily violating the human rights agreements and would be criticized for that in the human right reports and the UN statistics on human development would show them lagging behind in indices of human development!!

III. HOW DO GOVERNMENTS FACE THE CONTRADICTION?

Governments, particularly of the developing countries, have been persuaded and pressured to sacrifice human rights for the sake of globalization.

Violations of human rights agreements, particularly those of economic, social and cultural rights are not met by practical punishments or deterrence measures. The reactions of both international organizations and local human rights groups do not exceed criticism, condemnation or demonstrations at most. On the contrary violations of economic rules of globalization and agreements are met with very severe practical measures such as economic boycotting and cutting of aids.

Many authors provide evidence on the adverse effects of governments' adoption of globalization economic agreements on basic human rights due to the reduced overall government spending on services and satisfaction of basic human needs and the increasing tendencies towards privatization of these services.

Vandana Shiva states that " during 1979-81 and 1992-1993 , calorie intake declined by three percent in Mexico, 4.1 percent in Argentina ,10.9 percent in Kenya , 10.0 percent in Tanzania , 9.9 percent in Ethiopia . In India, the per capita cereal consumption declined by 12.2 for rural areas and 5.4 percent in urban areas". She explains these figures by saying that countries cannot ensure that the hungry are fed because this

involves laws, policies and financial commitments which are" protectionist.

She also offers evidence on the impact of globalization agreements on the right to health: "Under the trade Related Intellectual Property agreement of the world Trade Organization, countries have to implement patent laws granting exclusive, monopolistic rights to the pharmaceutical and biotech industry. This prevents countries from producing low cost generic drugs. Patented HIV/AIDS medicine costs $15,000, while generic drugs made by India and Brazil cost $250-300 for one year's treatment. Patents are, therefore robbing AIDS victims of their rights".

Diana Smith shows how the policies associated with globalization affected primary health care services. She states that: "introducing the market mechanism into the provision of health care obviously makes services less available to the poor. The privatization of health and hospital services also makes the poor suffer as services become more oriented towards those who can pay. In addition, essential drug policies, which aim to make necessary pharmaceuticals available to all at an affordable price, are threatened by increasingly liberal policies towards pharmaceutical companies. Finally, increasing unemployment and poverty add to the nation's health problems by creating extra demands on reduced government services."

The authors of Global Issues state that "the lives of 1.7 million children will be needlessly lost this year (2002) because world governments have failed to reduce poverty levels "and "Progress in life expectancy was also reduced for 4 out of5 groups of countries, with the exception of the highest group (life expectancy 69-76 years), also "progress in reducing infant mortality was also considerably slower during the last two decades than over the previous decades ".

T. Rajamoorthy states that "globalization resulted in the violation of the fundamental right to work. In their drive for profits, companies, in particular TNCs, have been restructuring their operations on a global scale. The result has been massive unemployment. In 1995, the ILO announced that one third of the world's willing to work population was either unemployed or underemployed ....the goal of full employment , which was one of the pillars of the social consensus that prevailed after the Second World War , has been jettisoned by nearly all governments .... Globalization has also engendered or accentuated the process of the casualization and in formalization of labor" . He mentions that only 8% of the labor force in India is in the formal economy while 90% work in the informal economy with no legal protection or security and are subject to ruthless exploitation. Many companies ,including TNCs got rid of their unionized labor force and moved their operations to law wage and depressed areas to avail themselves of the large supply of unorganized and unprotected , mainly female labor.

Mathews George Chunakara describes the state of workers in developing countries after globalization as a race to the bottom, and the bottom means slave like conditions. He explains this by the search of transnational companies for cheap labor in order to maximize their profits, so the governments of developing countries compete for the investors by providing cheaper labor .

The right to education has been also adversely affected by the privatization policies and the turning of education into a profit generating enterprises in the developing countries. Due to the reduced governmental expenditure on education the quality of public free education has suffered a lot. Investors established educational institutes covering all the range from kinder gardens to universities offering better but much more expensive quality of education for the elites and motivated mainly by profit. However most developing countries still suffer a high rate of illiteracy and graduates of the governmental low quality educational institutions are not well prepared for the labor market so they suffer unemployment.

Danilo Turk showed that the globalization agreements and policies had its adverse effects on the right to work, the right to food, the right to health, the right to education and the right to development. There is almost a consensus over the fact that the human rights are much more adversely affected by globalization in the south or the so called developing countries .One of those adversely affected fundamental rights is the right to development. "When countries lose their right to regulate the entry, behavior and operations of foreign investment in the interests of their own people, it is not difficult to appreciate why it is bound to result in an impairment of the right to development.

IV. CONSEQUENCES OF VIOLATIONS OF HUMAN RIGHTS

No doubt that the widespread violations of human rights are related to the widening gap between the rich and the poor, both on the global and on the local levels. International Statistics prove this fact. It shows that: half the world –nearly three billion people – lives on less than two dollars a day the wealthiest nation on earth has the widest gap between rich and poor of any industrialized nation. The top fifth of the world's people in the richest countries enjoy 82% of the expanding export trade and 68% of foreign direct investment while the bottom fifth, barely more than 1%. In 1960, the 20 % of the worlds people in the richest countries had 30 times the income of the poorest 20%--in 1997 , 74 times as much. A few hundred millionaires now own as much wealth as the world's poorest 2.5 billon people. The combined wealth of the world's 200 richest people hit $ 1 trillion in 1999; the combined incomes of the 582 million people living in the 43 13east developed countries are $ 146 billion. This leads to increasing feelings of deprivation and injustice among the populations of the different countries of the world which is enhanced by the rapid and unprecedented advance in communication and

information technologies, which really turned the world in this respect into a global village. The deprived are exposed daily, if not every minute to images and evidences of the huge gap in standards of living between the rich and the poor.

Some consequences of this deprivation of human rights are social and political unrest and even violence and counter violence. It also leads to an increasing resort to suppression and to chaos. Paradoxically the expenditure on suppressing protest and violence may be equal to or even exceeds the ought to be expenditure on implementing economic, social and cultural human rights for all the peoples of the world. What matters more are the loss of human lives and the loss of constructive contributions which all the deprived could have offered to the economic, social, scientific and cultural advancement of humanity if they were granted their basic human rights. Racism, prejudices, and discrimination are negatively associated with justice and implementation of human rights.

There is enough evidence that the world wealth is; in general, rapidly increasing due to the advance in science and technology and that it is more than enough to satisfy the needs of all the dwellers of the globe. What is needed is the globalization of human rights and prosperity. but how.

V. GLOBALIZATION AND THE HUMAN RIGHTS APPROACH

Mary Robinson stressed the fact that "A key characteristic of economic globalization is that the actors involved are not only states, but private power in the form of multinational or transnational corporations. It is now the case that more than half of the top economies in the world are corporations not states, and international investment is increasingly private." She states that there is a trend towards holding companies accountable through legal rules for the human rights and environmental impact of their policies. She says that corporations should ensure that they uphold and respect human rights as reflected in the Universal Declarations of Human Rights and are not themselves complicit in human rights abuses.

But if we acknowledge that transnational corporations are much powerful than the states, particularly those of the dependant developing countries then who would issue those badly needed legal rules and who would implement them? Transnational corporations which are steering the economic globalization are not at all directed by ethical or humanitarian principles. The maximization of profit is the major if not the only driving force for all their activities.

To be logical I tend to think like this: if economic corporations became transnational and that much powerful what is needed is a powerful transnational government based on real democracy for all the countries and citizens of the world. A government which is capable of issuing and implementing global rules aimed at realization of the maximum use of all humankind achievements for the sake of all the dwellers of our globe. A government which is capable of making economy in the service of man instead of making man a victim and a slave for the market economy.

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E-RETAILING: CHALLENGES AND OPPORTUNITIES IN INDIA

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Abstract :
With the changing market scenario and economic growth, the demand for online shopping has increased. Through technology, sellers and buyers get benefited with easier, faster and convenient shopping trend. The rise of internet shopping is not only for the customer market but even the government is another rising user of online facilities under the overall theme of e-commerce. A series of initiatives of the government are undertaken using online like the railway, postal and public sector banks.Indian consumers perception of online shopping has experienced a substantial change and for the good. This has provided the investors and e-retailing players a numerous opportunities and it is growing under constraints. With the help of technology which is the backbone of e-retailing, the challenges of low internet penetration, low debit/credit card usage, logistic issues, cash-on-delivery, security issues, consumer bias, unchanged buying behavior etc., an attempt is made to bridge the gap. This paper is an outcome of studies carried out in connection with e-commerce or e-retailing. It raises key challenges and opportunities of e- retailing in India.
Key words:- E- retailing, E- commerce, Internet, Challenges, Opportunities.

I. INTRODUCTION

Electronic retailing is the sale of goods and services through the internet. It can include business-to-business and business-to-consumer sales. Online retailing is normally referred to as e-retailing. It is synonymous with e-commerce. E- Commerce is anything that involves online transaction. This can range from ordering online, through online delivery of paid content, to financial dealings such as movement of money between bank accounts, electronic payments etc. Elizabeth Goldsmith and others (2000) reported that the general category of e-commerce can be broken down into two parts: - E-merchandise:selling goods and services electronically and moving items through distribution channels, like shopping through internet for tickets, music, books, groceries and gifts. E-finance: - banking, debit cards, smart cards, mobile and internet banking, insurance and financial services. World Trade Organization (WTO) has recognized commercial transaction into three stages, that is, the advertising and searching stage; the ordering and payment stage and the delivery stage. The two popular models that exist in the e-retailing market place are online retailers and online auctions. The website of an online retailer is used as a storefront to sell physical goods that are then delivered by a third party. On the other hand, the online auction serves as a platform where a seller can offer to sell its product to interested buyers and provides the enabling infrastructure for electronic transactions. In the past, auctions were limited to only high valued items such as paintings, antiques etc. but nowadays even low valued items such as old books, cassettes etc. could be auction. Both the formats of e-retailing differ in the procedures for conducting an electronic transaction.

Even in India, things have becoming easier with almost every places connecting to internet. Kearney's annual Global Retail Development Index (GRDI), in 2015, puts India as the 15th largest retail destinations globally against its rank of 20th in 2014. Currently the retail industry stands at 500 billion and growing at decent rate accounting for 22 percent of its GDP. India is one of the largest and leading growing populations of internet users in the world, which is estimated to be around 190 million as of June 2014 and growing rapidly. India already has the third largest internet population in the world today, after china and the US. Today approximately 40 million Indians are online every day. Internet penetration rate in India is just 20 percent of the population and infrastructure needs to improve significantly. Moreover a very high percentage of the population accessing internet in India is in the age group of 20-45 years. In spite of all this online retailing forms a meager 1% of the total Indian retail market which is expected to increase to 1.4 percent of the total sales by 2018. The e-commerce industry stood at roughly INR 9200 crores by end of 2008. If we ignore the big travel portals which contribute roughly 75-80% of this market the rest of the market is formed by online classified, e-retailing (online purchase of goods) and digital downloads. About 12% of the market is contributed by online classifieds like matrimonial and job portals. However, the chances of

online business could be growing in future with more internet penetration of the masses. The rise of internet shopping is not only for the customer market. The government is another rising user of online facilities under the overall theme of e-commerce. A series of initiatives of the government are undertaken using online like the railway, postal and public sector banks. Changes of India retailing position can be seen and studied based on Global Retail Development Index (GRDI)

GRDI India's retailing rank

Year	GRDI India's Rank
2008	4
2009	5
2010	3
2011	4
2012	5
2013	14
2014	20
2015	15

II. OBJECTIVES OF THE STUDY

- To highlight the scenario of India's e- retailing
- To study the challenges and opportunities of e-retailing in India.

III. DATA COLLECTION

The study is mainly based on secondary data from published literature, legal documents, official statistics, various books, articles, journals, reports and websites.

IV. E-RETAILING IN INDIA

India's economy became the world's fastest growing major economy from the last quarter of 2014.It is a country where retailing occupies22 percent of its GDP and where e-retailing just a merge 1 percent. It is also expected that e-commerce market will account for 2.5 percent of the India's GDP by 2030. Cities, towns and rural areas are penetrating the facilities of internetwhich is around 71 percent out of the total population. With people becoming busy with their work and commitments, they are left out with a little spare time. In addition with a large availability and usage of smart devices, people find internet shopping easier, convenient and time saving. This has given immense popularity to online shopping sites in India and online shopping websites are flaunting best deals and offers to lure buyers. Online retailers must bend to the will of the customer rather than the customers having to fit into them. Customers should be provided with customer service and support channel available to customers in the manner and style they want and demand. Every e-retailer should make sure that customer support service is available 24 hours through online and offline mode. Flipkart, amazon india, snapdeal, mytra, jabong, yepme, ebay, naaptol, indiatimes shopping, fabfurnish, firstcry, grabmore, biba, indian gifts portal, D2H shop, caratlaneetc.are some few e-retailing websites where products ranges from electronics, apparels, foods, clothing, jewellery, gifts, books, furniture and lots more. There is a wide range of products that can be chosen by a customer in just a click. However in India, travel is where the real money of e-commerce is. Online travel accounts for nearly 71 percent of e-commerce business in India. This business has grown at a compounded annual growth rate (CAGR) of 32 percent over 2009-2013.

V. OPPORTUNITIES

V (A) Time and cost saving

E-retailing provides a customer lesser cost and time saving opportunity. Through different e-retailing websites, customer can choose and shop within a few minutes. Wastage of time in shopping from one shop to another is no longer required; also it is cost saving with different brand and company providing the best deals and offers.

V (B) Convenience

A customer no longer needs to go spend time and energy shopping for goods and products instead all that is needed is the right website to shop online. Comparison of products with best deals and quality can be done in just a click providing a customer a convenient shopping arena.

V (C) Payment

Payment when shop online can be done by using electronic payment, that is, by using debit card, credits card etc. also products can be purchase by cash on delivery of the products. This provides e-retailing customers a great facility to expand their business.

V (D) Delivery

No matter what the size, quantity and shape a product is, through e-retailing shopping, delivery is certain. Delivery opportunity enables online shopping to grow and increased customers. Also there are certain places and products where delivery option is not provided.

V (E) Easy comparison of product

Comparison of quality and prices of a product can be done easily through a click at home instead of going store to store. This enables e-retailing customer a convenient way of

shopping.

VI. CHALLENGES

VI (A) Digital infrastructure
India still lack behind when it comes to digital infrastructure. Digitization is the key to unlocking the potential of the creative sector such as e-retailing. The government have introduced digital India where it plan to connect rural areas with high speed internet networks, even so, till today penetration of internet is still very low creating e-retailing business to grow slowly.

VI (B) Best deals and offers
Almost all retailers are introducing online retailing. Users of internet are making purchase decisions based on the information gathered online where there are many deals and offer to attract customers. This becomes a big issue for e-tailing business as they have to bring the best deals and offers for their customers.

VI (C) Unchanged buying behavior
Indians are still reluctant to buy on-line and prefer brick and mortar models. Indians still like to have a feel of product and spend time in buying from traditional stores, making a comparison on various choices of products. Buyers intend to keep their behavior instead of shopping in just a click.

VI (D) Transaction frauds and security issues
Indian buyers are reluctant to buy goods by paying online. They are dreads with the prospects of buying by using their debit or credit cards. All these are mainly cause by cyber-crime. Insecurity of paying online happens with so many transaction frauds such as phishing, DDoS attacks, viruses, and malware etc. causing buyers to pay online.

VI (E) Many competitors in just a click
With the coming up many e-retailing in India, competitors are just a click away. Choosing of best deals and offers could be done in few minutes for which e-retailing faces huge competitors.

VI (F) Too many frauds websites
There are certain people involving in frauds and cyber-crimes. Different numerous websites selling various products and goods are frauds. Buyers need to be careful and see that the websites they are dealing with is a true e-retailing site.

VI (G) Consumer bias
Indian consumers are still having a bias over known and unknown brands. A well-known brand scores more over the products of a less popular brand. Only few risk purchasing from new online websites. This becomes a difficult position where e-retailing curtails in India.

VI (H) Lack of touch and feel experience
The mindset of buyers in India has not change with the times. Majority of Indian buyers like to touch and feel the products, this also explains why travel is one of the best converting segments than any other clothing, furniture or electronics online stores.

VI (I) Logistics

In India, logistical challenges hit growth of online retailing business. Online retailers like to avoidsnarled roads and inefficient railways that they fly their packages. Cargo cost are high when it comes to flight and still 90 percent of goods ordered online in India are moved by air. This is mainly because roads and rail transport networks remain woefully underdeveloped. Also Warehousing and distribution system lacks efficient management.

VI (J) Cash-on-Delivery and high rate of return
The most popular mode of payment for online purchases in India is Cash on Delivery (CoD). This affects the profits of the online retailers in terms of longer credit cycles and higher cost. It is been said that 60 percent of e-commerce transaction is done in cash-on-delivery mode.-

VI (K) Delivery
India is a country where address, landmark, residence of the people are not properly registered. There are various issues relating to delivery issues. Customer's complaints with the delay in delivery and longer in transit process whereas online retailers faces exact location problems.

VII. CONCLUSION

There are divergent views on the growth of e-retailing in India and it does grow to a favorable extend. But India is still not pervasive in its e-retailing market.The growth of e-retailing in India is driven by demand factors such as substantial rise in internet penetration, increasing speed of broadband, connections, increasing uses of smartphones etc. e-retailing is poised to get a boost when government allowed online retailers to sell directly to consumers. Nonetheless, Indian consumers perception of online shopping has experienced a substantial change and for the good. This has provided the investors and e-retailing players a numerous opportunities and it is growing under constraints. With the help of technology which is the backbone of e-retailing, the challenges of low internet penetration, low debit/credit card usage, logistic issues, cash-on-delivery, security issues, consumer bias, unchanged buying behavior etc., an attempt is made to bridge the gap.

VIII. REFERENCES

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720 DEGREE APPRAISAL SYSTEMS: A NEED OF PRESENT SCENARIO

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Abstract :
The most challenging aspect of a performance appraisal is measuring the actual performance of the employee. Since the performance is measured by tasks performed, there is a continuous process that must be administered in order to monitor the performances throughout the appraisal cycle. Thus, it's very important to choose the correct measuring techniques. It's also important to focus on a desired performance (standardized performance) and then compare the desired performance to the actual performance of the employee. There are various methods which are used to assess the performance of an employee as per the need of an organization.
The main problem arises in the previous methods is that they are not guide the employee after the appraisal and not give more focus on development of the employee hence the 720 degree appraisal was introduced where the employees performance is measured, analyzed and targets are set in the first appraisal and after a short period his performance is measured again and the proper feedback and guidance is given to ensure that the employee achieves the target. The process of 720 degree appraisal system gives emphasis on the development of the employee along with the performance.
The main objective of the paper is to highlights the need, process, features of 720 degree appraisal system. The paper also includes the case study related to the implementation and benefits of 720 degree appraisal in different organization.
Keywords: 720 Degree Appraisal system, Performance, Development

I. INTRODUCTION

Performance appraisal has been synonymous with performance review, performance evaluation, performance assessment, performance measurement, employee evaluation, personnel review, staff assessment, service rating, etc. The development of performance appraisal has four distinct phases. It is called TEAM (Technical, Extended, Appraisal and Maintenance) approach. Performance Appraisal is reviewing past performance, rewarding past performance, goal setting for future performance and employee development.
Employee's appraisal system may be considered one of the indicators of the quality of Human Resource Management in an organization. Properly designed and realized process of employee's appraisal is not only the necessary basis of successful employee performance management, but also provides valuable information for other human resource management functions. Performance Appraisal is important because it helps in Performance Feedback, Employee Training and Development Decisions, Validation of Selection process, Promotions & Transfers, Layoff Decisions, Compensation Decisions, Human Resource Planning (HRP), Career Development and Develop Interpersonal Relationship.

II. DIFFERENT TECHNIQUES OF PERFORMANCE APPRAISAL

There are two types of measures which are used in performance appraisal: Objective measures which are directly quantifiable and Subjective measures which are not directly quantifiable. Performance Appraisal can be broadly classified into two categories: Traditional Methods and Modern Methods.

II (A) Traditional Method

- Ranking Method: According to Dessler et al. (2011), ranking method is ranking employees from best to worst on a particular trait, choosing highest, then lowest, until all ranked.
- Graphic Rating Scales: According to Dessler et al. (2011), Graphic Rating Scale is a scale that lists a number of traits and a range of performance for each. The employee is then rated by identifying the score that best describes his or her level of performance for each trait.
- Critical Incident Method: According to Dessler et al.(2011), Critical incident method is keeping a record of uncommonly good and undesirable examples of an employees work related behavior and reviewing with the

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employee at predetermined times.

II (B) Modern Methods

Modern Methods were devised to improve the traditional methods. It attempted to improve the shortcomings of the old methods such as biasness, subjectivity, etc.

- Management by Objectives: In1954, Peter F. Drucker introduced "Management by Objective" in his book "The Practice of Management". It comprises of three building blocks: object formulation, execution process and performance feedback.
- Behaviorally Anchored Rating Scale (BARS): BARS were introduced by Smith and Kendall in 1963 with the attention of researchers concerned with the issue of reliability and validity of performance ratings. Behavioral anchor scales are more informative than simple numbers.
- Humans Resource Accounting: The main theory underlying the HRA is: The people are valuable resources of an organization or enterprise, information on investment and value of human resource is useful for decision making in the organization.
- 90 Degree Appraisal: In 90 degree appraisal the feedback of the employee is taken from various other variants like the peers, managers, self appraisal, and immediate superiors. In the present form of appraisal only one of the above virtual circles of the employee gives a feedback about the worker.
- 180 Degree Appraisal: 180 degree Appraisal is the feedback given by a resource (self appraisal) along with the feedback from two of the variants mentioned above.
- 270 Degree Appraisal: 270 degree Appraisal is the feedback given by a resource (self appraisal) along with the feedback from three of the variants mentioned above.
- 360 Degree Appraisal: 360 degree Appraisal is the feedback given by a resource (self appraisal) along with the feedback from all of the variants mentioned above.
- 540 Degree Appraisal: 540 degree Appraisal is the feedback given by a resource (self appraisal) along with the feedback from all of the variants mentioned above and also includes the feedback from external customers or clients.
- 720 Degree Appraisal: 720 degree Appraisal as the name suggests is the 360 degree twice and is given by a resource (self appraisal) along with the feedback from all of the variants mentioned above including pre and post intervention result. The 360 degree appraisal is the first step (pre Intervention) and after the resource is provided with certain amount of training in the areas identified during the appraisal the second step comprising of the post intervention is taken up.

720 degree appraisal method aims at monitoring, measuring, giving feedback and encouraging the employees to achieve the goal and for the Organization in turn. Effective monitoring also includes giving timely feedback, reviewing the performance according to pre-determined standards and timely recognition of the accomplishments that motivates the employee to perform better each day.

It is rightly said that, "Encouraged people achieve the best; dominated people achieve second best; neglected people achieve the least." as recognition and reward at the right time is the best encouragement. This appraisal gives the employee a lot of feedback generally from anywhere from 5 to 8 people, to provide the employee within all-round assessment of his or her on the job performance.

III. OBJECTIVES OF PERFORMANCE APPRAISAL

There are some objectives of performance appraisal, given below:

(i) Review the performance,
(ii) Judge the gap between actual and the desired performance,
(iii) Strengthen the relationship and communication between superior – subordinates and management– employees,
(iv) Diagnose the strengths and weaknesses of the individuals so as to identify the training and development needs of the future,
(v) Provide feedback to the employees regarding their past performance,
(vi) Provide clarity of the expectations.

IV. REVIEW OF LITERATURE

720 degree appraisal system is the demand of the present time. Different authors put pressure for implementation of this appraisal system in their articles, some are given below:

J.Jagadeeswari (2013): describes in her article entitled "720 Degree Performance Appraisals" that continuous improvement requires constant measurement. All organizations aim at being effective and achieving their goals, in order to do this it is important to monitor or measure the performance of the employees on a regular basis.720 Degree Performance Appraisal is considered an all round appraisal; the 720 Degree performance appraisal gives an employee more than feedback from one person.

Sundarapandian Vaidyanathan (2013): denotes in his article entitled "What is 720 degree performance appraisal system and why is it important" that 720 degree performance appraisal is an integrated method of performance appraisal where, the performance of an employee is evaluated from 360 degrees (Management, Colleagues, Self and also customers) and timely feedback is given and performance is evaluated again based on the targets that are set. Hence, 720 degree performance appraisal can be stated as twice 360 degree performance appraisal: once when the appraisal is done and the targets are set and the second where the feedback is given and

the boss gives tips to achieve the goals. Hence, there is a pre and a post round of feedback."

Nimisha Sapra(2012): mentioned in her paper entitled "Current Trends in Performance Appraisal" that the study of current trends in performance appraisal indicates that most large organizations are placing increasing emphasis on the importance of performance appraisal and are making continuing efforts to improve their systems. Performance Appraisal system has progressed from appraisals and reviews to a valuable tool to link performance to strategy and to do this in an environment that is less onerous on HR.

Anupama. Mary Binu T.D., And Dr. Tapal Dulababu (2011): reveal in their article entitled "The Need Of '720 Degree Performance Appraisal' In The New Economy Companies" that the success of an organization depends on the performance of the employees and it is the human tendency to judge everything and everyone around them. If there are no fixed standards of judging they will start judging based on informal standards that can create negativity and impact the performance of the employee and in turn, the organization. Further they put pressure on the necessity to set the right standards to judge the performance of the employees. The major setback in the previous methods of appraisal was that it did not guide the employee after the appraisal hence the 720 degree appraisal was introduced when the employees performance is measured, analyzed and targets are set in the first appraisal and after a short period his performance is measured again and proper feedback and guidance is given to ensure that the employee achieves the target.

Aurthur et al's (2010): describes in his paper entitled "360° Vs 720° Feedback Processes: An Exploratory Study on Performance Management System in Higher Education" he found during his study that 720 degree appraisal system is more accurate. Further he writes that mainly under 720 degree review system people get the chance to learn from their weaknesses and improve upon it.

V. NEED OF 720 DEGREE PERFORMANCE

Now the organizations become more complicated and diverse in all area. It increases the expectation from employees in terms of skill, productivity and efficiency. It creates the need of appraisal system which improves the performance of employee in all aspect and not only performance but simultaneously focus on development of the employee. The main need of 720-degree performance appraisal is the improvement of the performance of the people in their jobs and to ensure that the expectations of the employer, employee and the customers are met. The main need of 720-degree performance appraisal can be raised due to following features:

(i) It defines the ranks for performance so those employees have clear information about the target.
(ii) It helps in career planning of the employee like salary fixation, confirmation, promotion, transfer and demotion.
(iii) It set target, monitor the performance based on the targets set and provide feedback timely about the performance.
(iv) It helps to check the effectiveness of personnel procedures and practice i.e. validation.
(v) It is needed to ensure that employees reach organizational standards and objectives.
(vi) It uses the regular feedback process and discovers the work potential. It helps to understand the areas where training is required to guide the employees to perform their best.
(vii) It helps to understand the expectations of the employees and prevent grievances and in disciplinary activities.
(viii) It provides information to diagnose deficiency in the employee regarding skill, knowledge, determine training, and prescribe the means for employee growth and information for correcting placement.
(ix) Assessment should be done twice a year.
(x) Along with 720 degree appraisal method, different assessments should be tabulated and compared for a given period.
(xi) Treat employees with sensitivity and respect.

VI. DIMENSIONS OF 720-DEGREE PERFORMANCE APPRAISAL

All the current organizations aim at achieving higher rate of employee satisfaction and transparency in the working environment. In order to achieve the goals, 720 degree performance appraisal would be a vital tool as it is used to appraise the performance of an employee from different dimensions and helps to overcome the barriers of bias, prejudice and discrimination. The performance is appraised from 5 dimensions and feedback or the appraisal meeting is conducted twice (pre and post feedback) to ensure the efficient performance of the employee. Including the pre and the post feedback, that plays a vital role, the 720 Degree performance appraisal has 7 phases:

VI (A) Pre Appraisal Feedbacks

This is the first appraisal step that is done after the feedback is collected from the different dimensions or people with whom the employee would interact.

VI (B) Self Appraisal

The employee is given a questionnaire consist of statement and asked to evaluate his performance based on various criteria of performance and through this method, the employee gets an opportunity to express his thoughts and his valuation of strengths, weakness and judge his performance.

VI(C) Peers/Colleagues Appraisal

The feedback from the peers or colleagues is important as it

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helps to understand the ability of the employee to work as a team, co-operate, co-ordinate with others and bring out the-best.

VI (D) Customer Appraisals
In order to survive in the current competitive market, Organizations aim at achieving high customer satisfaction. Customer feedback helps to analyze the customer point of view and help to improve the person and the Organization.

VI (E) Sub-Ordinates Appraisal
The feedback of the sub-ordinates is essential to analyze the organizing skills of the employee and to understand his abilities like communication and motivating abilities, ability to delegate the work, leadership qualities and way of handling responsibilities.

VI (F) Managers/Superiors Appraisal
In this, the performance, responsibilities and the attitude of the employee is evaluated by the Superiors or Managers.

VI (G) Post Appraisal Feedbacks
It is this step that makes the 720-degree performance appraisal different and better than the 360-degree performance appraisal method. In this step, the performance is evaluated based on the target set in the Pre appraisal and feedback is given. Timely feedback and guidance helps to make the employee improve his performance.

VII. 720-DEGREE PERFORMANCE APPRAISAL: COMPETITIVE ADVANTAGE FOR ORGANISATION

720 Degree performance appraisal will help in creating a synergetic work environment and will help to bring out the best of each employee. The other benefits of the 720 degree performance appraisal are as follows:

i. It involves all the levels and area of organization structure so it improves the feedback.
ii. It increases the environment of team. It reduces the errors like stereotype, biasness and discrimination etc.
iii. It involves the very important dimension i.e. Customer in the process. The involvement of customer raises the customer satisfaction.
iv. It raises fairness and transparency as compare to other performance appraisal method. A powerful developmental tool because when conducted at regular intervals it helps to keep a track of the changes, others' perceptions about the employees.
v. It gives more accurate result for Training needs assessment and career development of individual.

720 degree appraisal system gives more emphasis on development rather than performance alone. It follows the systematic path to improve and develop the performance of an employee:

VII (A) Planning
Planning is the process of setting organizational goals, stating performance expectations and communicating them to the employees. Organizational goals are established during the strategic planning stage. At this stage, managers define the expectations, objectives and priorities on which employees have to work on. Performance management is the process that aims at translating these lofty visions and objectives into concrete results in terms of quality and quantity by delivering products and services to the society. Managers, in consultation with the employees, set very clear objectives for effective performance. In the absence of clear expectations, employees expend their energies doing things that are not right. Goals mutually set and accepted by the manager and the employees should be "SMART"—specific, measurable, acceptable, realistic to achieve and time-bound with a deadline. Clear expectations leave no room for confusion and employees get involved in their jobs immediately.
The planning process lays down a clear set of standards that is measurable, understandable, verifiable, equitable and achievable against which performance will be judged. This ensures employee accountability and fulfillment of responsibilities. It also ensures the right fit between employees and their roles.
The performance planning process followed by Computer Sciences Corporation serves as a model to understand the planning process.
An organization which involves the employees in the planning process can be effective in securing employee cooperation to accomplish its goals. The process itself becomes more effective and ensures results. Employee performance plans ought to be flexible so that they can be modified as and when required.

VII (B) Monitoring Performance
Monitoring is the process of consistent tracking of performance and providing an ongoing feedback and guidance to employees and work groups on their progress toward reaching their goals. Conducting regular progress reviews, comparing their actual performance against predetermined standards, provides an opportunity for employees to make changes when their performance falls short of the expectations. Continuous observations and monitoring can detect unacceptable performance and address performance problems

at every stage. Periodic meetings between the managers and the employees help in resolving issues before they become too big to handle. The fear that is often associated with performance gets reduced as employees develop a good rapport and relationship with the managers. This leads to better reliability and ensures better results.

VII (C) Developing Performance

Employee performance has to be evaluated with the perspective of increasing the capacity to perform. All the shortcomings and performance deficiencies can be set right through training programs and exercises. Providing ample developmental opportunities enhance competencies and help employees to update themselves to meet the rising demands of the job.

VII (D) Rating performance

Rating refers to evaluating employee or group performance against the elements and standards in an employee's performance plan and assigning a summary rating based on the procedures included in the performance system. It is based on work performed during an entire appraisal period under consideration. This will ultimately result in the fulfillment of the objectives for which the Performance Management System (PMS) is created. When the performance does not meet the desired performance standards, then plans are developed to address the gaps.

VII (E) Rewarding performance

A PMS has to duly acknowledge good performance by appropriate reward systems in terms of monetary benefits and promotions. Rewarding means recognizing employees, individually and as groups, for their performance and acknowledging their contributions. When good performance is not recognized, it acts as a demotivator. Hence, good performance should be rewarded and bad performance must be admonished appropriately. The underlying principle of effective PMS is to encourage desired behavior by rewards and control undesirable behavior.

Effective management of 720 degree PMS requires that each component of the process is well taken care of. Goals are set and work is meticulously planned, progress is accurately measured, frequent feedback is provided and steps are taken to reward and recognize good performance.

VIII. CASE STUDY

There are two case studies related to 720 degree appraisal system given below:

VIII (A) Johnson & Johnson Advanced Behavioral Technology (JJABT)

JJABT is using 720 degree appraisal system.

- Johnson & Johnson Advanced Behavioral Technology (JJABT), based in Denver, Colorado, has instituted a new 720-degree feedback system.
- The most important consideration in implementing the system is choosing the right individuals to be raters.
- To assemble the rating group, JJABT employees develop a list of key internal and external customers with whom they interact and then recommend five to ten individuals to serve as raters.

The JJABT 720-degree appraisal form includes items such as: - Does the employee:

- Follow up on problems, decisions, and requests in a timely fashion?
- Clearly communicate his or her needs/expectations?
- Share information or help others?
- Listen to others?
- Establish plans to meet future needs?
- Adhere to schedules?
- Raters score these items on a scale ranging from 1 (needs improvement) to 5 (outstanding). Space is also provided for the raters to make written comments.
- This represents a combination of the comments and ratings from the various raters and the supervisor's own feedback on the rate's performance. Typically, managers include a mean score and distribution range for each item.
- JJABT managers stress that the key is to look for trends or patterns in the data.
- After summarizing the data, the supervisor conducts the formal appraisal interview with the rate.
- In this way, it is hoped that the 720-degree appraisal can become less an evaluative tool and more a comprehensive system for enhancing communication, facilitating self-development, and improving performance.

Advantages to Johnson & Johnson's 720 degree appraisal

- The raters are selected from a list of key external and internal customers developed and recommendation by the employees.
- Criteria by which the rates are evaluated are clearly defined by the supervisor.
- While the supervisor evaluates the work performance, the raters evaluate the behavior aspect of the rate.

VIII (B) Bangalore Based Indian IT Companies

A survey has been conducted in Bangalore based six IT companies regarding performance appraisal system. 100 respondents were taken for the study, 20 from management and 80 from employees. It was found that in all six organizations; Human Resource Accounting, Management by Objective and 360 degree appraisal system has been used. Results indicate that only 30 % of respondents from management while 8 % of respondents from employees were aware regarding 720 degree

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appraisal system. It was known from the study that only 20% of employees were satisfied with their current appraisal system. Survey reveals that 55% of respondents from management would like to implement 720 degree appraisal system in their organization.

It is concluded that 720 Degree performance appraisal is a method that gives paramount importance to feedback as there is a pre and post feedback session. The pre and post feedback session is a process that helps the appraiser and the appraised equally.

IX. CONCLUSION

The 720 degree appraisal is more development oriented than performance alone and we can say that this type of system is beneficial for training and development and career planning of the employee. It is a powerful developmental tool because when conducted at regular intervals it helps to keep a track of the changes and others perceptions about the employees. Many organizations are beginning to realize that the skill base of their executives and managers does not match the requirements of a rapidly changing environment, they need more than four sided development. Without these critical competencies, executives and managers are less likely to be able to lead these organizations toward successful implementation of strategic changes. Soin this way 720 degree appraisal is the right choice to keep track of performance of employee along with development.

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INFORMATION AND COMMUNICATION TECHNOLOGY IN AGRICULTURE AND RURAL DEVELOPMENT

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Abstract :
Information and Communication Technology (ICT) has many dimensions. In this article its agricultural and rural development dimension has been taken into consideration. The whole article is divided into five sections. Section one deals with the definition and role of the ICT with particular reference to agriculture and rural sector. Section second is devoted to the application of the ICT in agricultural education research, extension and production. In section third an effort has been made to briefly discuss the emerging areas and technologies relevant for agriculture and rural development. Section four deals with the major initiatives taken by the Central State Governments and private organizations to popularize the ICT. The last section analyses the challenges of ICT in agriculture and rural sectors in India and the solutions thereof.
Keywords:- Agriculture, Bioinformatics, Soft ware, Communication, Electronic

I. INTRODUCTION

Information and Communication Technology (ICT) has been defined as the technologies involved in collecting, processing, storing, retrieving, disseminating and implementing data and information using micro electronics, optics, telecommunications and computers. It also includes internet connectivity, e-mail facility, web-portals, on-line chatting, video conferencing, multimedia technology etc. on the computers. It is well recognized that computer images have far greater impact on the minds and psyche of the rural uneducated farmers than the textual descriptions of the technology. With the establishment of rural information kiosks and Kissan Call Centres along with country-wide investment in creating information connectivity fibre optics backbone, the rural masses in the remote comers of the country have better access to the information through ICT. This helps in the dissemination of information for taking scientific knowledge and technologies to the end users.

II. THE USER GROUPS OF ICT IN AGRICULTURE DEVELOPMENT

There are a number of user groups in the process of agricultural research, development and management. Their knowledge requirements are also different. The following user-groups with their specific information requirements can be distinguished:

1. The policy-maker groups require information for priority setting,allocation of investments and increasing efficiency by avoiding duplication and building on existing information. Policy making requires information regarding social, economic and environmental issues.
2. The managers of various organizations associated with agriculture and rural development require information on various ongoing activities, available expertise and the various processes in the functioning of their organization.
3. Researchers and advisors require information relating to funding sources, available researches and their findings and the areas which require research efforts.
4. Development practitioners such as extension services, development agencies, NGOs etc. require information regarding available technologies, past experiences and market and price information on input and output prices of various commodities and services.
5. Farmers want information on location-specific technologies, best practices of cultivation, inputs and output use and specific information on soils, pests, crops, weather forecasts etc.
6. Agribusiness enterprises want information on management information, market situation, government policies, new technologies; consumer behaviour, product cycles and so on.
7. Educational and training organizations require information on training materials, expertise, user needs, policies and programmes being run in the country and the lessons learnt so far.

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III. ROLE OF ICT IN RURAL DEVELOPMENT

India took to IT early compared to many other developing countries. The nationwide network of computers set up by the National Information Centre took the PC to every district in the country, making government level interaction and communication faster for planners. The internet has now given us an opportunity to take the PC to every village. IT has a definite role to play in rural education, health and agriculture. In the Indian situation, a PC need not be a personal computer. It can be a community computer. In the day time, it can be used to educate children at primary and middle levels in the village school. In the evening, the community computer can turn into a "cyber dhaba" for villagers - where they can access web-sites of their choice and get information that they can use. Moreover, for the benefit of the rural people it can be located in an internet kiosk, which may be at the village pan shop or the bus stand, where people can get Information for a small price, The IT Task Force has suggested the concept of a community information centre. We need to look at the concept of "Community in formation centres", community library Centres and Panchayat Centres across the country in a completely new way with the availability of IT tools and services. These community centres could become hubs of education and awareness as well, and not just remain places for providing information to people on a mass scale. The convergence of IT tools enables interactive learning along with broadcasting medium such as television and radio. At the same time the reach of IT in rural areas will provide unique opportunities to producers of rural products, agriculture/agro- processing products, rural handicrafts etc. to have direct access to markets. Internet will enable advertising of rural products produced even in the remotest villages to global markets. The agriculture extension worker can access latest information on farm technology and products, and disseminate the same to villages.

IV. APPLICATION OF INFORMATION TECHNOLOGIES IN AGRICULTURAL EDUCATION, RESEARCH, EXTENSION AND PRODUCTION

Education, research and extension are the three integrated stages of agricultural system. Education involves teaching and training in agriculture. It is followed by research because unless one is systematically trained in the theory and practice of agricultural science, he cannot be a good researcher. Research relates to the solution of specific problems and formulation of technology. Extension is the last stage which involves the transfer of research findings and technologies to the end users i.e., the farmers. To strengthen education, research and extension in the field of agriculture, the Information and Communication Technologies (ICT) play vital role. How it can be done is discussed separately in the following analysis. Although the technologies overlap yet every technology is more specific in one area than the other.

IV (A) Education

The development in information and communication technologies has revolutionized the whole educational system. Educational standards will be highly raised through multimedia, computer simulation, virtual reality and other teaching tools. There will be tremendous increase in knowledge available in libraries and databases will bring to the forefront the critical question of managing and handling of this new knowledge. The advances in computer technologies and satellites will pave the way for the globalization of educational system in which teachers and students of various countries will be brought under one umbrella. All can benefit from one another. In addition, distance learning will become a virtual reality. There will be many options open for the students and teachers to learn and specialize in the courses of their interest. It will be easier for the coming generations to prepare their own teaching material, research proposals, have access to manuscripts of research papers, reports and other documents with minor expenses and efforts. Audio-visual aids and multimedia packages have revolutionized the traditional method of teaching and learning by making it more attractive and motivating.

At present India has one of the biggest network of agricultural education, research and extension system. In the field of agricultural education there are about 40 agricultural universities besides many other agricultural colleges and institutes which are imparting education and training in the field of agriculture. There is need to interlink all these institutions for better results and avoid duplication. The use of ICT will be very useful to the planners and administrators for better policy planning. The teachers will be able to enhance their knowledge and impart quality education to the students. The use of ICT will also be very .helpful to the students to learn much more than in the class room teaching.

IV (B) Research

Agricultural research in India helped in bringing green revolution, white revolution, yellow revolution, blue revolution and all combined as Rainbow Revolution. However, after 1990s stagnation has come in productivity of Indian agriculture. Indian agriculture is also experiencing technological fatigue. One of the' methods to break this barrier is the use of ICT extensively in agricultural research. There are vast potentials for the ICT to, bring second wave of rainbow revolution in India. The application of ICT will be helpful in many ways:

1. It will help in prioritising research requirements of Indian agriculture. Prioritising is required because of the fact that requirements are many but the research budget is limited. To perform this task a huge database is required regarding

the various sectors of Indian economy. The use of IT alone can be helpful in reaching the right decision - making - process.

2. It will be of great use in exploring the frontier areas of research. Bio technology holds the key for future growth in agricultural sector in all countries of the world including India. It will help in using Recombinant DNA technology for the development of transgenic plants like cotton and tomatoes. Research in biotechnology will also provide a unique opportunity for introducing desired genes from microbes, plants and even animals into crop plants. The biotechnological research has application in bio-fertilizers, bio-control agents production, microbial fermentation technology, wine production technology, recycling and agricultural waste and cloning of select animals.
3. The IT will also help iJ1 getting the feedback of research findings. This is facilitated by internet, teleconferencing and video conferencing, cable networking for T.V. Channels etc. The feedback of research will help in modification of research to the users.
4. ICT is a great help in avoiding duplication of research. It will help in coordinating the researches in universities, private sector, government and private organizations as well as at international level. By avoiding duplication, a lot of efforts, money and manpower will be saved. This is essential in developing countries where research budget is the biggest constraint.

IV(C) Extension

Cyber extension will be the most important form of technology dissemination in future. The new ICT can be of great help in rural development. It has great possibilities to solve the problems of poverty, inequality and bridge the gap between information-rich and information-poor population of the rural community. The use of internet will bring peoples' participation in development projects. Through internet people can send their problems and likely solutions to the government and the government can inform the people about the decision taken regarding their quarries. A two-way traffic in the flow of information will come up instead of one-way traffic from above to bottom as is the case at present.

The main objective of extension is the dissemination of technology, Indian agriculture is diversifying and so is the case with extension technologies. The major role of let in the changing agricultural scenario is as following:

1. The upcoming agricultural expansion would be information- driven. The new extension methods will be supported by database. It will require documentation and planning. It will be more professional than earlier and client-oriented.
2. Training and retraining of extension workers is an important component of the present strategy. These training programmes to be more effective will be linked to strong information, documentation and publication support to be more effective. With the help of leT it will be possible to get latest information from any corner of the world. Interlinking and networking of various institutions will give synergetic support to agricultural extension: Online printing of the text is available on various websites through internet. This will be very helpful in training programmes.
3. It will also strengthen the communication system. With the help of internet some of the barriers associated with communication can be removed. All components of communication system such as communicator, Message, channel, treatment message, audience and feedback will be strengthened and will function more effectively.
4. In an era of globalization working under W.T.O. region, the functions of extension system have widened. In the new international trade the focus of extension system will also include communication regarding quality of production. value addition, diversification of the products, export-oriented information etc. which are the need of the time. Strengthening the communication of these emerging trends through ICT will make Indian products more competitive in the international market.

IV (D) Agricultural Production

The application of ICT has become necessary to achieve better production by managing agricultural, dairy, poultry and other livestock products. The major areas of enhancing production and productivity in agriculture and rural sector can be done with the help of ICT in the following way:

1. Better Scheduling of land-use planning can be done when the farmer has full information of soil, plant, water, vegetation, climatic and socio-economic factors. ICT has made these databases available. At macro level land use involves the allocation of land for cultivation, pastures, forests, barren land and use of land for non-agricultural purposes. It has also facilitated the land use planning in these various categories. This has helped in sustainable agriculture and enhancing production.
2. Better Scheduling of land-use planning can be done when the farmer has full information of soil, plant, water, vegetation, climatic and socio-economic factors. ICT has made these databases available. At macro level land use involves the allocation of land for cultivation, pastures, forests, barren land and use of land for non-agricultural purposes. It has also facilitated the land use planning in these various categories. This has helped in sustainable agriculture and enhancing production.
3. A number of crops, such as spices, horticulture, floriculture, cereals etc. are in great demand for export. With the help of Information Technology it will possible to collect data regarding the demand of a crop, its quality parameters, prices, location, time etc. in various

countries, Country's export can boosted with the application of ICT.

4. The IT tools can help in precision farming, regulation of the application of various inputs quantity, agronomic practices, soil nutrients etc. Precision farming will get a boost with the help of new technologies of measurement in the use of fertilizers irrigation, pesticides, insecticides, etc. Thus inputs can be saved to a great extent from overuse. Integrated Plant Nutrient Management has become easy.

V. THE EMERGING AREAS IN INFORMATION TECHNOLOGIES

Two most important emerging areas in ICT relating to agricultural are Geographical Information System (GIS) and E-Commerce. They are being discussed briefly as follow-s:

V(A) Geographical Information System (GIS)

GIS is a technique that incorporates graphical features with tabular data in order to assess real world problems. It is basically used as computer cartography i.e., mapping and analyzing things that exist and events that happen on earth. Hardware, software,
data and people are the basic components of GIS. At present there many GIS packages available in the market which have direct relevance for agricultural and rural sector. It is used for estimation of area under cultivation, crop damages due to natural calamites, production estimates, water-shed planning, land topography, soil survey, extent of vegetative cover and so on. In short, GIS is a configuration of computer hardware and software specifically designed for the acquisition, maintenance and use of cartographic, data.

V(B) E-commerce

Electronic commerce (E-commerce) is the exchange of business information using electronic data interchange (EDI). The major methods are e-mail, electronic bulletin board, fax transmissions and electronic fund transfers. E-commerce in agriculture can widely be used. After globalization, agricultural sector in India has to compete in the international market. This requires extensive information and databases on inputs and outputs, demand, supply prices and so on to remain competitive. The agricultural marketing system is the widest and most-fragmented in the world. E-commerce can go a long way in integrating these markets. Since food is the basic necessity of all species in the world including human being, the role of E-commerce is the most important to balance demand and supply of food grains in the world.

V(C) Emerging Technologies

Computer Software

1. A number of Statistical Software Packages have been developed in the field of agricultural education, research analysis and extension system. These Statistical Software Packages have changed the scenario as the drudgery of computational labour has almost been eliminated and now agricultural research workers are willing to use advanced statistical techniques in their analysis work. A number of standardized statistical packages are available now on various aspects of agricultural research.

2. Software packages have also been developed for geographic and remote sensing applications. They are used for collecting, storing, retrieving, transforming, image rectifications and restoration, enhancing, integrating and displaying images. They are generally used a Geographic Information System (GIS).

3. Software have also been developed for farm business management, production management and control. They have a variety of applications in crop management, horticulture, floriculture, poultry, plant protection, irrigation management, animal husbandry and fishery management.

4. Software are also available for simulation and modeling, management information systems, decision support systems and expert systems in agriculture.

5. Most of the software are based on system approach rather than micro level approaches. A number of packages have been developed for routine activities in officers. MS-Office, Lotus SMARSUITE, STAR office are some of the popular packages for information processing and application development.

VI. GEOINFORMATICS GEOINFORMATICS TECHNOLOGIES INCLUDE THREE SYSTEMS.

1.Geographic Information System (GIS),
2. Global Positioning System (GPS) and
3. Remote Sensing (RS). Geoinformatics relate to the data on and above the earth. This helps in the prediction of natural calamities such as floods, storms etc. All this prediction will be very useful in preparing in advance to meet the situation. Geoinformatics is also very helpful in precision farming. Precision farming deals with micro level entities such as site, soil, spatial and temporal variability within fields. Fundamentally, precision farming acknowledges that conditions for agricultural production as determined by soil resources, weather, vary across space and overtime. With these things in mind, management can take specific decisions. The other applications of geoinformatics in precision farming include site-specific crop management, crop classification, positioning guidance, weed control, crop protection,

management, forecasts and many other areas of agricultural production system.

VI (A) Bioinformatics

Bioinformatics is a science that essentially uses a combination of computer science, information technology and biological knowledge to collect, store, retrieve, analyze, relate and model biological data for understanding various biological systems. It is a new area for reduction in time and cost for feeding the growing population or both in quantity and quality. Some common applications of bioinformatics in agriculture are hybrid machine model in rice against rice blast fungus, mapping of quantitative traits in plant breeding, a database platform for comparative plant genomics. Bioinformatics is very essential component in bio-tech revolution.

The Department of Biotechnology has initiated a number of programmes, It has created the Biotechnology Information System Network (BTIS) connecting the whole country through research centres, providing databases on various aspects of crops and animals. Several major international databases for application to genomics and proteomics have been established. Bioinformatics mainly has three objectives.

1. To organize data in a way that allows researchers to access existing information.
2. To develop tools and resources that help in the analysis of data.
3. To use computational tools to analyse the data and interpret the results in biologically meaningful manner.

Genome sequencing at present is one of the most important areas for researchers in the world. Some projects are being run as collaborative projects by various countries. For example, the International Rice Genome Sequencing Project (IRGSP) a consortium of 10 countries of the world is in operation. Similar attempts are also being initiated in other crops.

VI (B) Electronic Governance

Electronic Governance is a process of the functioning of a government to make it responsive, transparent and accountable. During the last few years the government has taken a number 'of initiatives in e-govemance. Budgetary allocation has been considerably enhanced for Information Technology. Various state governments have also initiated many projects and some of them are very successful. Andhra Pradesh Governments' computer-Aided Administration of Registration Department, Karnataka's Bhoomic Project for computerization of land records. Himachal Pradesh's Lokmitra for providing services etc. are some of the success stories of e-governance.

VI(C) Electronic Publishing

Electronic publishing is gaining widespread popularity. The products include indexing, abstracting, full-text, databases computerized library catalogues, national and regional catalogues of library and collections, digital libraries, encyclopedias, dictionaries, bibliographies and other reference sources etc. In -addition, there are audio, video, graphics, electronic journals etc. Electronic publishing allows faster dissemination of information than conventional printing technology. Libraries and Information centres are the beneficiaries of the Electronic Publishing. This is highly useful to agriculture sector as it. Encompasses areas such as animal and crop husbandry, plant breeding, plant protection, forestryengineering, economics, statistics, management, biotechnology and so on. It has made agricultural research teaching and extention easy and effective.

VI(D)Scientometrics

Scientometrics is concerned with quantitative aspects of scientific enterprises like publications, patents, journals, etc. In short it is a quantitative method of investigating the development of science as an information process. In this information model, publications are the carriers of information, journals are communication channels and bibliographical references represent the effect of previous research on the development of information flow.

The technique of scientometrics can be used as a tool for comparing research across countries and groups, fixing research priorities, impact of research output, collaborations among institutions, authors and countries. The most basic tool used in scientometric assessment is the publication output and the citations to the publications output. It is a potential area for its application as a tool of Information and Communication Technology.

VII. CHALLENGES FOR AGRICULTURAL INFORMATION TECHNOLOGY

VII(A) Central Government Initiatives

A number of initiatives have been taken by the Central and State Governments, private organizations, and the international institutions for the use of ICT in agriculture and rural development. The initiatives taken by the government are through the National Informatics Centre, Ministry of Information and Technology, . Government of India. It has set up a Nation-wide computer Communication Network (NCNET) in collaboration with the state governments and the district administration. A number of information systems have been developed to cater to the information needs in various areas that include crops, fertilizers, seeds, animal production and health, horticulture, plant protection, fisheries, marketing etc. The ICAR has also provided its institutions all over India with good connectivity through Agricultural Research Information System Network (ARIS Net) encouraging them to develop web-portals and databases for their routine work. Similar many other facilities were created by the ICAR to plan, monitor and evaluate research projects running in its

Institutes.

VII (B) Non-Government Institutions

Among the non-government initiatives the .most important initiatives were taken by M.S. Swaminathan Research FoundationNagarjun group of Companies, Tatas, Indian Tobacco Company, IITs, SEWA and many other organizations. The M.S. Swaminathan Research Foundation established a project "Village Knowledge Centre" with the object of providing rural families access to a variety of information in fostering agricultural and rural development through ICT. The Nagarjun Group of Companies launched "Ikisan Portal and Information kiosks" to disseminate information on agricultural practices, animal husbandry, agricultural machinery aromatic and medicinal plants, credit, insurance, prices etc. The MSSRF-TATA established National Virtual Academy (NVA) for Food Security and Rural Prosperity. The objective is to launch an "Every Village Knowledge Centre Movement" for fostering Green Revolution without environmental hazards. The Indian Tobacco Company established E-Choupals in Madhya Pradesh connecting 1200 choupals to provide latest information on agriculture and rural development. There are many other initiatives by leading IITs which provide information kiosk which include facilities for internet, video conferencing, scanner, photo copier etc. There are many other organizations which are busy in providing ICT services to the villages.

VII(C) International Initiatives

The Food and Agricultural Organization (FAO) has developed the Virtual Extension, Research and Communication Network (VERCON) to establish and strengthen linkages among and within the human and institutional elements of agricultural research and extension systems. Similar other facilities are being developed by the W.T.O., other institutional agencies and the financial aid, extended by the various countries involved in the promotion of agricultural and rural development in India.

VIII. CONCLUSION

The new information tools and technology can play a vital role in agricultural education, research and extension system. The application of Information and Communication Technologies are bringing fruitful results in the form of fertilization requirements, crops stresses and weather forecast etc. From GPS and GIS systems, it will be possible to understand and global agricultural patterns, agricultural production, agricultural marketing system, produce rates and autonomy of selling the produce from the Internet. Various networks are also helping the agricultural community - students, teachers, research scholars, scientists, extension specialists and farmers for better production and timely expert help through community radio, television, networks, Internet and Multimedia application. Now farmers are being made informed farmers and they are being provided timely help through digital information system.

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CHANGING LANDSCAPE FOR INFRASTRUCTURE FUNDING AND FINANCE IN INDIA

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Abstract :
Infrastructural development reflects the picture of the country's economy. Building, road, ports, railways, dams, power houses and highways come under infrastructure and these are necessary to sustain and enable economic growth. The Indian economy is currently going through challenging phase as GDP growth has slowed down to nearly a decade low in 2012-13.most projection envisage a slow build up to the 8-10% GDP growth. Infrastructure spend is likely to have a positive spiral effect to the GDP growth and is likely to be one of the main lever to unleash India's economic growth.
The focus needs to be back on infrastructure development and financing which remains secular challenge for the economy. One of the key concerns which remain is the adequacy of investment in infrastructure development. Infrastructure has been one of the key priority areas of the nation and the government has increased infrastructure spend at rapid pace since the 11th five year plan. However, the increase in India's GDP in recent year has put tremendous pressure on its inadequate infrastructure. Though there has been a tremendous growth in demand of Roads, Power, and Port etc. India's infrastructure development hasn't been able to keep pace with its economic growth. The study based is based on secondary data which is collected by various secondary sources like newspaper, journals, Reports, magazines and internet etc.
Keywords: - Infrastructure, challenges. Funding. Finance, GDP Growth.

I. INTRODUCTION

The Indian scenario of funding and financing is changing rapidly and new concepts are coming into prominence. As we know that India is one of the fastest growing nations in the world, has considerably opened up its economy after 1991 and is looking further to open up certain sectors which have been under close wait and watch for a considerable period of time. The industries include, retail, banking, infrastructure, and other industries. India is distinctively placed in its social and economical welfare initiative for the broad multitude population with various social and financial issues and challenges.
The financial system consist a huge network of institutions, instruments and markets with banks being the most significant players in the any economy. An innovative, competitive and blooming banking and financial sectors are playing a vital role in the smooth and easy functioning and development of country. And by far India's banking system is the most dominant segment of the financial sector, with commercial banks and co-operative banks together accounting for around 70 percent of the financial system assets. Commercial banks, cooperative banks, regional rural banks and Development banks are regulated by RBI who plays important role of apex credit regulatory institution of our financial system. Capital markets are relatively small but it also playing a very crucial role in financial landscape of India.
There are prominent different challenges in funding and financing in India. During the last two decades, an Indian economy and financial system have undergone a drastic change in structure, nature, scope and regulation has undergone a major transformation from being a largely connected with farming economy with a modest growth rate into one of the world's most dynamic economies and, as projected by Goldman Sachs is set to be the third economy by 2030.
Dr. Brinda Jagirdar "The Indian economy is said to be in a sweet spot today because there are two critical factors driving change over the next 10-20 year; first one India is a young country and will see a sharp rise in its working age population and second more people in India will get rich with in one generation."
A study by Mc.Kinsey suggest that if India continues to grow at 8.9% every year, average household income will triple over the next two decades and it will become the world's fifth largest consumer economy by 2025; The pyramid structure of India's consumer market with a very small wealthy class at the top, a middleclass at the centre and a vast economically

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disadvantaged class at the bottom being replaced by diamond ie. a relatively large wealthy class at the top, huge middle class at the centre and a relatively small economically disadvantaged class at the lower end and India will witness a rapid growth of its middle class, ie. households with disposable income from 20,000 to 90,000 rupees a year from about 50 million people at present (5% of the population) to about 583 million people (41% of population) 2025.

II. REVIEW OF LITERATURE

In the field of Infrastructure funding and finance various studies has been conducted by so many experts and research scholars for the exploring the new ideas and suggestions for the development of infrastructure in India. The studies are as follows:

Lall Rajiv & Anand Ritu (2009), Financing Infrastructure, the study reveals that infrastructure should be a strong pillar of any Indian economy. In the eleventh five year plan Government of India was predicts to raise infrastructure investment over the 9% of GDP. The study defines that building infrastructure is a capital intensive process with large initial costs and low operating costs. Infrastructure projects have significant Infrastructure projects have significant externalities where the social returns exceed the private returns. The NBFCs have become a prominent source of financing infrastructural but their growth is constrained by their access to bank finance in the absence of varied whole sale funding source. There is no substitute to improve the functionary of our domestic financial system. It is very necessary to create mechanism to identify the problem of NBFCs lending to Infrastructure.

Bothra Nidhi (2011), Sources of Infrastructure Funding, the study identify that infrastructure funding is featured by non recourse or limited recourse funding, large scale investment, long gestation period, high initial capital, low operating cost, repayment from the revenues generated from the project. The government has invites private participation in funding capacity building by way of PPP Model, commercial bank leading, infrastructure debt fund, ECB, FDI etc. the study concluded that the positive steps have been taken for bridging the funding gap for the fast growing sector shall be contributed to economic development of the country.

Kumar Arvind (2013) the study titled Infrastructure Investment: A trillion dollar question, it explores the magnitude of infrastructure investment during the 12th five year plan. Infrastructure companies or project sponsor typically have much higher gearing than other corporate which make them unattractive in the security market. The study also analyze the deployment of infrastructure, capital raised through public and right issues in infrastructure and FDI flow to infrastructure. The challenge of infrastructure financing which country is facing is not inadequate of financial savings but lack of financial intermediation.

III. OBJECTIVE OF THE STUDY

- To explore the macroeconomic view and macro economics constraint of India's Infrastructure Development.
- To identify available sources of infrastructure investment.
- To study overview of Current Landscape of Infrastructure.
- To explain PPP Models.

IV. RESEARCH METHODOLOGY

The present research study has depended substantially on the data suggested by IMF report. The study has been conducted mostly on secondary sources of information procured from various development schemes and reports, journals, Articles and similar studies conducted in the field, internet and various books. Research Design is Descriptive in nature.

V. MACRO-ECONOMIC VIEW

These days Infrastructure funding and finance is in a period of instability. On both equally sides of the equation supply and demand, there are positive and negative influences resulting from the credit crisis and governments responses to it, It is clear that infrastructure needs remain pressing the globe over and that governments will strife to meet them, particularly on the heels of a global economic downturn that will have harmful fiscal impacts.

Providing dynamic for nation, there should be a constant role for the private sector in the development of infrastructure and the public services delivered through it. The credit crisis should have temporarily changed the economics of public private partnerships as financial transactions, but it has only served to highlight the need for new approaches and concepts to resolving the world's infrastructure problems and obligations

In Indian environment, the current state of the economy makes it necessary for the government to put in position a strong and implementable plan of action for its revival. The economy has experienced a consistent fall in the quarterly GDP growth since the beginning of 2011, distressingly high levels of twin deficits viz. Current Account Deficit (CAD) and fiscal deficit as well as worrying volatility in the inflow of foreign investments. Budget 2013 was provides us to opportunity to regain focus by holding to the path of fiscal consolidation and take appropriate policy initiatives outlining the timely recovery of the Indian economy. Strengthening fundamentals and boosting growth inducing investments is the foremost consideration at this stage. If India needs to invigorate the investment cycle and accelerate structural reforms, to be continued on this trend. The Indian economy is the incredible spot in the global landscape. "Growth numbers are now much higher and the current

account deficit is comfortable, in part due to the fall in gold imports and lower oil prices," said Paul Cashin, IMF Mission Chief for India.

The inclusive financial crisis affected virtually every economy in the world and India was no exception but we recovered previously than even other emerging economies. At the time of crisis growth decrease by 6.7% in 2008-09, but very soon it was improved by two year 2009-10 the growth averaged 9% which compares favorably with the average growth of 9.5% in the three year before the crisis. In 2011-12 the growth moderated with 6.2% and in the year 2012-13 it was 5% approximately.

In the year 2015 the data shows that India is one of the fastest-growing country and emerging market economies in the world. The Indian economy is stimulating, helped by positive policy actions that have improved confidence and by lower global oil prices, says the IMF in its annual assessment of the Indian economy.

The IMF forecasts growth will strengthen to 7.2% in 2014-15 and increase with 7.5% in 2015-16, driven by stronger investment following improvements to the business climate. The GDP modification depicts a more flexible performance of the services and manufacturing sectors of the economy." while public and private consumption look more robust, he added, investment performance continues to be held back by structural and supply-side constraints. The IMF will continue to examine the improved GDP method and its inference for its growth forecasts, and further details on the compilation methodology will enable a deeper understanding of India's growth.

Table 1

Year	2005	2006	2007	2008	2009	2010
Real GDP Growth	9.3%	9.3%	9.8%	3.9%	8.5%	
Year	2011	2012	2013	2014	2015	6.4%
Real GDP Growth	6.6%	4.7%	5.0%	5.6%		

*Estimate (International Monetary Fund (IMF) World Economic Outlook (WEO) database, October 2014)

Above Table 1, represents that the real GDP growth is from 2005 and 2006 the real GDP growth is still with 9.3% , in 2007 the increment of .5% (9.8%), the drastic change has come in 2008 with decrease GDP growth rate with the 3.9% and after that India covers its GDP rate with very huge difference of 5.4% that become 8.5% in 2009,further it in increases with the 10.3% and after then again it felt with 6.6% in 2011 and 4.7% in 2012, 5.0% in 2013, 5.6% in 2014 and data estimates for the 2015 is 6.4%. the trend of this data is between 4% to 7% between the year of 2011-2015 this shows that GDP is in fluctuating trend.

VI. ESTIMATING THE INFRASTRUCTURE SOURCES OF FUNDS

In first 3 years of eleventh plan, budgetary support constituted 45 % of the total infrastructure spending. The debt from Commercial banks, NBFCs, Insurance Companies and the external sources constituted 41% of the funding while the balance 14% was funded through Equity and FDI. The Eleventh Five Year Plan had projected investment requirements and needs in infrastructure to be about Rs. 20.5 Lakh crores, equivalent to $514 billion. The Mid-Term performance of the Eleventh Five year plan indicated that, however the physical capacity goals would not be met, the whole financial investment would be close to the original projection.

The Planning Commission provided preliminary estimates of infrastructure investment for the Twelfth Five Year Plan. According to these estimations, an investment of Rs 41 Lakh Crs. is targeted over the duration of the Twelfth Five Year Plan in order to sustain a real GDP growth rate of 9 per cent. This is almost double the amount proposed under the Eleventh Plan.

VII. SOURCES OF PRIVATE FUNDING

VII (A) Banks

There has been a rapid pace of growth in bank credit to infrastructure projects and schemes with banks contributing 21% of the total investment during first 3 years of 11th five-year plan. This funding has been offered by Public Sector banks and in some cases the sectoral prudential caps have almost been reached for power sector thus constraining any more lending to these sectors. Banks have prudential exposure caps for infrastructure sector lending as a whole as well as for individual sectors.

VII (B) None banking financial companies (NBFCs)

NBFCs lending sharply increased due to higher demand from power, telecom and roads sectors. Two major NBFCs, PFC and REC together constituted 80% of the lending by NBFCs.

VII(C) Life insurance Companies

Life insurance companies are required to invest at least 15% of their Life Fund in infrastructure and housing. Investment by insurance companies in 2012 has only been 10% of insurance life fund AUM which indicates further potential to utilize insurance companies to fund infrastructure development. Moreover insurance penetration is estimated to continue to rise, with the insurance premium expected to grow from the current approximate 4% of GDP to 6.4% of GDP by the end of the Twelfth Plan. This will generate further potential for infrastructure funding however it will be subject to management of prudential and regulatory constraints in the sector.

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VII (D) External commercial borrowings (ECB's)

The share of ECB in total infrastructure investments has been recording a decline. This could be a reflection of the way regulatory environment is viewed by the international investors. They are not keen on making long term investments in environments which have regulatory idiosyncrasies. Under-developed financial markets/products may have also contributed to this drop in ECB funding.

VII (E) Equity

A large part of equity investments relies on foreign investments with domestic investment institutions not showing significant interest in taking equity in Infrastructure projects. The equity investment for the twelfth plan period is estimated to be Rs 4.56 lakh crores.

As proof from the above the major funding was through support of budget and which is constituted 45% of total infrastructure spending.

The data shows that the projected investment requires for infrastructure in 12th five year plan is at least 9% of GDP growth for the Debt/ Equity(FDI)in 12th five year plan is estimated to be ` 189 lakh. Equity funding is likely bigger constraints than debt funding over 12th five year plan.

VII (F) Overview of 12th Five Year Plan

Planning commission is targeting an investment of 51lakh crores over the duration of the twelfth five year plan which is almost double the amount proposed under the eleventh plan. While the share of public investment is projected to decrease from 62% to a level of 53% in the twelfth plan, the share of private investment is projected to increase from 38%(11th plan) to 47% (12th plan) of the total investment.

In comparison to eleventh plan, a very significant growth (>100%) in investments (Budgetary & Private) has been projected for Non-Conventional Energy, MRTS, Ports and Storage. All the other sectors are also projected to have an investment growth of >50%. Planning commission is expecting private sector to play a key role in twelfth plan with an overall investment growth of 131%. Private investment is projected to grow in all the infrastructure sectors with Railways, Water Supply, Storage and Ports projected to grow at >200% whereas investment in other sectors is projected to grow at >100%. Overall private sector investment will be a key to success of infrastructure development under twelfth five year plan.

VIII. ISSUES AND CHALLENGES OF INFRASTRUCTURE FUNDING

While there are multiple roadblocks like delays in approvals, land acquisition, and environment clearances etc. impeding the acceleration of the infrastructure development, one of the key one which will be critical for future is the availability of funds.

An important distinction to draw when considering the financial elements of an infrastructure project is that between funding and financing. The funding for a project could be defined as its long-term source of support. In the case of public infrastructure, this may be revenues generated by the project, dedicated tax revenues or general resources of the sponsoring public sector entity.

The financing of a project is the means by which the funding is leveraged to provide enough up-front cash to purchase construct or adapt the project. While there may be many creative financing vehicles available, once the funding structure is established, all of these financing vehicles will be "securitizing" the same project economics.

Based on industry analysis, we have identified key issues and challenges that are thought to be constraining the flow of funds towards infrastructure development. These issues and challenges are as listed below.

IX. REGULATORY & MACRO-ECONOMIC CONSTRAINTS

- Highly regulated investment norms constrain the flow of funding to infrastructure projects.
- NBFCs infrastructure investment growth is limited by their access to bank finance. Tighter prudential limits on bank lending to NBFCs have capped their access to commercial bank funds.
- IRDA has set stringent guidelines towards investment in infrastructure bonds. As per the guidelines, the rating quality of investment bonds should not be less than AA whereas a typical non-recourse infrastructure project is rated BB. Moreover,75 per cent of all debt investments in an insurance company's portfolio (excluding government and other approved securities) must have AAA rating.
- Statutory restrictions imposed by Government of India on infrastructure: Some key restrictions include minimum credit rating for debt instruments and minimum dividend payment record of seven years for equity. These are difficult conditions for private infrastructure projects to meet as they have been setup recently and do not enjoy high credit rating in the initial years.
- Equity markets are not favorable for financing projects because of uncertainties in the global economy and due to present regulatory requirements limiting exit options, which hinder equity infusion. Moreover, most infrastructure companies have already diluted their equity in public to raise capital and further dilution is not possible due to contractual restrictions imposed on them.
- Sale of unlisted projects is subject to capital gains tax which acts as a disincentive to most equity investors. There is also a growing perception amongst the equity

shareholders that the termination payments in the event of government agency defaults are not adequate in most concession agreements.

- The PFRDA guidelines allows investment in credit risk bearing fixed income instruments(Asset class).However, at least 75% of the investment in this category is to be made in instruments having an investment grade rating from at least one credit rating agency. The sectoral cap of 75% of the investment having an investment grade rating under Asset class scheme, has led to Pension Funds missing on the opportunity to invest in infrastructure projects.
- Sovereign credit rating of BBB- limits investments from foreign funds

This largest workforce will drive consumption and investment demand in the Indian economy. The demand for financial service will increase and the banking and financial sector will have a key role in intermediating investment and savings from large number and growing incomes, which will fuel growth.

In globalizing environment, so many multitasking challenges faced banks and other financial or non financial institution. Global development such as the ongoing euro crisis sluggish US economy and the global signs of slowdown and many other such developments impact the quality of banking and business a home too.

Integration of economies leads to integration of financial markets catalyzing the globalization process. The growing role of the financial sector in allocation of resource has significant advantages for the efficiency with which our economy functions. Hence all efforts today should be focused at ensuring greater financial stability.

The enhanced role of the banking sector in the Indian economy, the increasing levels of deregulation along with the increasing levels of competition have facilitated globalization of the India banking system and placed numerous demands on banks. Operating in this demanding environment has exposed banks to various challenges.

Infrastructural development reflects the picture of the country's economy. Buildings, roads, ports, railways, dams, power house and highway come under infrastructure and these are necessary to sustain and enable economic growth. As we saw continuously that our economy's infrastructural sector growth rate is approx and for GDP growth of 8.5% for the overall economy, infrastructure sector should grow by 25% to 30%. And financing of infrastructure sector has to grow between 25%-33%.

The Indian infrastructure sector continues its sluggish journey in 2012, marked by poor macroeconomic forces, policy gridlock and political instability. Delays in land acquisition and environmental clearances continue to be the key areas of concern, while the poor enforcement of contracts, ineffective monitoring and high input costs are also factors that are hindering growth. Nonetheless, some areas have witnessed progress. The telecom sector saw the emergence of the National Telecom Policy, a cohesive document covering a broad range of communication services. In both civil aviation and power sectors, the Government of India has approved foreign investment of 49%, bringing relief to the heavily leveraged public and private companies. However, several events in the infrastructure sector have been disappointing this year the telecom sector dealt with the fallout of the 2G scam, the power sector witnessed the coal scam and the grid collapse, the roads and urban sectors saw the poor private participation, and the civil aviation sector witnessed the poor financial health of the airport and airline operators. The end of the 11th five-Year Plan saw India missing targets in infrastructure development in sectors such as railways, ports, electricity, and airports, while investing beyond the budgeted investment in others- the roads and telecom sectors. Overall, 19.45 trillion was invested in Indian infrastructure between fiscal years 2007–08 and 2011–12, 95 % of the projected ` 20.56 trillion. The 12th Five-Year Plan projects the total investment in infrastructure during the period to be 51.46 trillion, with 47% contributed by private participation and 53% by the central and state governments.

X. A CURRENT LANDSCAPE OF INFRASTRUCTURE

The Government of India realizes the importance of accelerating the investments in infrastructure to boost the country's slowing economy. Therefore, it has set a massive target for doubling investment in infrastructure from Rs. 27 lakh crores (eleventh plan – 2011/12 prices) to Rs 51 lakh crores during the twelfth plan period, i.e., 2012–2017.The share of infrastructure investment in GDP is planned to be increased to more than 10% by the end of the twelfth plan. This investment, if it materializes, can propel India's economic growth to a higher trajectory. It was not so long ago that infrastructure investment in India was financed almost entirely by the public sector from government budgetary allocations and internal resources of public sector infrastructure companies.

However lately, the private sector has emerged as a significant player in bringing in investment and building and operating infrastructure assets from roads to ports and airports and to network industries such as telecom and power. Private investment now constitutes almost 40% per cent of infrastructure investment. In these times of tight fiscal environment, private sector will need to play a greater role without which infrastructure development will not meet the growing demand and could fall far behind the requirements.

The pace of growth envisaged at 9% by planning commission can be achieved only if the infrastructure deficit is overcome and adequate investments are made. It is critical to bridge the

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gap between planned infrastructure spend and delivery.

XI. INVESTMENT IN INFRASTRUCTURE SECTOR

Union Budget 2013 has taken cue from the Twelfth five year plan beginning FY13 which consider investment in infrastructure up to 50lac crores of which half would flow from private sector. In the context of banking, Infrastructure sector is never viewed separately. Along with the infrastructure development, there will be series of important activities that can come up in the particular place (Vicinity). Moreover, the power an aviation sector can now borrow resources through ECB route up to$1billion. In series, to provide low cost funds, withholding tax on interest payment on ECB is also reduce from 20% to 5% in sectors such as power, aviation, roads, bridges etc. as we know. And an order to step up infrastructure in urban areas, allocation under the Jawaharlal Nehru National Urban Renewal Mission has been trebled to 88crores so that micro facilities could be built. These could open up business opportunities to bank branches in urban areas.

XII. BANKING INFRASTRUCTURE TO GET A BOOST

State-run IDBI Bank will launch the country's first infrastructure debt fund (IDF) to raise $5 billion for building roads, ports and airports. Such debt funds, announced in the budget 2011-12, can be floated through non-banking finance companies (NBFC) or as trusts. They were proposed two years ago by a panel led by HDFC chairman Deepak Parekh, which had suggested an initial corpus of 50,000 crore. IDBI Bank has sought Reserve Bank of India's approval for an NBFC, which will have a capital base of 1,000 crore. The bank will hold 30% stake in the NBFC and the rest will be held by some state-run banks and Life Insurance Corporation of India, said a top banker involved in the process. The new entity under the relaxed norms can provide long-term debt of over 25,000 crore inthe infrastructure sector.

The current retail landscape though is huge with120000 bank branches, 100000 each of ATMs and banking correspondents will need to cope with intention of direct benefit transfer scheme. It is expected that in tune with the changing requirement over 20lac interoperable micro ATM with facilities for biometric scanning an Aadhar authentication and sweeping changes to increase the outreach of banking correspondent will see deserving population to have cash withdrawal and bank account facilities. The steps would include installation and operationalization of ATMs at all branches in the identified 78 district by May 2013and 121 districts by June 30th, 2013. It is also very important banks have a focused programme for issuance of debit card and it's important that account opening and issuance of debit card will be completed in a given time bound manner to enable implementation of direct cash transfer.

Government has been showing keen interest to open new bank branches, onsite ATMs, mobile banking all of which are enabling factors for a seamless DBT. Based on the status of DTB schemes as of March 2013, it is important to recount the challenges which could help us plan well to overcome such challenges in the near future:

With only 20%of the population is Aadhar enabled, liking Aadhar to welfare delivery is going to be a challenge. Moreover 42% of the populations are still left out of the banking system without holding any bank account. There is need to delink DBT from Aadhar as only 280million Aadhar numbers have been completed. By 2014 it is expected to reach at the maximum 600 million counts.

XIII. AGRICULTURAL FUNDING

12th five year plan envisages 4%annual growth rate for agriculture. Agriculture is priority sector of India because our country having agrarian economy. The All India Rural Credit Review Committee (1966) recommended significant role of commercial banks in the delivery of agriculture credit as a national policy. In between 2000-10 policy for doubling the flow of agriculture based credit, announcing credit targets in absolute terms in annual finance budget, financing new farmers, broadening the scope of priority sectors credit and linking agricultural credit targets to revised definition of ANBC implementation of Agricultural Debt relief scheme, Opening No Frill A/Cs, and covering 73,000 villages under banking facilities.

In order to bring about growth in agriculture sector, banks' target for lending to agriculture sector has been raised for 475000 crores in FY12 to575000crores in FY13 calling for an incremental rise in lending up to 100000crores.for interest subvention scheme for providing short term crops loans to farmers at 7%interest per annum will be continued in FY13too and in order to mobilize large resource to fund irrigation projects .A Government of India owned irrigation and water resource finance company is being operationalized .It will fund micro irrigation, contract farming and waste water management projects. Similarly, additional storage capacity is to be created to step up food processing activities. Banks are making full uses of opportunities arising from the initiative of the government of Bringing Green Revolution to Eastern India (BGREI). This has resulted in a significant increase in production and productivity of crops. Since April 1, 1999 the Swarnjayanti Gram Swarozgar Yojna has been under implementation as the largest program for the self employment of the rural poor with a focused objective to bring the assisted BPL families above the poverty line by providing them income generating assests through provision of bank credit and government subsidy . The program targets at establishing

micro enterprises in rural areas based on the ability of the poor and potential of each area like; mobilization of rural poor to enable them to organize into SHGs and strengthening it through Revolving Fund Assistance, participatory approach for each key economic activity, development of activity groups to ensure backward and forward linkage, training of beneficiaries in group dynamics and skill development for managing micro enterprises, provision of credit linked subsidy to help beneficiaries acquire income generating assets and marketing support with special focus on market research, upgradation and diversification of products, packaging, creation of marketing facilities and provision of infrastructure development fund to provide missing critical links etc. are the special key component which are related to financing in SGSY.Total expenditure incurred during 2009-10 was 66.1% of the total allocated funds showing poor utilization of funds in all region except Northeast(117.9%).Eastern and southern regions utilized higher proportion of Revolving funds than other regions. Only northeast, southern and eastern regions could utilize training funds more than mandated10%.

In order to meet shortage of housing for low income groups in major cities or towns, funds can now be accessed via ECB route for affordable housing projects. A credit guarantee trust fund will also be set up to ensure better flow of institutional credit for housing loans.

Since1970s,banks were advised to classify housing finance under priority sector lending. It is worth quoting that, commercial banks started affordable housing finance facility for economically more weak section in the society.

Our Indian finance ministry made the following announcement in last Union Budget 2012-13 to stimulate growth in housing sector:

- To give housing finance facility to aimed groups in rural area at competitive rates, the provision under Rural Housing Fund is enhanced to 3000 crore from the existing 2000crore.
- Due to increase in in prices of residential properties in urban areas,housing loan upto 25lac will be treated as under priority sector lending.
- For enhancing their credit worthiness government of india issue new scheme of credit enablement of EWS and LIG households a Mortgage Risk Guarantee Fund under Rajiv Gandhi Awas Yojana will be created.

Reserve Bank of India has taken recent initiatives in December 2012 for allowing developers or builders to raise funds through external commercial borrowing (ECB) for low cost affordable housing projects with immediate effect, under approval route. Housing finance corporations or National housing board can also avail of external commercial borrowing(ECB) for financing prospective owners of low cost affordable housing units, RBI also notified that this project for the purpose of ECB would be one in which atleast 60% of the permissible floor space index would be for units having maximum carpet area upto 60square meter.

XIV. ROLE OF PRIVATE SECTOR IN INFRASTRUCTURE FUNDING

The private sector contributes over 40% of the total capacity added in power only. Assuming equity of 30% in the projects to be executed in 2012-17, the private sector will have to bring in $100-120 billion worth of equity. However, the market capitalization of the biggest players in infrastructure all put together will be only around $30 billion so they need to raise more equity, which in the present market looks improbable. At the same time, it is unlikely that the banks, in the present situation would fund debt equities of75% .Also the increase in resorting to restructuring can be partially attributed to excessive leveraging by some borrowers during the boom period. It is basically seen that the debt equity ratio of infrastructure projects is unusually high as the funding mechanism is generally 'Project Finance' mode of finance. So, higher debt may help the companies in lowering cost of capital and raising funds on project basis. The problem, however is, that Project financing encourages high debts as repayment is sculpted around guaranteed cash flows. But in this world of regulatory uncertainties, the guaranteed off-take of cash flows does not evoke much confidence.

It is also seen that private players frequently overbid which loads the project with high debt. this debt is often a put option in the hands of borrowers and whenever cash flows shows volatility and the value of equity goes below the value of debt, they exercise the put option. This result in private players asking for sweetener after the bidding has ended. Many of times, the private sponsor awards contracts like Engineering procurement and construction, Operation and Management to their own company, thus effectively reducing their paybacks and enhancing Return on investments. And to top this, many promoters are only eager to exercise the exit clause or at least offload apart of their equity through the IPO route. Thus stress in Infrastructure sector may raise cost of capital for infrastructure companies there by making it difficult for them to raise funds to put in new projects, thus affecting the total funding.

XIV (A) Role of the Government

Delay in clearances, fuel linkages and right of way is some of the commonly highlighted problems. But fiscal deficit is a bigger problem. Faced with a high fiscal deficit, the government sometime has a hands-off approach towards funding infrastructure .Public money is rarely spent in sectors where Public Private Partnership (PPP) is possible. So, the risk is often loaded to the private sector and mutual risk sharing which is the bedrock of PPP scheme, often ignored. And sharing of revenues negative grants are only schemes which sometimes highlight that the focus has shifted to revenue

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maximization.

With the Indian economy growing at an average annual rate of around 8 percent over the last five years and other macroeconomic factors and policies favorably complementing the growth, India has emerged as an attractive investment destination. Global investors looking for investment opportunities in emerging markets in order to tap the growth potential as well as to diversify and mitigate their risk are getting increasingly attracted to Indian markets. Consequently India's share in global pool of private equity investments is steadily rising. The private equity landscape is changing. Regulatory pressure, calls for transparency, erratic markets and increased competition mean that private equity (PE) funds need to cast their net further to find untapped sources of value. Government is also playing a critical role in addressing an urgent need like removing regulatory barriers to put domestic and international PE firms on a more level playing field. Greater transparency and consistency in how rules are applied are important preconditions for regulatory reform. But the PE industry is waiting for policymakers to take several other concrete steps that would facilitate PE capital formation and deal making.

The Government of India realizes the importance of accelerating the investments in infrastructure to boost the country's slowing economy. Therefore, it has set a massive target for doubling investment in infrastructure from ' 27 lakh crores (Eleventh plan – 2011/12 prices) to `51 lakh crores during the twelfth plan period, i.e., 2012–2017.The share of infrastructure investment in GDP is planned to be increased to more than 10% by the end of the twelfth plan. This investment, if it materializes, can propel India's economic growth to a higher trajectory.

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Private investment now constitutes almost 40% per cent of infrastructure investment. In these times of tight fiscal environment, private sector will need to play a greater role without which infrastructure development will not meet the growing demand and could fall far behind the requirements.The pace of growth envisaged at 9 percent by planning commission can be achieved only if the infrastructure deficit is overcome and adequate investments are made. It is critical to bridge the gap between planned infrastructure spend and delivery.

XIV (B) PPP Models – A Perspective

Governments typically have a number of objectives when building infrastructure: getting good value for money, timely delivery, meeting public needs and so on. PPPs have shown their potential as an important tool to meet these objectives and address infrastructure shortages. For example, they provide new sources of capital for public infrastructure projects. Shifting the responsibility for arranging the financing to the private partner can help deliver infrastructure if a public entity is unwilling or unable to shoulder the full debt or the associated risk of the project at a certain point in time.

XIV (C) Public-Private Partnerships 101

A public-private partnership, or PPP, refers to a contractual agreement formed between a government agency and a private sector entity that allows for greater private sector participation in the delivery of public infrastructure projects. In some countries involvement of private financing is what makes a project a PPP. PPPs are used around the world to build new and upgrade existing public facilities such as schools, hospitals, roads, waste and water treatment plants and prisons, among other things. Compared with traditional procurement models, the private sector assumes a greater role in the planning, financing, design, construction, operation, and maintenance of public facilities. Risk associated with the project is transferred to the party best positioned to manage it.

PPPs can also be used for existing services and facilities in addition to new ones. Some of these models are described below.

XIV (D) Service Contract

The government contracts with a private entity to provide services the government previously performed

XIV (E) Management Contract

A management contract differs from a service contract in that the private entity is responsible for all aspects of operations and maintenance of the facility under contract.

XIV (F) Lease

The government grants a private entity a leasehold interest in an asset. The private partner operates and maintains the asset in accordance with the terms of the lease

XIV (G) Concession

The government grants private entity exclusive rights to provide operate and maintain an asset over a long period of time in accordance with performance requirements set forth by the government. The public sector retains ownership of the original asset, while the private operator retains ownership over any improvements made during the concession period

XIV (H) Divestiture

The government transfers an asset, either in part or in full, to

the private sector. Generally the government will include certain conditions with the sale of the asset so that improvements are made and citizens continue to be served.

XIV (I) PPP Maturity model

All over the world, public-private partnerships (PPPs) are increasingly being used to finance and deliver infrastructure. One offshoot of the rapid growth of this trend is that countries remain at vastly different stages of understanding and sophistication in using innovative partnership models. Each country and even individual states and localities take their own path in developing infrastructure PPPs. Many factors play a role in development including local geography, political climate, the sophistication of the capital market, the forces driving formation of partnerships and the factors enabling their creation. Nevertheless, three distinct stages of PPP maturity can be observed across the world.

Many governments are still at the first stage of PPP development. It involves designing the partnership policy and legislative framework, getting the procurements and contracts right and building the marketplace by encouraging the private sector to bid on these kinds of contracts. After a few successful deals, countries typically move to the second stage of maturity. They begin to expand their use of PPPs to multiple infrastructure sectors. They experiment with sophisticated hybrid PPP models to meet the unique needs of each infrastructure sector. And they establish PPP units in each agency to drive PPP deals.

XV. CONCLUSION

After focusing overall objective of study we found that Changing landscape of finance or Infrastructure finance in India is a major issue which is endless. We all know that India is agrarian economy and having multitude features. Our infrastructure is based on PPP models. There has been a strong focus on assuring effective implementation of associated project through budgetary allocation, tariff policies, fiscal incentives, private sector participation and public private partnership (PPPs). Inadequacy of a developed infrastructure sector has been causing concern to the government, the regulator and the financial institutions.

The impact of infrastructure development on economic growth, productivity and trade has been extensively studied, and most studies conclude that improvements in a broad range of infrastructure categories lead to faster growth. Infrastructure is a critical determinant of investments, manufacturing depth, logistics, productivity, inclusive development, national integration and poverty reduction. Insufficient capacity across infrastructure sectors leads to a widening infrastructure gap, resulting in lower productivity, higher transport and logistics costs, reduced competitiveness, and slower growth.

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IMPACT OF ICT ON COMMUNITY

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Abstract :
The spread and adoption of information and communication technologies (ICTs) throughout the world have been phenomenal during the past decade. ICT is used to give us a better understanding of the world around us.
This Article is based on secondary source of data such as Books, magazine, news paper, web sources etc. In this paper I have discussed about Impact of ICT on Community in various way e.g. Communications, Educations, Entertainment, Business, Security, News & Media, Socio-Economics, Health, Social Networking, live chat, measurement of ICT impact, terminology and their uses with their needs.
In India 30 % people use Internet and its rank 2nd position in the world in top 20 countries. The number of internet users in India has reached 375 million by the end of October 2015. The latest figure indicates that India has more internet users than the population of the US and become the second largest country by the number of internet users after China. According to the report published by the Internet and Mobile Association of India (IAMAI), the internet users in India have grown 17%, adding 52 million new users.
Keywords: Communications, Education, News & Media, Socio-Economics, Networking.

I. INTRODUCTION

Whether you work at home or in a lab, whether you work with kids or adults, there's one thing that connects us all-Our local community and how we use ICT to make it work. Communication in the community-ICT is used in a number of ways to communicate and keep in touch with people in our local communities creating not only a vibrant social mix but also reducing the need to leave your home to talk to people in local businesses and neighbours meaning not only is there less congestion on roads but we are also saving the environment as well.

II. ICT IN EDUCATION

ICT is used to assist teaching and learning across the globe. Whether you are learning to count or taking an online course in accounting there is ICT technology that can make your life easier.

II (A) Interactive Software

ICT is beneficial to Education in a number of ways, in schools; colleges and nursery's all across the world computers and ICT technology are being integrated into school day to day life. From the morning Computers can be used to keep a track of attendance and absences in the registration periods Not only does this save time the chances of misplacing such folders are greatly reduced meaning in an emergency it can be located quickly.

Now days Schools also use ICT interactive hardware such as "smart boards" these can be used in the class to show power points and work tasks. This saves time and energy for the teacher and makes a more enjoyable learning experience for the pupil. There is a wide range of different presentations of topics on the internet meaning less time has to be spent designing them yourself. Also by using a visual display teachers can not only tell but also show what they are talking about using the touch system pupils can be kept interested by playing certain relevant interactive games that can be used to educate in a more fun way.

II (B) Websites

The Internet just like a library is a huge valuable source of information; from it people can search through millions of files to find the data they need. By searching for the required information you can find hundreds of web pages that can help you learn, by reading through pages on the internet you can absorb a large amount of information quickly.

II(C) Online Courses

Online courses are widely used by many students and adults alike to expand their knowledge of a certain topic. The benefit of online courses is that you don't have to travel to a university to get taught. You can learn everything from the comfort of your own home. Not only does this save time it means you can also have a flexible timetable. In addition if you are planning to learn a more exotic topic the chances are the university you want to go to does not teach that particular course or the nearest

university that does have it is too far away. In an online course if you get stuck its difficult for someone to explain it to you although FAQ pages and forums to discuss issues are usually set up.

II (D) Educational Television

TV has a range of different programmes amongst them is educational ones which is a way to learn in a more enjoyable environment there is a huge range of educational programmes on TV such as nature programmes or science and history there are also many more covering most topics. This way you don't have to go out of your way to search through huge amounts of information, you can sit down, relax and enjoy as you assimilate all the important information! However a negative of TV is that it is very rare to get exactly the information on the topic you need and it might be months before anything relevant comes up!

III. TRAVEL

Whether you're driving to your mum's house or flying across the world for a vacation. Its travel that makes our journeys easier!

III (A) Airport

All over the world airports are situated to provide fast and economic transportation to your destination. For security CCTV is installed across the airport and inside the planes. As well as CCTV Metal detectors and X ray scanners are used to make sure people are not bringing any dangerous items onto the flight. When entering a country Border Control has installed measures to stop immigration passports can be updated to accommodate a microchip to stop forgery these methods of ICT Security help keep us safe while we are travelling through the air

When in the air pilots need all the help they can get to keep the plane on the right track and prevent it from crashing, on a foggy day a pilot may not be able to see more than 20m out of his plane, with loss of sight it would be impossible to land safely and so electronic guidance systems can be used.

Online booking systems are extremely useful. They save time and money compared to travelling to your local travel agent, and also by using the internet you can quickly and efficiently shop around for the best deal that suits you.

III (B) Cars-Satellite navigation

Satellites can triangulate your position in seconds to a few meters and not only tell you where you are anywhere in the world but also give you a range of other important information such as your speed, direction and time to destination! Satellite Navigation is easy to use and extremely effective by placing in two postcodes.

IV. COMMUNICATING WITH FRIENDS AND FAMILY

Communication-ICT is used in a number of ways to communicate and interact with people across the world and with so many alternatives you can choose the way that best suits you or use a mixture of them all!

IV (A) Social Networking

There are hundreds of social networking sites available on the Internet, Phones and Computers. Sites such as Face book, Twitter and MSM, work alongside email, by being able to contact people as well as the ability to upload photos. Using these sites you can keep in touch with peers and associates and of course your treasured family members, using these you can build a detailed profile of yourself online to show off to your friends anything from where you have been on holiday recently to what TV programmes you like to watch, connect with other people: friends or strangers and view the information they have to offer so you don't have to even leave your home to learn about your friends and relatives. Currently many people both from their early teens to working people in their forties all use social networking to keep in touch with friends family and new people, and to make new friends!

IV (B) Phones

Nearly everyone has a phone, from the range available it's not surprising from the first release of the mobile phone of cell phone it was a huge hit the ability to contact anyone, and anywhere this is extremely useful. Modern Mobile phones are not only used to phone people but can also come with a range of different of different apps. We all need to have some fun once in a while so a number of games on phones are available for every different age range most games can be played against others so you can always have a fun competition with one of your friends!

IV(C) Games

ICT has totally revolutionised the way we view entertainment, one huge change was the birth of games and consoles, currently millions of different games exist on a variety of consoles ranging from educational to first person shooters. These consoles allow you to play your favorite games online against strangers to add a bit competition into your game play as well as this by adding your friends you can actually play against them as long as you both have the same game without even being in the same room! Currently games not only thrive on the main consoles a large number of phones and I pads also incorporate apps which give the ability to have fun on the go!

V. SOCIAL INTERACTION

V (A) Online News

ICT is used to access and view news from across the world whether it's a presidential election or a new swimming centre being erected in your local area chances are you can find a detailed coverage of it on the internet. Hundreds of broadcasting companies are available to provide you not only with the information you want but also with pictures and live video feed so you can witness some of the main world events and not miss out on any action. Also as well as being used just to view the week's events online news can also be used to help you with day to day business using the internet you can search the weather to be able to tell what you'll need if your travelling anywhere also traffic reports of your local areas can stop you being stuck in unnecessary delays saving you time and making your life a lot easier

V (B) Google Earth/Satellite imaging

Google earth is an excellent fun way to become aware of the world using the search bar you can zoom in on specific places of interest and be amazed at our earth. You can spend hours of fun looking around your local area up close from a bird's eye view or even use the plight simulator to give you the impression of flying over our earth not only does this get us used to our world it does so in a fun educational way! Satellite Imaging is also important to show us pictures of specific areas such as when searching a holiday resort or completing homework for your teacher using a satellite picture can help you better understand what it is!

V(C) Maps

Maps are not only used for travel but to look at the landscape of a specific area sat naves and online maps can be used to show you what a certain area looks like and help you familiarise yourself if you ever want to go there a map could be anything from a map of your local shopping mall to the world so distance doesn't matter!

V (D) Social Networking

There are hundreds of social networking sites available on the Internet, Phones and Computers. Sites such as Face book, Twitter and MSM, work alongside email, by being able to contact people as well as the ability to upload photos. Using these sites you can keep in touch with peers and associates build a detailed profile of yourself online, connect with other people: friends or strangers and view the information they have to offer so you don't have to even leave your home to understand more about people in the world. Social networking can also help you to learn more about famous people and understand more about them!

V (E) Emails

After its invention in 1971 email quickly took off however it wasn't until after the creation of the World Wide Web that it was used wide scale. Nowadays email can be accessed on phones, computers, laptops, Ipads and Iphones so not only can you message at home you can also message on the go meaning you are not limited to when you need to contact someone with important information. With billions of email accounts worldwide, Email has become an essential part of working life and an easy way to communicate with people.

V (F) Video Conferencing

Video conferencing is widely used in businesses across the world giving the ability to hold a conference from the comfort of your own home with anyone across the world not only can you talk webcams are used to provide live video feed of the person you are talking to this means all the necessary details can be discussed without the waste of cost and time of actually travelling to speak with someone! Video conferencing can be used in families so people can talk to their relatives about daily matters without having to go and meet them it can also be used to talk to friends and colleagues as a way to catch up, pass the time or discuss this week's homework from school. Video conferencing is widely used in the army so soldiers serving abroad can keep in touch with their families, this will have a positive impact on the community as they will have a sense of duty to their country and will be proud that someone they know helps to keep them safe, this makes communities more enjoyable.

V (G) Notice Boards

Regularly updated, Internet Notice boards are perfect for viewing information quickly, and efficiently. By being to sort through dates and genres so you can find what you want when you want! Notice boards are excellent to bring people's attention to important matters.

Large advertisement boards are utilised in a number of ways across our local communities, when in town flashy billboard displays can be used to attract people's attention and remind people of local businesses, this may increase the profit for companies and make towns more alive!

VI. SECURITY- CCTV

Closed circuit television is used all over our local communities whether it's in shops to use as evidence in case of crime or at home as a deterrent to burglars a wide range of cameras are available to keep our local community a safer place.

VII. BUSINESS

ICT is used in a number of ways in local businesses in shops and supermarkets computers are used in tills to calculate the

price of items so you know how much to pay with the minimum amount of fuss. not only does this save time with computers being able to add chains of prices almost immediately it also reduces the amount of errors compared to if it had been done without a machine this means you will be paying the right price for what you buy. This can also be seen in calculators that are used to work out sophisticated sums accurately and in a short amount of time! Additionally computerised accounts such as on Excel can be used to calculate profits and losses of the business in a particular time frame and can also be used to calculate amount of tax owed to the government. ICT can be used in local communities to save time and energy for businesses making our communities run a lot smoother!

VIII. SOCIC-ECONOMIC LIFE

The role of information and communication technologies (ICT) has been growing in the economic and social life recently. Information and communication technologies are one of the basic priorities of research and development (R&D) in the information society. In recent years, analyses on the impact of ICT on business and economic environment have been widely addressed by policy makers, technology developers, and science and business societies more and more often. Studies of the socioeconomic impact of ICT cover a wide spectrum of questions. The Information Technology defines five important thematic trends in ICT research:

1. Macroeconomic and social conditions for ICT-based innovations;
2. Organizational changes and transformation of work processes;
4. The social dimension of ICT;
5. Political instruments related to ICT development.

In the case of ICT-related research, different visions by information society of what ICT is and what role it should play in directing research. Although variety of positions exists, ICT socio-economic impact remains one of the most often discussed issues. The spectrum of problems defined by various Technology Institutions in India shows that the impact of ICT is important both at macroeconomic and microeconomic levels as well as on social and political processes affecting all economic subjects' activities. Consumers and producers form private sector and government – public. ICT development has conditioned the fact that ICT is used by all economic entities in their activity. ICT creates opportunities for an economic entity and transforms its methods and techniques of activity simultaneously. Evaluating the impact of ICT on business, it is necessary to indicate that the implementation of ICT enabled solutions is related to both internal and external factors. The implementation of ICT does not only mean acquiring certain software; it also affects different processes of the enterprise. The enterprise has to be able to change, because the implementation of ICT requires primarily transformations inside the enterprise. Changes conditioned by ICT are closely related to the impact of ICT on consumers.

One of the main impacts of ICT is the capacity "to move people to the centre". In this context the Information Technology in India is dedicated to declares a possibility "to move every citizen, home and school to the digital century; create literate for trendy Indian people and student in digital systems supported by business culture ready to finance and develop new ideas; ensure that the process is socially comprehensive, creating consumer reliance and enforcing social cohesion". This includes efforts like the development of e-learning, e-government, e-health, etc. Usually e-Government is defined as the usage of ICT to provide public services (therefore, it is closely related to an administrative management unit); however, ICT enabled solutions are also applied at various administration levels – international, national, regional or local. The application at the local level is related to the concept of e-City. The concept of e-City is based not only on the provision of information, but also on the possibility to include citizens into the life of a city more actively and mutually usefully. E.g. digital technologies (remote network systems, internet and mobile technologies) are used to facilitate the process of decision-making for public institutions, improve public policy in local communities and transform relations with citizens, business and other public institutions.

IX. CHANGES CAUSED BY ICT DEVELOPMENT

Following are some changes cause by ICT Development

- Consumer needs have become more complex while consumers themselves have become more demanding.
- Trademark management has changed radically.
- Distribution channels have become virtual.
- Payment process has become virtual.
- Markets have become global.

The developed ICT infrastructure has created new environment for the operation of enterprises. The meaning of consumer has grown significantly, and unique environment features have conditioned many changes of consumer behaviour. Both ways of interaction between consumers and enterprises and consumer behaviour have been changing because of the ICT development and their community awareness program run by Information centre in India.

X. STANDARDISATION OF TERMINOLOGY

It is recommended that member countries consider the different terms which can be used to describe ICT impacts and use them appropriately. Policy makers and statisticians will tend to classify impacts as social, economic or environmental. Another particularly useful distinction is between intermediate

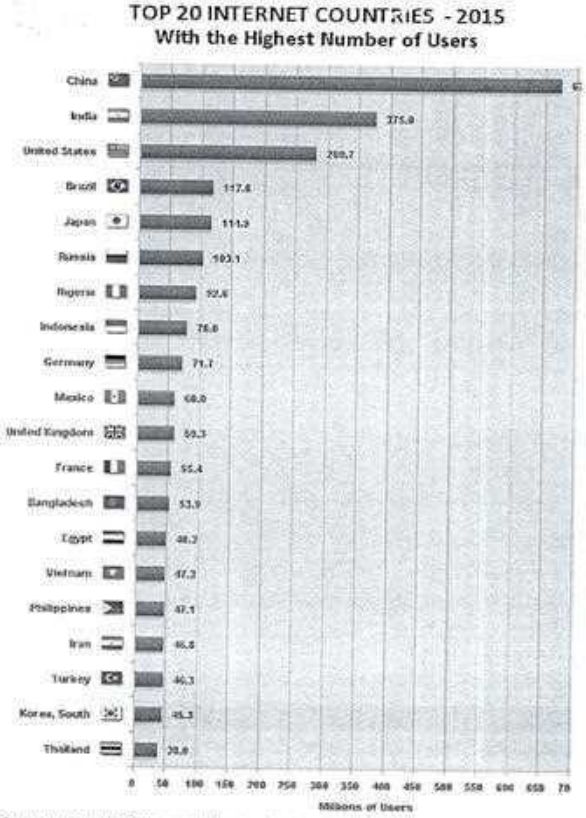
impacts (for example, how ICT changes the way something is done) and final impacts (how that use of ICT has important effects on an entity, the economy or society). Other potentially useful ways of looking at impacts include:

- The degree of impact whether it is strong or weak (in which case, it may be termed an influence rather than an impact).
- How localised the impact is whether it is broad or narrow, micro (entity level), meso (community level) or macro (economy, society, international level).
- Whether it is positive or negative.
- Whether the impact is short or long term; and
- Whether it is direct or indirect.

#	Country of Region	Internet Users 30 Nov 2015	Penetration (% Population)	% Growth 2000 - 2015
1	China	674,000,000	49.5 %	2,895.6 %
2	India	375,000,000	30.0 %	7,400.0 %
3	United States	280,742,532	87.4 %	194.4 %
4	Brazil	117,653,652	57.6 %	2,253.1 %
5	Japan	114,963,827	90.6 %	144.2 %
6	Russia	103,147,691	70.5 %	3,227.3 %
7	Nigeria	92,699,924	51.1 %	46,250.0 %
8	Indonesia	78,000,000	30.5 %	3,800.0 %
9	Germany	71,727,551	88.4 %	198.9 %
10	Mexico	60,000,000	49.3 %	2,112.1 %
11	United Kingdom	59,333,154	91.6 %	285.3 %
12	France	55,429,382	83.8 %	552.1 %
13	Bangladesh	53,941,000	31.9 %	53,841.0 %
14	Egypt	48,300,000	54.6 %	10,633.3 %
15	Vietnam	47,300,000	50.1 %	23,550.0 %
16	Philippines	47,134,843	43.0 %	2,256.7 %
17	Iran	46,800,000	57.2 %	18,620.0 %
18	Turkey	46,282,850	59.6 %	2,214.1 %
19	Korea	45,314,248	92.3 %	138.0 %
20	Thailand	38,000,000	55.9 %	1,552.2 %
	TOP 20 Countries	2,455,770,654	49.9 %	854.9 %
	Rest of the World	910,490,502	38.9 %	777.2 %
	Total World Users	3,366,261,156	46.4 %	832.5 %

XI. LIST OF COUNTRIES USING INTERNET'

This is a sort able list of countries by number of Internet users in 2015. Internet users are persons using the Internet in the last 12 months from any device, including mobile phones. Penetration is the percentage of a country's population that are Internet users. Estimates are derived from either household surveys or from Internet subscription data. Where India stands on 2nd positions.



Source: Internet World Stats - www.internetworldstats.com/top20.htm
2,455,770,654 Internet users in the Top 20 countries as of November 30, 2015
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XII. CONCLUSION

Finally, We conclude that Impact of ICT on Community Effect with various way with the relation, health, life, living standards. Social, Economics, Travel, Educations, Security,

banking, and various aspects of the life as well as organising business meeting live and running agenda of Government and their implementations.

Today the scenarios are changing day by day in speedy nature to the adaptations of ICT in everywhere.

In Last Several Decades India is rapidly growing their communications skill in technology by using ICT.

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GENDER SENSITIVITY AND THE PARTITION OF MATRIMONIAL PROPERTY

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Abstract :
With the inception of divorce laws, though, countless women found them unrestricted to remit themselves of the fetters of a calamitous marriage, they also found themselves on the periphery of impecuniousness with most laws esteeming possession of property and family assets by the husband alone as his exclusive property. This was made shoddier by the fact that the aids made by a home maker were hardly ever reckoned by Indian Courts unlike in some other countries. However in order to set veracious the crevasse that exists in the social and economic position of women vis-à-vis men in Indian society, many laws have been passed and reforms made. These embrace the right to receive equal pay to inheritor own property, to maternity benefits, to terminate undesirable pregnancies and the right to be protected from husband's cruelty. The research paper delibcrates the economic rights of the Indian woman within the family edifice particularly after the cessation of marriage. The concept of divorce was not reachable to the Indian Hindu population, until the year 1955. The Hindu wife was not a coparcener but was provided with a poultry sum of economic security and shelter and a standard of living to which the husband was familiarized. With the genesis of divorce laws, the same Hindu woman could be destitute of her marital assets, compelled to leave the matrimonial home and secluded from the joint family upon divorce. The Indian woman's economic rights have orthodoxlygy rated around maintenance, alimony&stridhan. While stridhan was absolutely the woman's property over which her husband could not have any prerogative, alimony and maintenance were concomitant to the concept of nourishment to avert the wife from deteriorating into 'vagrancy and destitution' and were painstakingly distinct from an award of property This paper deals with the law as it subsists today and postulate rational recommendation to assuage additionally the monetary anxieties of women.
Key words: - Gender, Matrimonial. Marriage, Partition, Dowry, Judicial Separation

I. INTRODUCTION

The notion of divorce was not reachable to the Indian Hindu population, until the year 1955. The Hindu wife was not a coparcener but was provided with a poultry sum of economic security and shelter and a standard of living to which the husband was familiarized. With the genesis of divorce laws, the same Hindu woman could be destitute of her marital assets, compelled to leave the matrimonial home and secluded from the joint family upon divorce. The Indian woman's economic rights have orthodoxy gyrated around maintenance, alimony & stridhan. While stridhan was absolutely the woman's property over which her husband could not have any prerogative, alimony and maintenance were concomitant to the concept of nourishment to avert the wife from deteriorating into 'vagrancy and destitution' and were painstakingly distinct from an award of property This paper deals with the law as it subsists today and postulate rational recommendation to assuage additionally the monetary anxieties of women.

II. PURPOSE AND LEEWAY OF SECTION 27 OF THE HINDU MARRIAGE ACT, 1955

It is significant to note that this section alongside Section 14 of the Hindu Succession Act adapt the concept of "Stridhan". The current section 27 of the Hindu Marriage Act is though inappropriately limited only to property obtainable to the parties at or about the time of their marriage which fits conjointly to them. It does not extend to articles of dowry given to and exclusively owned by the wife. The party who needs that the direction be issued under this section must make an application before the main proceeding terminates as the order is required to be made at the time of passing of the decree. Section 27 provides alternative remedy to civil suit and does not affect the criminal liability of any party. Where a petition for divorce is rejected, there is no illegality if no finding is given on the application under section 27 of as the finding could have created disharmony between the parties to the marriage.

III. RETRIEVAL OF ADORNMENTS UNDER SECTION 27 OF THE HINDU MARRIAGE ACT, 1955

Section 27 of the Act has a self-same narrow room as it enables the court to make such provisions as it deems fair and appropriate in respect of any property presented conjointly to husband and wife at the stage of marriage. Though the Allahabad High Court in Kanta Prasad v. Omvati has opined that the court has inherent power to make arrangements in respect of the individual property it is also submitted, this is not anaccurateopinion. Starved ofcreating any orientation to this decision, the Allahabad High Court in Satya Pal Sethi v. Sushila Sethi58, has postulated that the wife cannot uphold a claim for the retrieval of adornments under section 27 in proceedings for divorce funneled by the husband. Since adornments were the élite property of the wife as stridhan, if she wishes to recuperate the same from her husband, she will have to file a distinct suit. But in Sangeeta v. Balkrishna , it has continuedthat the court can prize relief in admiration to the other belongings under section 151 of the Code of Civil Procedure, 1908.

IV. COMMON PROPERTY OBTAINABLE AT OR ABOUT THE TIME OF MARRIAGE

Guidelines under section 27 concerning disposal of property can be approved only, if the property is obtainable at or about the time of marriage and conjointly owned by the parties to the proceedings under the Hindu Marriage Act,1955. As stated earlier the section does not smear to the property, articles of dowry presented to and wholly owned by the wife. Nevertheless the term "belong" in the section does not denote to the title of the property in the sense of ownership and it only signifieslinking with property as to its possession, e.g. a husband can be restrained from confiscating ornaments kept in a locker in the course of the pendency of proceedings under section 9 to 13-B of the Act, if such adornments are obtainable at the time of marriage and the locker is operable by both the husband and wife. Nevertheless a submission under the section should be made in advance for the removal of the principal petition of restitution of conjugal rights, termination of marriage or divorce,judicial separation,but in exceptional cases the court can exercise the power, even, if the application is made at a subsequent stage. Not only the property presented at the time of marriage is covered under this section, but one given "about the time of marriage" also gets attracted to it. Provided the same jointly belonged to both of the parties. However the property which is not covered under this section can also be disposed of between the parties in a petition under this Act by exercising inherent power under section 151 of the Code of Civil Procedure in the interest of justice in exceptional cases. However adornments given to the wife by her father in marriage is her stridhan and the husband holds it as a trustee and he is liable to return it to her after the decree of divorce. The dowry on the other hand includes not only the property presented during marriage jointly to husband and wife but also articles presented to wife as well.

V. OFFER IN GSSUBSEQUENT TO THE MARRIAGE

The Matrimonial Court has no jurisdiction to give directive in respect of the property presented subsequent to the marriage. In the absenteeism of statutory provision, the court trying matrimonial causes has no jurisdiction to deal with supplementary property rights of the parties.

VI. ÉLITE POSSESSIONS UNDER SECTION 27 OF THE HINDU MARRIAGE ACT

It has however been held by the Allahabad High Court that section 27 does not exclude the power to pass a decree relating to property belonging exclusively to either to the husband or wife as that power is inherent in the proceedings under the Act. The words 'which may belong jointly to both the husband and wife' in the section show conferment of an enabling power to deal with jointly owned properties also but do not restrict the Court's power to such properties alone. It was also held that in the view of section 21 all, powers of a Civil Court are available while dealing with the proceedings under the Act. The view taken by the Allahabad High Court appears to go beyond the scope of section 27, although the result arrived at is a desirable result. The Punjab High Court while dissenting from the Allahabad High Court has set out assuredrations for making an order under this section. There must be a matrimonial ensuing pending under the Act before the Court and an application must be made before the decision of the proceeding. It is not incumbent on the court to make provision in the decree with regard to disposal of property and it is left to its judicial discretion. The provision so made, if any, must be fair and appropriate as the court deems having regard to the adjustment of the equities between the parties and all surrounding material circumstances. The order would enclose only that property which was obtainable at or about the time of marriage, which means not only obtainable at the marriage but at a time either prior to or after the marriage and not to those made external to the extending limit of that time. The property so obtainable may either be to the wife or to the husband or both.

At the time the court is required to use its discretion, the property must belong jointly to both the husband and the wife. Any property not belonging conjointly to the husband and wife is not covered under this section. A court exercising jurisdiction under the Act is immobilized to make an order concerning individual property of the partners. Such an order cannot be passed by this court even underneath Order 6, Rule 7

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read with section 151 of the code of civil procedure. A claim by the wife for retrieval of adornments which are her exclusive property is also outsidethe scope of the section. The court has no jurisdiction under the section to dispose of property which is demanded by the party as exclusive property. Once it is held as a matter of fact that definite articles of dowry were given to be exclusively owned by the wife the Section is not applicable to such articles. In PratimaPrajapati v. Vinay P. Prajapati the wife filed a petition in the Family Court for divorce under section 13(1)(b) of the Hindu Marriage Act and she prayed for the leave by the husband of the flat belonging to her. Without any reference to Section 27 of the Hindu Marriage Act the division bench of the Bombay High Court held that when the husband and wife are hitting an end to a relationship, the property belonging to the wife has to be given wholly to her. The husband was ordered to divest the premises and hand over its empty and peaceful proprietorship to the wife.

VII. SECTION 151 CPC IN RELATION TO SECTION 27 OF THE HINDU MARRIAGE ACT, 1955

In Sangeeta Balkrishna Kadam v. BalkrishnaRamchandra Kadam a Division Bench had set the trend that the court must exercise the powers vested in it under Section 151, CPC and pass orders relating to the property not covered under section 27 of the Hindu Marriage Act. The Bench gave very cogent arguments: the Hindu Marriage Act imposes no bar on the Courts regarding the disposal of other forms of property, it is hardly fair to the parties to drive them to file another case, nor is it fair to the Courts in view of the volume of litigation pending. Filing one more case seems unnecessary and superfluous. A Division Bench of the Madhya Pradesh High Court agreed with the Division Bench of the Bombay High Court in the case of Surendra Dixit v. Smt. Seema Dixit . It also held that the court has jurisdiction to direct the return of the property given to the bride by her parents. But the Calcutta High Court has held that under Section 27 of the Hindu Marriage Act the return of the articles and adornmentswhich the wife claimed as her exclusive stridhan cannot be ordered. For that she can seek appropriate relief under the general law. Where the wife has files a separate application in a District Court the matter raised no problem. The appropriate forum would decide the suit.

VIII. TIME FOR MAKING THE APPLICATION UNDER SECTION 27 OF THE HMA, 1955

The application must be made before the proceedings terminate and the order may be made at the time of the passing of the decree or liberty may be reserved to the parties to apply for an order for disposal of such property in the proceeding on any subsequent date.

IX. JOINT WEDDING GIFTS UNDER SECTION 27 OF THE HMA, 1955

Section 27 in spirit lays in detail that any property obtainable at or about the time of the marriage to both the husband and wife, an application may be made conjointly by either party to the proceeding under the Act and the court may in the exercise of its discretion make provision for the disposal of such property as it deems just and proper. The operation of the rule is confined only to property presented to the parties at the time of marriage which belongs jointly to them. Before an order could be made under the section it must be shown that the property in respect of which a claim is made was obtainable at or about the time of marriage. The word "at" must unavoidably mean the actual time of marriage and "about the time of marriage" means near or rotund about the time of marriage and gifts enclosed by the section are not presents subsequently made. The manifestation, "presented at or about the time of marriage" proposes that such property must be associated with marriage. The property presented 'at or about the time of marriage' anticipates not only obtainable at the time of marriage but also those obtainable before or after the marriage, on condition that it is relatable to marriage.

The claim regarding presentation of such property has to be recognized on the basis of evidence. When in a matrimonial arrangement, relief is claimed under section 27, if presentation of such property is established by evidence, then an order under Section 27 has to form part ofthe decree which has to be passed in the matrimonial proceedings. According to the Division Bench of the Delhi High Court this property naturally comes to belong to both parties because all marks and areas of distinction and division are obliterated by the marriage. It is proliferated that the presents may individual as well as joint. What can be used either only by the husband or only by the wife, is their separate property and on the other hand the property which is for the usage of both of them, is the combined property. The property enclosed by the section comprises property received separately or conjointly as present at or about the time of marriage and which has come to be as a method of life in their joint useage.

X. DWELLING HOUSE AND SECTION 27 OF THE HINDU MARRIAGE ACT, 1955

Even if the household property was wholly owned by the husband from before marriage, wife's right of residence in a portion is now firmly entrenched in our jurisprudence. Such share would be commensurate with the status and lifestyles of the parties. Nevertheless under Section 27 the provision concerning disposal of property has been made to discourage multiplicity of suit so that the court, while deciding the matrimonial action, may also give directions as to the disposal of the joint properties of the husband and wife presented to

them at the time of marriage or thereabout. The Division Bench of the Andhra Pradesh High Court observes that the parties can approach the family court for asuitable order on settlement of properties which were given at the time of marriage or learnt out of funds given at the time, and that what is more is that it is also permissible to make a prayer for partition and separate possession of any property in which such party to the marriage claims to have donated a share towards acquisition of such property.

XI. PROPERTY RECEIVED BY A WOMAN IN EXERCISE OF HER COPARCENARY RIGHT AND SECTION 27 OF THE HINDU MARRIAGE ACT, 1955

The amendment to the Hindu Succession Act, 1956 visualizesyieldingcoparcener rights by birth to all daughters. We hold in mind that India's marriage rate is objectively high and that most girls get in India get married. This would finally mean that the daughters will get property rights in both their families of birth and marital families. This seems unwarranted towards the male coparceners. After marriage the daughter is alleged to become a member of the other family. Besides all this, the most significant point to note in this regard is that as soon as they will become coparceners they will get a right to probe for partition. This will make them more susceptible for exploitation by her in laws. She might be focused to torture in case she does not entertain their demand for consuming a partition. Another significant problem in yielding coparcenary rights to the daughter is that the widow's share in the property will be reduced. Conversely, the coparcenary property acknowledged by a daughter is considered to be her élite property and the husband will have no right over the same whether under section 27 of the Hindu Marriage Act, 1955 or otherwise. Even upon her death the belongings will not federalize upon her marital property but upon her broods or natal clan only.

Mulla in his 'principles of Hindu law' has also reinforced this view and has opined that if the purpose of the legislature was somewhat different then it would not have certified the son of predeceased daughter to claim partition of the dwelling household.

XII. WOMEN'S PROPERTY RIGHTS UPON DIVORCE AND THE NOTION OF SEPARATE PROPERTY REGIME

As per the separate property regime, the spouse who acquires the title of the property will walk away from the marriage with that property undamaged in his or her name. The court will not take into reason the separate contributions of the spouses to the formation of a property and will merely implement the right in errand of the person who holds the title of the property regardless of the influence of the other spouse. This often distinguishes against the woman who defecates title to the matrimonial household and other possessions by failing to escalate marriage as a partnership. In dealing with this problem of rights in property after marriage , the Hindu Marriage Act provided that the property conjointly presented to the spouses at or about the time of marriage may be disposed of by the court as it may reason just and appropriate. Under Section 27 of the Hindu Marriage Act, settlement of the conjointly held property must be made at the time that the decree is delivered and property obtainable to the husband and the wife before or after the marriage is not in the interior of the purview of the section.

The manifestation 'jointly' in the Act is noteworthy because it delineates the limits of the matrimonial courts' jurisdiction over the dumping of such property in two venerations, first, by limiting it to property which has been given to the spouses either at or about the time of marriage and secondly, such property must have been given to them unswervingly. Section 27 hence expediently left out several other types of acquired by the spouses before or after the marriage or property jointly assimilated by the spouses during their period of wedlock for assemblyof the demands of the family etc.

In as early as 1950 the English courts has previously recognized a doctrine to demarcate property held by the husband or wife after marriage where clear differentiation was not possible. Denoting to such complications, Denning L.J. remarked in Newgrosh v. Newgrosh

"In the ordinary running of a home, where the parties agree to buy clothes or furniture, they may also agree to whom it is to belong; but if, as so often happens they have left that unsaid, the title to it depends as a rule on the nature of property bought or the investment made. It does not necessarily depend on who provided the money. If clothes are brought for the wife they are of course hers; if money is invested in the wife's name it is presumably hers. Conversely, where money is invested in the husband's name, it is presumably his. But if they invest money in their joint names, or if they buy furniture with it, which it is obviously intended as a continuing provision for the benefit of them together, it may properly be presumed to belong to them jointly...Full effect is, therefore, given to their intention by holding them to be joint owners".

Although the court in India has option to decree any settlement of the property to the advantage of either spouse, it is only empowered to distribute property that is jointly held by the husband and wife. Courts have conservatively held that under the Hindu Marriage Act, jurisdiction is missing to deal with the property solely by one party or the other, irrespective of the time or manner in which it was acquired during the marriage. The Rajasthan High Court stated in Anil Kumar v. Jyoti that section 27 discourses only that property which is conjointly owned by the couple and which has been specified to them at or about the time of their marriage.

Consequently, it was the court's thoughtfulness brought about the fact that this provision did not distress any property

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belonging solely to one of the parties. The only procedure to recover possession of his or her individual property, the husband or the wife must establish a separate suit. The Special Marriage Act, 1954 includes no provision lecturingon the settlement of any type of property upon divorce. Codified Muslim law provides only that upon divorce the wife shall obtain the property given to her unswervingly and an amount equal to the sum of mahr or dower formerlydecided to be paid to her.

The existing codified personal law allocating with post-divorce property distribution is exceptionally insufficient to address the concept of joint conjugal property which treats marriage as an equal partnership in which assets are accrued as a result of work, support and fortune of both parties for the benefit of the whole family unit. Rendering to a study, even though a wife's earnings from agricultural wage work were typically about half or two thirds of the husband's, her contribution to household maintenance was greater than his in six of the twenty sample villages, equal or close to equal in five others and substantial in the rest.

The study also presented that the proportion contributed by the wife from her income was greater than that by the husband. Typically she contributed over 90% of her earnings, while the husband rarely gave over 60 to 75% of his and sometimes even less. Another study found that majority of working women gave most or all of their earnings to a senior member of the household such as the husband. A study conducted and published by Majlis found that shelter was the most pressing need of divorcing women and provided evidence of the disastrous effects of the separate property regime for women. Of 60 women who contributed in the study only six resided in the matrimonial family, three of whom did so since the husband left to live with another woman. Divorces had not been confirmed for fifty-eight of the women, which destined that women were also defenseless during divorce accounts. Thus for 90% of the women in the study, divorce or purely divorce proceedings meant loss of the matrimonial homespun. There are some approaches to evade the inequality in the separate property system. The husband and the wife, during the marriage can settle to hold titles conjointly and in an equitable manner. During the wedding or upon divorce one spouse can agree to transfer the title of certain assets to the other one. But both these approaches of minimalizing the inequality of separate property require the accord of at least one person. Joint title necessitates some amount of prudence that may be far away at the time the couple obtained the property. Using the device of constructive trust, the Court may also be able to enhance the suffering of the non-title croft party. Nevertheless beneficial trusts do not create legal rights for the beneficiary. The court may also coerce a spouse to sell his or her property in order to make court authorized maintenance expenditures. Despite these conducts in which the separate property regime can be ducked, it remnants aprejudiced system which fails to identify marriage as a partnership and distinguishes against women who lack title to the marital homespun and other possessions. Courts elsewhere have replied to these economic authenticities by embrowning a jurisprudence of joint matrimonial property organization where all assets acquired from the time of marriage are regarded as joint marital assets to be alienated equitably or evenly between the divorcing parties. In India, nevertheless the woman, while relishing the formal status of equality at law, in spirit remains frugally dependent on her husband. The separate property regime has occasioned in the continuation of subservience of women's economic safeties.

XIII. RECOMMENDATIONS

The contemporary system of personal laws regarding property division is tremendously biased against women because it miscarries to safeguard that the woman will leave the marriage with the assets and economic refuge to which she is eligible. This legal establishment is prolonging gender imbalances that condense the woman itinerant and an impoverished by divorce. Observing into the abovementioned discussion, the subsequent suggestions may arise to create a more evenhanded and democratic legal scheme that will shield the rights of women who are divorced from their husbands.

XIII (A) Separate Property

Individual property prior marriage should continue separate property to which only the proprietor will be permitted after divorce. It may comprise inheritance and gifts and there must be a mandatory provision of registration of the same. Conjecture unless invalidated should be that unregistered assets are common property.

XIII (B) Joint Marital Property

Property learnt in the course of the marriage that will be alienated equally if the parties decide to divorce. The court must have the control to order the transfer of property from individual party to another and to order reimbursement of spousal property for the subsidy of the other spouse and children.

XIII (C) Ante-Nuptial Agreements

The court may apply ante-nuptial contracts where both parties to the marriage settle to an alternative settlement of property. These acclaimed provisions treat marriage as a partnership of equivalents and diagnose both financial and non-financial charities of both spouses to the marriage, the household and the attainment of assets. Removal of legal restraints and legitimization of improvement of property rights is an essential and catalytic step for women. Deprived of economic rights, the rise of women as equal thespians in the Conventional Indian life will persist as it has for the last six decades slow and occasionally regressive.

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EUTHANASIA: COMPARATIVE STUDY OF THE LAW IN INDIA AND USA

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Abstract :
Debate over euthanasia has been continuing since quite a long period of time. There are two facets of a coin on one hand we see the people speaking for sanctity of life and on the other we find those who advocate for individual autonomy. Although, Supreme Court has made certain guidelines but some doubts persists in its execution .So it is controversial to decide which course would be better legalizing or non legalizing euthanasia.
The increased importance given to individual autonomy in the twentieth and twenty first centuries has been a major reason for lateral thinking in the direction of legalizing Euthanasia. Euthanasia societies are emerging rapidly in all parts of the globe to seek public Opinion and to pressurize the legislature to pass legislation in this respect. The euthanasia debate has now become increasingly significant because of the developments in Netherlands, Canada, US States (Montana, Oregon, Vermont and Washington), Belgium and Columbia where euthanasia has been allowed in the recent period of time. The objective of this article is to look into the comparative position of US States (Montana, Oregon, Vermont and Washington) with the Indian position.
Key words: - Euthanasia, Killing, Legalizing, Law, sanctity

I. INTRODUCTION

Life is a gift even a painful one is a life at least. The general presumption is that every human being is desirous to live and enjoy the fruits of his life till he lives. However this presumption is not beyond debate. There are situations where human beings wish to end their lives by unnatural means. This happens mostly in the cases where one is suffering from painful, chronic and incurable disease. The intentional termination of patient's life in such a situation by an act or omission of medical care is called euthanasia or mercy killing.
The term Euthanasia originated from the Greek word eu, meaning "good" Thanatos meaning "death". It is defined as intentional killing by act or omission, of a dependent human being for his or her alleged benefits .It literally means mercy killing or putting a person to painless death especially in case of incurable suffering or when life becomes purposeless as result of mental or physical handicap.
Euthanasia can be classified into voluntary and involuntary euthanasia on the basis of consent of the person whose life is terminated. While voluntary euthanasia is prohibited in most of the jurisdictions, the involuntary euthanasia, though subject to controversy, is allowed in certain circumstances. Depending on the way in which life is terminated; euthanasia is classified into active and passive. Active euthanasia is highly complicated, as it involves the administration of poisonous substances to bring death. In other words, the dying person actually dies from something other than the disease. Passive euthanasia, on the other hand, is the death caused by the removal of life supporting systems or by the omission of medical care. It is refraining from action that would probably delay the death, and thereby allowing natural death to occur. It is not much complicated because the persons whose lives are terminated by this means are those who are not in a position to recover from their diseases and lead the normal life. Therefore the death in such cases is caused by the disease and not by the external factors.
As per medical terminology is concerned, Brain Death, Coma and vegetative State have specific meaning and significance. Even, there are certain social, religious and legal aspects also.

II. HISTORICAL BACKGROUND

In ancient Greece and Rome, euthanasia was a common practice with many preferring voluntary death over endless agony. This widespread practice was challenged by the minority of physicians who were part of the Hippocratic School and had pledged "never give a deadly drug to anybody if asked for, nor make a suggestion to this effect". The ascent of Christianity, with its view that man's life was a trust from God, reinforced the Hippocratic position on euthanasia and led to a culmination of consistent opposition to euthanasia among physicians.
Euthanasia-supporters gained advantage in the 19th century with the egress of the use of anesthesia. In 1870 came Samuel Williams' proposal to use anesthetics and morphine to

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intentionally put an end to a patient's life. Subsequently, in the 1890s, the euthanasia debate exploded to reach beyond the medical profession and to include lawyers and social scientists. The most notable event occurred in 1906 with the introduction of the Ohio Bill in the United States to legalize euthanasia, which was ultimately defeated. Two Parliamentary Bills were introduced in Britain in 1936 and subsequently for a second time in1969. Both the Bills did not find favour before the House of the Lords, finding extensive criticism for providing inadequate safeguards to the patients, and were ultimately defeated.

The euthanasia issue has since been a recurring decimal with periodic reappearances. With the increasing acceptance of patient autonomy, the euthanasia debate has once again become a matter of public concern. Sophisticated medical treatments which prolong life, while leaving a patient suffering without hope of recovery, too have forced reconsideration of the whole issue.

III. THE LEGAL STATUS OF EUTHANASIA IN INDIA-THE APEX COURT RESPONSE

In the case, P. Rathinam v. Union of India heard by a two-judge bench of the Supreme Court through Justice B.L. Hansaria , invalidated section 309 of the Penal Code, which made attempt to commit suicide an offence, on the ground that it 'violated the fundamental right to life'. However in the case Gian Kaur v. State of Punjab the five judges Constitution Bench of the Court overruled Rathinam and held that Article 21 only guarantees right to life and personal liberty and in no case can the right to die be included in it. In Naresh Marotrao Sakhre v. Union of India , Lodha J. observed that, Euthanasia and suicide are different. "Suicide by its very nature is an act of self-killing or self-destruction, an act of terminating one's own act and without the aid or assistance of any other human agency. Euthanasia or mercy killing on the other hand means and implies the intervention of other human agency to end the life. Mercy killing thus is not suicide and an attempt at mercy killing is not covered by the provisions of Section 309. The two concepts are both factually and legally distinct. Euthanasia or mercy killing is nothing but homicide whatever the circumstances in which it is affected."

In Suchita Srivastava v. Chandigarh Admn , the Supreme Court refused to terminate a fetus of a mentally retarded woman who was a victim of rape and who had been brought up in a State-run orphanage, when the latter applied for the Court's permission for abortion. It is most likely that the Supreme Court would have granted the woman permission to terminate the pregnancy as well, if the woman had wanted an abortion, having regard to the provisions of the Medical Termination of Pregnancy Act. In Aruna Shanbaug v. Union of India5, a request was made to the court to stop giving food and water to a rape victim; now 60-year-old coma patient, without relatives to care for her, in a permanent vegetative state for the past 37 years in the hospital. The attorney, Shekhar Nafde, explained that the request by her friend social activist Pinki Virani could not be construed as a plea for euthanasia. "Her life is worse than animal existence." keeping her alive by force feeding her violates her right to die with dignity. The Supreme Court rejected the plea. This case reopened the debate on legalization of euthanasia in India. It is now high time for India to have a clear law on euthanasia.

IV. THE LEGAL STATUS OF EUTHANASIA IN THE STATES OF THE US

In the US states, particularly Montana, Oregon, Vermont and Washington, physician assisted suicide is permissible. The Physician assisted suicide is legalised by legislation in the states of Oregon, Vermont and Washington, whereas it is legalised by the court in the state of Montana.

- In Montana, the physician assisted suicide was permitted by the Montana First Judicial District Court on December 5, 2008,in the case of Baxter vs Montana.
- In the process of making physician assisted suicide legalized by the legislation, two bills have been tabled in Feb 2011.The two bills would have required a doctor to diagnose a patient as being terminally ill and the patient to make voluntary oral and written requests for a lethal prescription of medication. The request would have had to be signed by two witnesses and the patient also would have had to get a second doctor's opinion.
- In Oregon, physician assisted suicide was legalised on November 8, 1994. The legislation allows terminally ill adults to obtain prescription for lethal drugs through Death with dignity act.
- In Vermont, the law legalising physician assisted suicide was passed recently on May 20, 2013. The legislation passed the Act No. 39- An Act Relating to Patient Choice and Control at End of Life.
- In Washington, the law makers' legalised physician assisted suicide on Nov 4, 2008. The act was incorporated through Death with dignity act.

V. THE RIGHT TO LIVE VS. THE RIGHT TO DIE

1) The article 21 of the Indian constitution protects the right of life and personal liberty of citizen not only from the executive action but also from the legislative action. It states that the right to live is not merely confine to physical existence but it includes within its ambit the right to live with human dignity. The right to live is not confined to the protection of any faculty or limb through which life is enjoyed or the soul communicates with the outside world but it also includes the right to live with

human dignity and all that goes along with it is the bare necessities of life such as adequate nutrition, clothing and shelter and facilities of reading writing and expressing ourselves in diverse forms, freely moving about and mixing and comingling with fellow human beings.

The right to life and liberty is given in the United States Declaration of Independence. The declaration stresses upon the "unalienable rights" which it says has been given to all human beings by their Creator, and for which governments are created to protect.

The United Nations also stresses upon the right to Life in its charter UDHR (1948).

2) The obvious question which would come up in the mind of any informed citizen-Like the right to life, does a person need the right to die with dignity also(Obviously in certain inevitable medical conditions). Many thinkers would agree that like the right to live, the right to die must also be given.

In short they may argue-When someone is suffering extreme pain from an injury or a terrible disease, do we deny them drugs to make them more comfortable of course not. Then there should be no reason to deny the same suffering and dying people the comfort of death.

VI. CONCLUSION

Legalizing euthanasia is a wide ranging topic. Several arguments can be put forward both in the favor as well as against it. In our view more holistic approach would be required to deal with the issue. Before reaching any concrete conclusion in terms of the law for euthanasia, a broader consensus would be required in our society.

Further, the topic touches the most reverent aspect-the life of an individual, In our view, it should not be just confined to the domain of law of the land. -

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HOW INCLUSIVE IS GREEN GROWTH: A STUDY OF INDIAN ECONOMY

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Abstract:
The concept of green growth and green policies are catching increasing attention. Reasons often quoted for green growth are efficiency gain, environmental sustainability and poverty eradication. The idea behind "go green" is to promote growth and development ensuring that natural assets continue to provide the resources and environmental services on which our well-being rely OECD (2011). Reference is also made in terms of unsustainable growth if the economic growth framework puts pressure on natural resources and compromises on the needs of future generations. The idea hence is to experience growth that is sustainable. Hence the concept of Green Growth comes into picture, as green growth leads to sustainable development. It implies breaking the link between economic growth and increased pressure on the environment, thus enabling economic growth to reduce poverty within the current generation while maintaining the carrying capacity of the earth for future generations.
In 1972 at the Stockholm Conference the then Prime Minister of India, Mrs. Indira Gandhi emphasized that 'poverty is worst polluter'. Almost similar understanding seems to have developed by the Environmental Kuznets Curve, which implies that initial rise in per capita income leads to environmental decay and eventually, with further rise in per capita income, environmental improvement takes place. However, one has to make use of this perspective with caution. If initial economic growth causes permanent environmental damage, then economic growth can not promote sustainable development. According to World Bank assessment, environmental degradation amounts to 5.7% of GDP in India. Presently, as it seems India faces a tradeoff between economic growth and environmental sustainability. What is more chaotic is the fact that significant poverty reduction has taken place owing to the accelerated growth that seems to have been realized at the cost of environmental sustainability. High value of ecological footprint of India also reflects the fact that growth is unsustainable in India. The present study aims to highlight inter-linkages between green growth and poverty eradication in Indian perspective. The paper also aims to bring into focus India's policy perspectives regarding sustainable development and to what extent the policy perspectives are been followed in India.
Keywords: Green Growth, Poverty eradication, Sustainable Development, Ecological Footprint

I. INTRODUCTION

The concept of poverty is multidimensional in nature and poverty eradication is deemed as ethically, economically, socially and politically appropriate measure taken up by an economy. The 1995 Social Summit views poverty in terms of deprivation, social exclusion and lack of participation in the economic activities (UN, 2009, iii).Poverty eradication has become the overarching objective of Millennium Development Goals, and yet high incidence of poverty remains a hard and naked reality of the African and Asiancountries, including India.
Economic growth is deemed as necessary, however, not the sufficient condition to remove poverty and experience just distribution of income and wealth. At the same time the conventional approach to economic growth comes under scanner in terms of experiencing sustainable development and inclusive growth. The conventional methods of rapid growth have been realized to be expensive in terms of environmental concerns; meanwhile majority of population has been left out from being benefitted.
Green growth as elaborated by OECD is 'a matter of both economic policy and sustainable development' (OECD, 2012, 5). The conventional approach to green growth takes into consideration the issues of economic stimulus packages to promote income generation and job creation. Secondly, it incorporates environmental sustainability issues. Thirdly and more recently, the concept of green growth incorporates issues of equity and inclusion that have more specifically been addressed by the developing nations.

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II. REVIEW OF LITERATURE

In order to attain sustainability, it is required to reintegrate economic, social and environmental implications. The greatest challenge of sustainable development is unusual consumption and production patterns of commodities. The proportion of people living less than $1.25 per day fell from 47% in 1990 to 22% in 2010, but the living condition of 700 million people is extremely deteriorated. It is all about the failure of Sustainable development models proposed (World Economic and Survey Report, 2013). In developing countries, poverty is the major issue of concern, and its eradication is indispensable requirement of sustainable development. Further this can be achieved by, improving access to sustainable livelihood, entrepreneurial opportunities, productive resources, access to basic social services and environmental sustainability (Johannesburg Plan 2002). The aspect of sustainability is concerned with three major pillars, economic sustainability, social sustainability and environmental sustainability. Economic sustainability means providing economic security by eradication of poverty from world. Social sustainability implies the growth should not hamper the social culture, prestige and heritage of the world as whole. Environmental sustainability can be achieved only if the current patterns of consumption and productions are not going to affect the natural integrity and environment (World Bank, 2012). To achieve sustainability green growth is the ultimate solution. Green cities leads to sustainability and poverty eradication. Many counties are planning to build green cities to sustain development and eradicate poverty (Beatley, 2012).

III GREEN MISSION IN INDIA

The National Mission for a Green India has been approved by the Prime Minister's Council on Climate Change. Mission to run through 2011-2022, and to be implemented in 12th and 13th five year plan. Green India Mission (GIM) has started with the objective to improve and increase India's ever diminishing forest cover and experience sustainable development. GIM scheme envisages a total cost of 46,000 crore rupees in the next ten years. The GIM is one of the eight missions of National Action Plan. The plan aims at doubling the afforestation efforts by 2020. Likewise, Ministry of Environment and Forest, Government of India has undertaken several other initiatives with the objective of conserving environment and biodiversity of the nation. Having stated that the government has continued its conventional growth trajectory, that impediments the initiatives of green growth. The subsequent section throws light on various projects of government in the name of rapid growth and industrialization of the nation that, in some way or the other have adversely impacted the environment or led rise in inequities and enhancement of poverty or both.

IV. CONVENTIONAL GROWTH TRAJECTORY IN INDIA

The conventional growth trajectory in India is benefitting a few and hence the disparities are on rise. Several projects undertaken by the government for accelerated economic growth were benefitting only to a particular section of society not to the poor people. Tihri Project, SardarSarovar Dam project on Narmada River, Tipaimukh dam etc were the examples of government approved projects to achieve the objective of fast paced growth and infrastructure development. Here are some projects highlighting the relationship between sustainable growth and poverty eradication and their impact on environmental sustainability.

Starting form "Chipko Movement"tnat began after intrusion of Chinese military in 1962, an extensive construction of road as a strategic project was initiated by the Government. Hereon, started the deterioration and never ending exploitation of natural resources of the region. The extent of damage was massive that led to deforestation and soil erosion leading to frequent draughts and floods. Meanwhile the local communities and villagers were accused of the deteriorating state of the environment as if the deterioration happened solely because of their existence. For blasting of mountainsides and felling of trees to make roadbeds, thousands of labourers were appointed in extracting the natural resources. This also led to cultural crisis for the local communities that were highly culturally sensitive. In order to protect their identity and to preserve and protect the environment, the local communities came forward together to protect trees from the axe of government.

Thus, the localities protected the very environments, who were deliberately accused of deteriorating the same.

Tihriproject that initiated in 1978 was another controversial and ambitious projectof Government of India that had severe environmental implications.The environmentalist and local people of Uttrakhand criticised the viability of the project in terms of environmental damage and social cost entailed. The environmental damage of the project has been highlighted ion terms of destruction of ecological system of Himalayan foothills. The social cost is represented in terms of submergence of a city of historical significance as Tihri, washing away of fertile land, and displacement of as many as 109 villages, which even now have not been compensated enough. And still the half hearted attempts for rehabilitation is in process after so many years (Karan 1994).

V. NARMADA RIVER DEVELOPMENT PROJECT

That was started in 1979 is one of the biggest projects ever of multipurpose gains. This project involves construction of thirty large dams and many small ones on river Narmada. This

is an overtly optimistic anticipation that the project will lead to change the lives of the local residents by increasing food production and hydro power generation in Gujarat, Madhya Pradesh and Maharashtra. However, as per the report of India Today 1992, this project will adversely affect the lives of one million people and will submerge 350000 hectares of forest land and 200000 hectares of agricultural land (as cited by P. Karan, page no.37-38). The local communities took the call to initiate 'Save Narmada Movement'which also incorporatednever ending and persistent struggle of resettlement and rehabilitation of people who were displaced by the construction of SardarSarovar Dam.This is sadly stated that compensation provided by the government to displaced people was not adequate enough. This leads to social as well and inequality injustice, leads to poverty in those areas.

Another case ofSilent Valley Project, Keralais worth mentioning in this context.The project initiated in 1973 with a false hope in the minds of local communities that building dam would benefit the poorest of all and would also enhance development of that particular region. However, the reality was far from encouraging. Villagers in Kerala noticed that entrance of new industries and cutting down of trees adversely affected the water flow and led to disruption of stream. This kind disruption affected the day to day life of the villagers and instead of reaping any benefits this led to incurring heavy environmental and social cost.In one of the most surprising and desirable developments the project was called off after years of struggle and protests by various (Swaminathan, 1979).

VI. FERTILE LAND PROTECTION MOVEMENT (FLPM)

In Manesar, has been one of the powerful movements against Government's conventional mode of rapid economic growth leading to fast paced industrialization of the region. Government of Haryana wants to acquire 1800 acres of land from seven villages. But villagers oppose this acquisition on the grounds of under pricing of agricultural land and against rapid industrialization of fertile land. A general fear arises that if government acquires more and more land, it may lead to the problem in the production of food grains, vegetables and fruits. Due to high industrialization, ground water resources are dipping down and farmers are facing the problem of limited water resources for irrigation. It may hamper the agricultural productivity which may lead to low production and low income. Despite continuous opposition of the villagers and local residents the acquisition continues.

Recently, Revised Regional Plan 2021, by NCRPB, Ministry of Urban Development, is under critical evaluation of environmentalists. The earlier provision of 0.5% construction on the Natural Conservation Zone has been completely done away with, which in effect meant only half an acre can be built in a 100 acre piece of land. In the approved draft plan there is no limit on construction in the Aravallis. The NCZ includes the Aravalli hills, major rivers, land around lakes, water bodies and sanctuaries. These eco-sensitive areas are critical in maintaining ground water recharge capacity, reducing air pollutants and for the long term regional environment security of the NCR that will eventually impact its carrying capacity (The Hindu, 2014).

Sikkim is recognised for its timely implementation of Green Mission. On the other hand, there are 29 big HEP projects tied with the TeestaRiver, these will generate nearly 41.5 % of total electricity of the nation. Impressive as it may sound, this doesn't come for free. There are technical and financial difficulties on the part of the government. Alongside there will be difficulties in terms of dealing with difficult terrains of Himalayas and issues related with resettlement of families affected by the project.

The social impact of hydroelectric power dam project at Teesta has been noticeably distressing. People have reported wide cracks in houses, drying up of small streams for daily water use, dislocation and change in livelihood and overall changes in lifestyles. At the same time land acquisition policies have led to never ending battle and tussle between local population and government stakeholders of the HEP projects,

VII. CONCLUSION

As indicated, major problems highlighted by the massive investment projects are displacement of people, livelihood of local people, environmental degradation (i.e. unsustainable development), settlement of migrant labor in the labor camps, disturbances among local villagers and tribal communities that are culturally sensitive, submergence of fertile land etc. Thus, on one hand the massive investment in the hydroelectric and other projects leads to rapid growth of the economy, on the other hand, the social cost of these projects is grossly underestimated or altogether disregarded. Thus, disregard to the above mentioned problems leads to a situation of unrest within that region. The outcome of these projects is growth at the cost of people and in no way this growth trajectory can be termed as inclusive. Another noteworthy aspect of growth trajectory in Indian economy is that growth is neither green nor inclusive.

The society has to choose from long term sustainability or short term economic growth. Otherwise the timesare not far when we as an economy will exhaust the carrying capacity of our system. The issues relating to environmental regulation and relating implementation gaps need to be dealt with carefully.

The high growth story of Indian Economy has accentuated more than ever the exploitation of natural resources at an unsustainable rate. The current growth trajectory has aggravated social divide and led to social exclusion. There is

also greater need for jobs and livelihood as people are displaced and removed from their natural habitat.

Achievement of the aforesaid will not be possible, until and unless government actively engages the local community into the growth process and utilizes the knowledge and velour of the local community. The government also needs to take into consideration the likely cost of growth trajectory on the village and local communities and take corrective measures regarding compensating the loser in the due course through some redistributive measures, while at the same time maintaining the carrying capacity of the system.

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ENFORCEMENT OF ENVIRONMENTAL IMPACT ASSESSMENT LAW (EIA): A CASE STUDY OF ACC CEMENT PLANT, BARMANA IN THE STATE OF HIMACHAL PRADESH

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Abstract :
The outline of the research paper is as follows. Environment Impact Assessment (EIA) has been introduced as a new tool in the field of environmental policy which covers almost all the environmental field. Environment Impact Assessment is an instrument whose basic object is to identify, predict, interpret and communicate the impact of legislative proposals, policies, programmes, projects and operational procedures on the natural environment and human health and well-being. EIA has been introduced with the intention to improve decision making so that environmentally and socially sustainable development can be ensured.
Keeping these objectives of EIA Laws in mind, the study is aimed at studying whether the ACC Cement Plant in the State of Himachal Pradesh has properly enforced, followed and implemented the Environment Impact Assessment Laws.
Key words: Environment, Assessment, Population, Authority, Sustainable Development

I. INTRODUCTION

Himachal Pradesh which used to be known as 'Apple bowl' is on the way of becoming 'Cement bowl'. Quite a number of cement plants are working in this dust free State. Has these cement plants really benefitted the State and its people? Or these plants have turned out to be just havoc in people's lives. Keeping these questions in mind the Researcher has conducted a survey of ACC cementplant, Barmana which is functioning in Bilaspur district.
The district Bilaspur falls in the Shivalik range. This district on the one hand is full of green vegetation and on the other is not untouched by the modern development. Bilaspur lies between 31012'30" and 31035'45" North latitude and 76023'45" and 76055'40" East longitude in the outer hills of Himalayas . It is bounded on the North by Mandi and Hamirpur districts, on the West by Hamirpur and Una districts, on its South lies Nalagarh area of Solan district. It is encircled on the East and North East by Solan and Mandi districts. It lies on both the banks of river Satluj which forms the boundary between Mandi and Bilaspur districts upto the centre of the Eastern boundary .
Originally, there were four villages in place of present day Barmana and these were: (i) Barmana, (ii) Bhatedh, (iii) Khatedh and (iv) Naalag. At the time of establishment of the Cement Plant, land of these four villages was acquired and these villages were merged to be known as present day Barmana. Associated Cement Company has established second most planned and advanced cement factory at Barmana in Bilaspur district of Himachal Pradesh, after the installation of first cement factory of Cement Corporation of India Ltd. at Paonta Sahib in Sirmour district. Both cement plants have been established after intensive investigation and exploration of the limestone, by Geological Wing of Industry Department of Himachal Pradesh in 1962. The first mining lease for limestone was granted to Cement Corporation of India Ltd. In 1964 at Paonta Sahib in Sirmour district having estimated reserves of 110 million tones. The second mining lease was granted to Associated Cement Company in 1971 at Barmana in Bilaspur district. It is estimated that this area has approximate 150 million tones of limestone deposits. This cement plant came into existence in 1980 with the productive capacity of 600 tones per day, capable to meet the annual cement demand of northern region of the country. Then this plant was expanded in 1993 and second unit, known as Gagal Cement Plant-II came into operation. From time to time objections has been raised on the functioning of the plant but it has tried to find solution to all the objections as this plant has converted to latest technology so that emission of dust can be brought to negligible. This is the first plant in Himachal Pradesh which has started using plastic waste as fuel and now collecting this waste upto Kullu district. Started:

- **Unit-I:** It started in 1984.
- **Unit-II:** It started in 1993.

Production Capacity: 4.6 MTPA

II. MATERIAL AND METHODS

The study was conducted in Bilaspur districts of Himachal Pradesh where ACC cement plant is functioning at present. Primary data was obtained for the study through the structured

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questionnaire as well

Sr. No.	Gender	Population	Percentage
1	Male	248	58%
2	Female	176	42%

as personal interview with the people residing around these cements plants.

III. RESULT AND DISCUSSION

The majority of the Respondents felt their Environmental Impact Assessment Notification has not been followed properly by the Cement Plant Authorities and they are facing problems in one way or another.

The Researcher chose a 10% of random sample of the population for "Questionnaire Schedule for Local Residents" by using Simple Random Sampling Method. The nature of study is exploratory, aiming to explore relationship between industrial development and environmental conditions of the area at micro level. Interview schedule contained both type of close and open-ended questions including the variables such as gender, age, educational qualification and year of establishment of the plants.

The variables chosen by the Researcher for the purpose of Data Analysis are:

- Gender;
- Educational Qualification; and
- Age.

Table 1: Population on the basis of Gender

After analyzing the sample chosen, i.e. 10% of the population, the Researcher found that the total number of population selected is 424, out of which 248, i.e. 58% of the total sample selected is male and 176, and i.e. 42% of the total sample selected is female which is shown in Table number 1.

Table 2: Population on the basis of Education Qualification

Sr. No.	Educational Qualification	Population	Percentage
1.	Illiterate	04	1%
2.	Primary	09	2%
3.	Middle	25	6%
4.	Metric	72	17%
5.	Plus Two	119	28%
6.	Graduate	136	32%
7.	Post-Graduate	27	6%
8.	Professional Diploma	32	8%

Table 2 shows that out of the total sample chosen, 4, i.e. 1% of the sample chosen, are illiterate, only 9, i.e. 2% of the sample chosen, are primary educated, 25, i.e. 6% of the sample chosen, received education till middle standard, 72, i.e. 17% of the sample chosen, are metric qualified, 119, i.e. 28% of the sample chosen, are +2 educated, 136 i.e. 32% of the sample chosen, are graduates, 27, i.e. 6% of the sample chosen, are post-graduate and only 32, i.e. 8% of the sample chosen, hold professional and technical diploma

Table 3: Population on the basis of Age Group

Sr. No.	Age Group	Population	Percentage
1.	18-25	34	8%
2.	25-32	52	12%
3.	32-39	90	21%
4.	39-46	73	17%
5.	46-53	55	13%
6.	53-60	77	18%
7.	60-67	37	9%
8.	67-74	04	0.95%
9.	74-81	02	0.05%

The third variable chosen by the Researcher is age. And Table 3 shows that 34, i.e. 8% of the sample chosen, people fall in age-group of 18-25 years, 52, i.e. 12% of the sample chosen, in the age-group of 25-32, 90, i.e.21% of the sample chosen, in 32-39, 73, i.e. 17% of the sample chosen, in 39-46, 55, i.e. 13% of the sample chosen, in 46-53, 77, i.e. 18% of the sample chosen, in 53-60, 37, i.e. 9% of the sample chosen, in 60-67, 4, i.e. 0.95% of the sample chosen, in 67-74 and 2, i.e. 0.05% of the sample chosen, people fall in the age-group of 74-81.

III (A) Analysis of the Sampling

The response of the Respondents to whether the Cement Plant Authorities has properly followed the procedure involved in enforcement of EIA is as:

Table 4: Public hearing for Environment Impact Assessment

Public Hearing		
Yes	No	Don't Know
No	Yes	69

Table 4 shows the distribution of answers to the Question in the questionnaire that whether the authorities held the Public Hearing for Environment Impact Assessment, 424 of the

sample chosen, 15 respondents said yes to it while 340 of the sample chosen no and 69 of the sample chosen, said that they don't know anything about it.

Table 5: Notice for Public Hearing

Notice for Public Hearing		
Yes	No	Don't Know
0	360	60

Table 5 shows the distribution of answers to the Question whether the authorities gave Notice of Public Hearing in advance (by 30 days), none of the sample chosen, said yes to it while 364 of the sample chosen, no and 60 of the sample chosen, said that they don't know anything about it.

Table 6: Place for Public Hearing

Sr. No.	Place	Held at	Percentage
1.	At site	0	0%
2.	In Site Close Proximity	0	0%
3.	At any other place	14	14%

Table 6 shows the distribution of answers to the Question in the questionnaire, asking the place at which Public Hearing was held for Environment Impact Assessment, only 14 of the sample chosen, says that it was held at any other place.

Table 7: Mode of Conduct for Public Hearing

Sr. No.	Mode of Conduct	Numbers	Percentage
1.	Direct	0	0%
2.	Indirect	15	15%
3.	Don't Know	0	0%

Table 7 shows the distribution of answers to the Question in the questionnaire, asking what was the mode of conduct for the Public Hearing for Environment Impact Assessment, none of the Respondents said that mode of conduct for Public Hearing was direct, 15 of the sample chosen, said that it was indirect.

IV. CONCLUSION

The survey of this study has led to a number of conclusions about the functions and consequences of this concept of Enforcement of Environment Impact Assessment (EIA) Law. As per the authorities of the cement plants the EIA Notification has been properly followed while the local residents has different tale to tell.

The Researcher has taken down the views of both the Authorities of the Cement Plant and local residents regarding the implementation of Environmental Impact Assessment Notification. The outcomes of data collection and observation by researcher are as:

IV (A) Work done as per the Authorities of the Cement Plant

1. ACC Barmana started production under first unit in April, 1984 and under second unit in 1993. EIA Notification was implemented after 2000 and for this Public Hearing was held. For Public Hearing Notice was given in newspaper and got Environmental Clearance. Executive Summary of the Plant establishment was given to the Panchayat. No objections were raised on the functioning of the Plant; however, H.P. Pollution Control Board (HPPCB) gave oral warnings only to control the pollution. The plant met the local demands and controlled the emissions which caused the pollution over the period of time as per the guidelines of HPPCB.
2. Major characterstic of Environmental Management Plan (EMP) was that the old technology was replaced with new which causes almost no pollution, e.g. ESP converted to Bag Houses. And this EMP was communicated to locals and followed properly.
3. The Cement Plant has started afforestation since 1984 and more than million trees have been planted and 70-80% of them are living.
4. The local residents do not complained of any health problem at any time of the functioning of the plant.

IV (B) Work done as per the Local Residents

1. The Plant has established DAV School which is running since last almost 25 years.
2. ACC has planted trees on roadside from Ghaghas to Slapper and on the hills. And 70-80% of these trees are living.
3. A hospital is being run by the Plant which provides the facility of free first aid to locals. And in case of serious problems refer the cases to other hospitals.
4. The Plant is doing the work of free fencing for animals in the whole village.
5. Since last few months the Plant has started collecting waste from the village in every 15 days.
6. The Plant has also controlled dust generated from it to a large extent by replacing new technology to the old one.
7. The plant constructed the building of the local government school.

IV(C) Issues raised by the Local Residents

1. As per the local villagers, the Cement Plant does not conduct any Public Hearing during the expansion of the second unit. The plant Authorities fooled people by

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organizing a "Dhaam" in local Guga Temple. But later on people came to know that this gathering for religious purpose has been shown as Public Hearing. The more shocking is that only those local residents who are actively associated with a local organisation working against the Cement Plant's bad effects on locals and surrounding environment were aware of this Public Hearing, other local residents does not know anything about this Public Hearing.

2. Another complaint of the local residents is that no doubt the plant authorities organizes Health Camps but it is only for women's and children's health check-ups and not for the health problems related to the functioning of the Cement Plant.
3. Another complaint of the local residents is that 781 families lost land for the establishment of the plant but only 200 persons were employed by the plant.
4. The plant does not give employment opportunities to locals and only 18-19 local people are employed by the plant. Father-son scheme initially started by the plant has now been closed.
5. The plant is also affecting health not only of humans but also of animals and vegetation. There are 10-12 cases of cancer-deaths, problems of stones in kidneys due to sewerage treated water, 600-800 people are suffering from stones in different parts of body, 70% people suffering from breathing problems, skin allergies due to dust from the plant.
6. The locals can cut their crops and fodder only after wearing masks because of the dust from the Cement Plants. As the fodder is covered with dust from plant which can not be removed even after washing, so there is less production of milk in animals, effect on their growth and aphoria/infertility in animals. Their skin also turned out to be very rough because of dust.
7. On the complaints of local residents, the HPPCB came to monitor pollution level, but on that day there was less production in the plant as compared to other days. As there used to be 300-400 trucks and crushers daily but on that day there were only 10-15.
8. No doubt, the plant has opened a D.A.V. School but its fee to locals is double than their employees.
9. The condition of roads is very bad. They are damaged, full of pits and not metalled for many and many months. Picture 7.7 clearly shows the comdition of roads.
10. As the ACC Cement Plant, Barmana is in the middle of bazaar, so there is of Traffic Jams for hours because of the trucks employed by the Plant and bad roads.
11. There was a Hunger Strike against the Cement Plant in which the whole village participated. The local residents raised the issue that "Health Cards" should be issued to the locals.
12. The Plant is providing drinking water by lifting from Satluj to the villagers. As per the plant authorities the water is supplied after cleaning in the treatment plant. But as per the villagers, the water is not cleaned in the treatment plant. It is directly supplied to the Respondents as the water is polluted and full of dirt and silt.

One thing is clear from the above discussion that the respondents are mostly suffrers in this whole scenario, less has been done for them and the plants are exploiting not only nature but respondents also as no EIA Notification has been properly implemented.

On the basis of the historical, analytical, comparative and empirical study made in this thesis, the following suggestions are made for so that EIA Laws can fulfill the purpose of their inception, i.e. they can truly be proved to be the instrument of sustainable development.

1. The process of EIA study should be made simpler and easy so that the local communities of the area where the project is proposed to be implemented could understand it and the efforts should be made for direct involvement of local communities and if they have any objections then it should be solved properly and seriously.
2. Presently, the Public Hearing which is an important tool in the hands of local communities should be properly publicized and the local communities should be made aware of this. As in most of the cases, the Panchayat Pradhans are the employees of the cement plants, in such cases the villagers should be allowed to choose another representative of them in matters relating to cement plants. The required consent of Pradhans and their signature should not be considered valid in matters of cement plants if they are employees of them.
3. The old machinery should be replaced with the newer one so that level of pollution could be reduced.
4. Proper health facilities should be provided to the locals. For this purpose, "Health Cards" should be issued to the local communities.
5. Health camps for animals should also be organized because they are major sufferers because of the damaged fodder.
6. The plants should also conduct research in the field of crops and vegetation so that they can be saved from the ill-effects of cement plants.
7. The local communities, who lost their land to plant, should be employed by the plant not for one generation only but "Father-Son" scheme should be adopted by the cement plants. Because the land if had not been encroached by the cement plant would have look after the family for generations to come.
8. More employment should be given to the local residents after all they are the one who suffered most.
9. At the time of establishments, these cements plants had cut thousands and thousands of trees, so they should implant more trees for this purpose they could adopt the

areas on yearly basis and survival of trees should also be made their responsibility.

10. The most of the plants has built government schools structure for the sake that they are spending on education as the State government s are already providing enough funds for this purpose. Rather than this the cement plants should open IT parks for the local children where they could get free education or the cement plants should provide education to local children in the schools run by them for their employee's children free of cost, or they could have taken the responsibility of higher education of children of affected communities, or they could have opened "Technical Training Institutes" to train the local children and then could have employed them.

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FORENSIC COMPUTING: AN COMPARATIVE ANALYSIS OF OTHER COUNTRIES UNDER ITS VARIOUS LEGAL OBLIGATION

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Abstract:
Digital information or data i.e. zero and ones, is the form in which our integration 'Information Society' carriers out its activities, whether through software applications, emails, data feeds or web. The global economy has become progressively more dependent on the dealing out and transmission of such data across networks to support us infrastructure and accomplish many of its functions. Even a police officer or investigating officer who is not involved in cyber crimes need to know a computer and discovered in an appropriate manner at arrest scene. When cyber crimes are conceded out, the ability of Law Enforcement Agency (LEA) to scrutinize and prosecute the perpetrators will be focused by the availability and accessibility of such data or information to the investigator of digital evidence, whether the investigator collect evidences, retrieval of evidence or consequent analysis and presentation in court of law. The realistic discipline of Forensic Computing has evolved over recent years to comprise pro-active participation in the collection of intelligence relating to criminal, illegal and inappropriate computer behavior, particularly in relation to terrorist activities, organized crime syndicates and recidivist behavior.
Keywords:- Cyber Crime, Forensic Computing, Digital Evidences, Enforcement, Pornography

I. INTRODUCTION

In India, in the year May of 2000, the government passed the Information Technology Act, 2000(herein mentioned as IT) a set of laws projected to provide a comprehensive regulatory environment for electronic commerce. The Act also addresses computer crime, hacking, damage to computer source code, breach of confidentiality and viewing of pornography. A variety of tools are provided to authorities to investigate cyber-crime. Section 44 imposes stiff penalties on anyone who fails to provide requested information to authorities. Section 80 allows deputy superintendents of police to conduct searches and seize suspects in public spaces without a warrant. In October 2006, the Indian government approved draft amendments to the IT Act. The extensive recommendations suggest allowing public-private partnerships in e-governance delivery of services as well as allowing relationships between Controller of Certifying Authorities, Certifying Authorities and Subscribers, Data Protection and Privacy. In March 2000, the Central Bureau of Investigation set up the Cyber Crime Investigation Cell (CCIC) to investigate offences under the IT Act and other high-tech crimes. The CCIC has jurisdiction over all of India and is a member of the Interpol Working Party on Information Technology Crime for South East Asia and Australia. Similar cells have been set up at the state and city level, for example in the state of Karnataka and the city of Mumbai. The government is also allowing for establishing an Electronic Research and Development Centre of India to develop new cyber-forensic tools. India's Intelligence Bureau is reported to have developed an e-mail interception tool similar to the Federal Bureau of Investigation's Carnivore system, which it claims to use in anti-terrorist investigations.

II. LEGAL CONSIDERATIONS IN FORENSIC COMPUTING

For the Computer evidence to be legally recognized it needs to be:

II (A) Admissible
It must obey the rules to certain legal rules before it can be put before a court.

II (B) Authentic
It must be possible to completely tie evidentiary material to the incident.

II (C) Complete
It must tell the whole story and not just a particular perspective.

II (D) Reliable
There must be nothing about how the evidence was collected and subsequently handled that casts doubt about its legitimacy

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and veracity.

II (E) Believable

It must be readily believable and understandable by a court.

United Kingdom

In UK, basically there are three major reasons why a record produced by a computer might be inadmissible as evidence:

- Firstly, because it is not an original as well as this does not become visible to present any real predicament in relation to computer records.
- Secondly, it is hearsay and the reason for the hearsay rule is that the primary source of evidence in English law is oral evidence, given by a witness, of facts observed by that witness.
- Thirdly, because some rule of law prevents the evidence from being adduced. Some eminent jurist have argued that all computer records fall within the definition of a statement in S. 10(1) of Civil Evidence Act 1968 (CEA) and S.72 (l) Police and Criminal Evidence Act 1984 (PACE).

It is illustrate that the courts have held that direct evidence produced by a computer is not subject to the hearsay rule and the Divisional Court has held in Sophocleous v Ringer that S.69 PACE does not apply where the computer has been used to calculate results, and thus produced direct evidence.

III. CRIMINAL PROCEEDING

The criminal proceedings as defined in S.24 Criminal Justice Act 1988, now replacing S.68 PACE, provides that documents arising from trade, business, professional, occupational or official activities and which record information supplied by a person who has personal knowledge of the matters recorded are admissible in criminal proceedings provided the necessities of S.23(2) or S.24(4)(iii) are contented. As per S.23(2), the document is admissible if the person who would otherwise give oral evidence is dead or unfit to give evidence, if he is abroad and it is not practicable for him to testify, or if he cannot be found although reasonable steps have been taken to find him. Perhaps more importantly, S.24 (4) (iii) permits the document to be given in evidence if the maker of the statement cannot reasonably be expected to memorize the matters contained in the record. This section deals with the hearsay problem. It is imperative that, where a document is required to be admitted under S.24, oral evidence must be recognized that the necessities of the section have been complied. This is in discrepancy to the accuracy requirements of S.69 PACE, which can be proved by certificate.

IV. AUTHENTICATION

In UK 'Authentication' means gratifying the court on the point of admissibility of forensic approach evidence on certain points are:

- the contents of the record remained unaltered;
- the information in the record does in fact originate from its professed source, whether human or machine;

"In an ideal world, the attorney would recommend that the client obtain and record countless bits of evidence for each message so that it could later be authenticated in court autographs, fingerprints, photographic identification cards, attestations from witness."

V. KEY REQUIREMENTS FOR FORENSIC SCIENCE PROVIDERS IN UK

There are five Key requirements for forensic science providers arising from the above Core Foundation Principles:

1. To abide by with the Codes of Conduct and Practice set down by the independent Forensic Science Regulator.
2. To make certain Quality Standards and Assurance processes are applied which are nationally consistent and compliant with appropriate ISO standards, United Kingdom Accreditation Service (UKAS) accreditation, EU directives and clear development and validation processes.
3. To provide clear communication and analysis of scientific processes, procedures, strengths, weaknesses and its meaning. Not all Crown Prosecutors will essentially have a detailed knowledge of forensic science.
4. To keep with Streamlined Forensic Reporting (SFR) process allied with in proportion prosecution requirements.
5. Following appropriate full disclosure of this information to the police and prosecution, the Court process allows for applications to be made to treat certain commercial information as 'sensitive' and cannot to be used for any purpose other than those particular proceeding.

UNITED STATES

In US, Federal courts contained that all computer records contain hearsay. The different eminent view suggests that in fact only a segment of computer records include hearsay. When a computer record contains the assertions of a person, whether or not processed by a computer, the testimony can contain hearsay. In certain cases, the government must fit the record within hearsay exclusion such as the business records exception. In such cases, the government must establish the legitimacy as well as the authenticity of the record, but need not to establish that hearsay exclusion applies for the records to be admissible.

VI. CHALLENGES TO ADMISSIBILITY OF COMPUTER RECORDS

In USA before a party may move for access of a computer record or any other evidence, the promoter must show that it is authentic. That is, the government must offer evidence "sufficient to support a finding that in question is what its proponent claims." The degree of authentication does not fluctuate simply because a record happens to be in electronic form. For example, witnesses who testify to the authenticity of computer records need not have special qualifications. The witness does not need to have programmed the computer himself, or even need to understand the maintenance and technical operation of the computer.

VII. CHALLENGES TO AUTHENTICITY OF COMPUTER RECORDS

Challenges to the legitimacy of computer records often take one of three forms. First, parties may challenge the authenticity of both computer-generated and computer-stored records by inquiring whether the records were altered, manipulated, or damaged after they were produced. Second, parties may question the validity of computer-generated records by challenging the consistency of the computer program that generated the records. Third, parties may challenge the authenticity of computer-stored records by questioning the distinctiveness of their author. When the computer program is not used on a regular basis and the government cannot create consistency based on confidence in the normal course of business, the government may need to reveal "what operations the computer had been instructed to perform as well as the precise instructi on that had been given" if the conflicting party requests.

VIII. PROCESS OF ADMISSIBILITY OF COLLECTION OF DIGITAL EVIDENCE

Reliable and Believable, the forensic specialists should confirm e-record and elucidate the process concerned in the collection of digital evidence at the instance of court trial. In this perception, the chaining technique adopted by an investigating officer would be of immense value. It is vital that the investigators must select for the forensic specialists possessing incomparable ability and skills to endure the examination by the court. The system administrator can determine patterns of network misuse through rapid speech analysis. Forensics analysis, being the technique adopted in the re-construction of crime and to depiction the digital or electronic traces, which might take account of the revival of deleted data, files slack, unallocated space, swap files and passwords. Forensics analysis is a relevance of a scientific regulation to investigation, especially search and seizure. The forensics analysis discipline applies to detection, collection, analysis and preservation of digital evidence while ensuring admissibility in the legal proceedings. The forensics analysis would be essential since the data is stored and transmitted in binary form. In short, the digital examiners conducts autopsy on a machine to recover evidence of crime.

Eventually, the forensic evaluation of digital evidence assumes incredible consequence in the task of search and seizure of cyber crimes investigation in the virtual situation, the digital evidence so collected must be ecstatic safely to the forensic laboratory for analysis and processing. The investigators must be able to demonstrate that no information is subsequently added or altered other than the consistent evidence collected. In the collection of digital evidence, the legal requirements that are applicable to a country must be complied with, as it is relevant to the admissibility of digital evidence.

Prior to 2006, there were surprisingly few decisions dealing directly with the admissibility of electronic evidence. Since then, however, the number of decisions regarding admissibility of electronic evidence has greatly increased, and indeed, there is now much published case law to help practitioners deal with admitting (or objecting to) electronic evidence.

IX. ADMISSIBILITY OF WEBSITES

The admissibility of information found on websites will depend upon who is the author of the site, and the purposes for which the evidence is offered But it the website evidence is being obtainable to show that the owner of the website made the statements at issue, and it is clear that the website operates as a bulletin board, such that any user may be able to post messages or content, the court may require heightened evidence of authenticity before allowing admission of the website postings.

India

The Act which specifically deals with the question of 'evidence' in India is Indian Evidence Act, 1872. This Act earlier had enacted keeping in view only the physical World, but later it was suitably amended to include the concept of electronic evidence. The Information Technology Act, 2000 provides for amendment in the Indian Evidence Act, 1872 these amendments contained in the Schedule II of the Act. The amendments made are:

In Section 3(a) in the definition of "Evidence", for the words "all documents produced for the inspection of the Court", the words "all documents including electronic records produced for the inspection of the Court" have been substituted;

(b) after the definition of "India", the following have been inserted, namely: 'the expressions "Certifying Authority", "digital signature", "Digital Signature Certificate", "electronic form", "electronic records", "information", "secure electronic record", "secure digital signature" and "subscriber" with the

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meanings respectively assigned to them in the Information Technology Act, 2000. In Section 17, for the terms "oral or documentary," the words "oral or documentary or contained in electronic form" have been substituted. After Section 22, section 22A has been inserted which says that "Oral admissions as to the contents of electronic records are not relevant, unless the genuineness of the electronic record produced is in question." In Section 34, for the words "Entries in the books of account", the words "Entries in the books of account, including those maintained in an electronic form" have been substituted. In Section 35, for the word "record", in both the places where it occurs, the words "record or an electronic record" have been substituted. For Section 39, the subsequent section has been substituted, namely: "What evidence to be given when statement forms part of a conversation, document, electronic record, book or series of letters or papers". When any statement of which evidence is given forms part of a longer statement, or of a conversation or disparage of an inaccessible document, or is contained in a document which forms part of a book, considers essential in that particular case to the full indulgent of the nature and effect of the statement, and of the circumstances under which it was made."

The High Court of Delhi in the case of Societe des Products Nestle S.A. v Essar Industries has rightly observed that: "Rapid rise in the field of information and technology in the last decade of 20th Century and the increasing reliance placed upon electronic record by the world at large necessitated the laying down of a law relating to admissibility and proof of electronic record. The legislature responded to the crying need of the day by inserting into the Evidence Act Sections 65A and 65B, relating to admissibility of computer generated evidence in the only practical way it could so as to eliminate the challenge to electronic evidence".

The digital evidence must be collected against the cyber executor instead of resorting to self-incrimination, It is all the more essential for the investigators to follow the thumb rule 'from cyber crime to the cyber perpetrator' while conducting investigation of cyber crimes. It signifies that the investigators should essentially exhibit their professional skills in the collection of digital evidence than adopting short cut methods. Any confessional statement of a cyber perpetrator regarding his involvement in the cyber offence would be of no avail, except where the material fact is exposed at the occurrence of the cyber perpetrator within the scope of Section 27 of the Indian Evidence Act, 1872. The investigators derive powers under Section 91 of the Code to require a person to cause production of a document while investigating crimes in the physical environment. A perpetrator cannot be compelled to surrender any incriminating material content, as held in B.G.K v. Nambiar. The same analogy is also applicable to the cyber crime scenario as far as the seizure is concerned. However, there is need for imposing mandatory duty on the holder of data to surrender, testify and deliver specific data necessary for the purpose of investigation of cyber crimes.

In Indian Legal System Section 69 of the I.T Act 2000 prescribes penalty for failure to assist the law enforcement agency. Also the different specialized investigating agencies such as CBI and CID, are now investigating cyber crimes, there are cyber crime cells recognized in different parts of the country to facilitate the investigation of cyber crime. The Information Technology Department, Ministry of Information and Technology, New Delhi has recently created a post of Deputy Controller (Investigation) under the superintendence of the Controller within the scope of Section 17 of the IT Act 2000 for the purposes of investigating cyber crimes as Section 28 empowers the Controller or any officer authorized by him to investigate the contraventions under the Act.

IX (A) Type of Evidence

Evidence can be classified under various categories, such as oral and documentary, direct and indirect, primary and secondary, hearsay and circumstantial, scientific and expert, paper-based and digital. Any form of evidence may be sufficient to have a fact proved before the court, depending upon the facts and circumstances of the case. Oral evidence means and includes all statements which the court permits or requires to be made before it by witnesses in relation to matters of fact under inquiry. A new s 22Ainserted into the Evidence Act deals with the relevancy of oral evidence as to the contents of electronic records. It provides that oral admissions as to the contents of electronic records are not relevant, unless the genuineness of the electronic records produced is in question. Section 59 of the Evidence Act provides that all facts accept the contents of documents or electronic record may be proved by oral evidence. Documentary evidence, on the other hand, is evidence produced in the form of documents.

IX (B) Admissibility

As per section 136 of the Evidence Act empowers "judge to decide as to the admissibility of evidence", and s 3 of the Evidence Act deals with 'admissibility of evidence'. The judge must then decide its admissibility. It is the duty of the judge to see that evidence brought on the record is relevant. In a suit or proceeding, evidence can be given only of those facts which are either facts in issue or are relevant, and of no others. In the case of State of Bihar v. Sri Radha Krishna Supreme Court of India observed that admissibility of a document is one thing and its probative value quite another these two aspects cannot be combined. A document may be admissible and yet may not carry any conviction and the weight of its probative value may be.

IX(C) Admissibility of Hard Disk

Admissibility of hard disk arise before the apex court that whether a hard disk of a computer can be considered as documentary evidence, the High Court of Delhi in Dharambir

v. Central Bureau of Investigation has observed that:
"While there can be no doubt that a hard disc is an electronic device used for storing information, once a blank hard disc is written upon it is subject to a change and to that extent it becomes an electronic record."

IX (D) Call Records

In the case of Rakesh Kumar and Ors. v State, the High Court of Delhi, while appreciating the reliance placed by the prosecution upon the call records, observed that 'computer generated electronic records is evidence, admissible at a trial if proved in the manner specified by Section 65B of the Evidence Act and Sub-section (1) of Section 65B makes admissible as a document, paper print-out of electronic records stored in optical or magnetic media produced by a computer, subject to the fulfillment of the conditions specified in sub-section (2) of Section 65B.

X. VIDEO CONFERENCE

The question as to whether oral evidence of the witness is admissible where the examination in conducted through vide conference, the answer has been given in affirmative by Supreme Court of India in the case of State of Maharashtra v. Praful B. Desai, it has been held by the court that:Section 273 CrPC provides for dispensation from personal attendance. In such cases evidence can be recorded in the presence of the pleader. The presence of the pleader is thus deemed to be presence of the Accused. A plain reading of Section 273 does not support the restrictive meaning sought to be placed by the Respondent on the word 'presence'. One must also take note of the definition of the term "Evidence" as defined in the Indian Evidence Act. Thus evidence can be both oral and documentary and electronic records can be produced as evidence."

In the recent case of Amitabh Bagchi v. Ena Bagchi same conclusion has been reached, that there is no bar to the examination of witnesses by way of video conferencing. The safety of victims and witnesses through the use of information technology was recognized by the Supreme Court of India in the case of Sakshi v Union of India while observing that:
"Section 273 Cr.P.C. merely requires the evidence to be taken in the presence of the accused. Thus, in Holding trial of child sex abuse or rape, a screen or some arrangements may be made where the victim or witness (who may be equally vulnerable like the victim) do not see the body or face of the accused. Recording of evidence by way of video conferencing vis-à-vis Section 273 Cr.P.C is permissible."

XI. BEST EVIDENCE RULE IN INDIA

When a party seeks to put the content of a document into evidence, the best evidence rule requires the original must be produced It is a cardinal rule in the law of evidence that the best available evidence should be brought before the court. The best evidence or original evidence means the primary evidence. The best evidence rule excludes secondary evidence. Section 62 provides that primary documentary evidence is the evidence of the original documents. Section 91 of the Evidence Act mainly forbids proving the contents of a writing otherwise than by the writing itself and lays down the best evidence rule. It, however, does not prohibit the parties from adducing evidence in a case where the document is capable of being construed differently to show how the parties understood the document In Bai Hira Devi v. Official Assignee, Bombay the Supreme Court of India observed that: "The Indian Evidence Act prescribes clear legal rules that are expected to guide the judge objectively to decide the relevancy and admissibility of evidence and rule out any unpredictability associated with subjective assessment."

The Best Evidence rule means that the best evidence, of which the case in its nature is susceptible, must always be produced. It is one of the cardinal rules of the law of evidence that the best evidence in possession of the party must be given. In other words, if a fact is to be proved by oral evidence, the evidence must be that of a person who had directly perceived the fact to which he testifies. In Omychund v. Barker, Lord Harwicke stated that no evidence was admissible unless it was "the best that the nature of the case will allow". The general rule is that secondary evidence, such as a copy or facsimile, will be not admissible if an original document is available.

The best evidence rule was predicated on the assumption that, if the original was not produced, there was a significant chance of error or fraud in relying on such a copy. In the age of digital facsimiles, etc. the rule is more difficult to justify. The likelihood of actual error (as opposed to mere illegibility) through copying is slight.

Insufficiency of existing law

The criminal procedure changes considerably when we switch from traditional investigations, involving eyewitness testimony and physical evidence, to investigations requiring the collection of digital evidence. There are three basic mechanisms of digital evidence collection the collection of stored evidence from third parties, the collection of stored evidence from the target, and the collection of evidence in transit. Applying existing doctrines to these three mechanisms one finds several difficulties. In many circumstances, the traditional rules fail to provide any real limit on law enforcement practices. In other circumstances, they allow ghost privacy threats to block necessary investigative steps.

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XII. SEARCH AND SEIZURE

The final stage of computer crime investigations exposes particularly deep problems of fit between traditional rules and the new facts. At this stage, the police seize and then analyze the suspect's personal computer. A warrant is plainly required; both to enter the home and to seize the suspect's property, but how much does the warrant actually limit what the police can do? In traditional cases, the rules governing the warrant process ensure that the search and seizure remain relatively narrow. The warrant must name both the specific place to be searched and the specific evidence to be seized.

XIII. FORENSICS PROCESS

The computer forensics process also needs a regime of rules tailored to the privacy threats and needs raised by modem uses of computers. On the one hand, the law should respect technological limitations of existing search methods and techniques. On the other hand, the rules should look beyond the traditional dynamic of regulating searches and seizure to counterbalance the burden that such technical limitations may impose. The rules might provide an explicit mechanism allowing suspects to stipulate that a mirror image of their computers is accurate and then enjoy a right to have their computer returned within a specific period of time. The rules might also require that investigators erase any copies of seized files when a criminal case has been closed, or at the very least bar investigators from opening or reviewing seized computer files after that point absent special court authorization. A number of judges have concluded that computer searches are "special" "unique" and "different" and are looking for new rules of criminal procedure that restore the function of the old rules given the new facts. Taken as a whole, such changes would attempt to balance law enforcement needs and individual rights in property and privacy in light of existing technological realities.

XIV. CONCLUSION

In nutshell, the legal consideration is vital element of admissibility of forensic computing to present the digital evidence and proof the admissibility in the court of law. The jurisdiction is one of the major problem come across during the course of trial in court and the validity of tools used during the part of the collection of evidence till examination of evidence. The role of technique changes in a vibrant form so it is impossible for law to meet the speed of technology of changing of tools to investigate the process of cyber crime but the suggestion to hire the investigator who are expertise in their core field as per law and prevent the crime related to cyber or virtual world under the parameter of legal enforcement.

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CHALLENGES AND DRIVERS FOR INVESTMENTS IN INDIAN RENEWABLE SECTOR

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Abstract :
Over the years, renewable energy sector in India has emerged as a significant player in the grid connected power generation capacity. It has been recognized that renewable energy has to play a much bigger role in achieving energy security in the years ahead and be an integral part of the energy planning process. Renewable Energy sector has moved ahead from the steady growth patterns of the last two decades and is now poised for a quantum jump. Recognizing these facts, India has reset its Renewable Energy capacity addition targets to 175 GW by 2022 in view of the significant Renewable Energy potential in the country and commitment made by the investors and stakeholders. Achieving this scale of target In monetary terms, creating the targeted RE capacity, means an additional capital requirement of about Rs 6.05 lakh crore, during the period (2012-22), calculated at the prevailing market costs. The estimated requirement of funds over the period of next 8-10 years will thus be about Rs 50,000 to 60,000 crore per year which certainly cannot be funded through government sources and requires active involvement of private sector. However, the renewable energy projects are considered to be quite expensive and complex, that is why; many investors do not want to put in money into the projects. As the cost of the project rises, the risks in that projects increase. There is no doubt that; in order to persuade the investors, risks pre and post completions of the projects have to be determined, allocated and additionally mitigated. This paper highlights the kind of risks involved in renewable energy projects, general factors making India as unfavorable destination for investment in India and also the kind of reform required in general and in financial markets in particular to attract investment both from the domestic and foreign investors in renewable energy sector.
Keywords : Investment, Renewable, Energy, consumption.

I. INTRODUCTION

India's renewable energy (RE) potential is estimated to be more than 3,000 GW based on existing identified resources. The Ministry of New and Renewable Energy (MNRE) has also estimated surplus biomass availability of about 120-150 million metric tons per annum from agricultural and forestry residues in India with which about 18 GW of electrical and/or thermal capacity can be developed. An additional 5 GW of biomass capacity can also be harnessed from bagasse generated in nearly 550 sugar mills across the country. MNRE has also identified 5,415 potential sites for small and mini hydro projects, which have a potential of 14 GW. However, the actual potential could be much higher as the potential site identification process is still on-going across the country. Over the past 10-15 years, both the central and the state governments have developed favorable policy frameworks to facilitate development of RE projects in the country. These include mechanisms such as feed-in-tariffs (FiTs), capital subsidies, and tax benefits. These mechanisms have been successful in attracting significant investments and adding RE capacity. New policy instruments such as Generation-Based Incentives (GBIs), Renewable Purchase Obligations (RPOs), RE Certificates (RECs) and open access (wheeling and banking) have provided further stimulus to the sector in the last few years. This has led to an annual growth rate of over 19 percent in RE capacity over the last five years (2007-2012). Despite all these efforts, only 29.8 GW has been tapped so far which is less than one percent of the estimated RE potential.

In view of the fact RE is a key resource for the nation's energy security and energy access, the GOI has set a target for 15 percent of power consumption to be generated from RE sources by 2022, up from the current share of five percent. To meet this target, the 12th Five-Year Plan of the Planning Commission includes an ambitious target to add 30 GW grid connected, over and above the existing cumulative capacity of 29.8 GW of RE, between 2012 and 2017 and about 45,000 MW of RE capacity during the 13thFive Year Plan Period (2017-2022). The Jawaharlal Nehru National Solar Mission (JNNSM) under the National Action Plan on Climate Change (NAPCC) targets addition of more than 20,000 MW of solar capacity by 2022. In addition, about 3400 MW is targeted to be

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added through off-grid distributed renewable power systems during the 12th Plan which would at least be doubled during the 13th Plan period (2017-22).

Over the years, renewable energy sector in India has emerged as a significant player in the grid connected power generation capacity. It has been recognized that renewable energy has to play a much bigger role in achieving energy security in the years ahead and be an integral part of the energy planning process. Renewable Energy sector has moved ahead from the steady growth patterns of the last two decades and is now poised for a quantum jump. Recognizing these facts, India has reset its Renewable Energy capacity addition targets to 175 GW by 2022 in view of the significant Renewable Energy potential in the country and commitment made by the investors and stakeholders. This includes 100 GW from solar, 60 GW from wind, 10 GW from biomass and 5 GW from small hydro power. The substantial higher capacity target will ensure greater energy security, improved energy access and enhanced employment opportunities. With the accomplishment of these ambitious targets, India will become one of the largest Green Energy producers in the world, surpassing several developed countries.

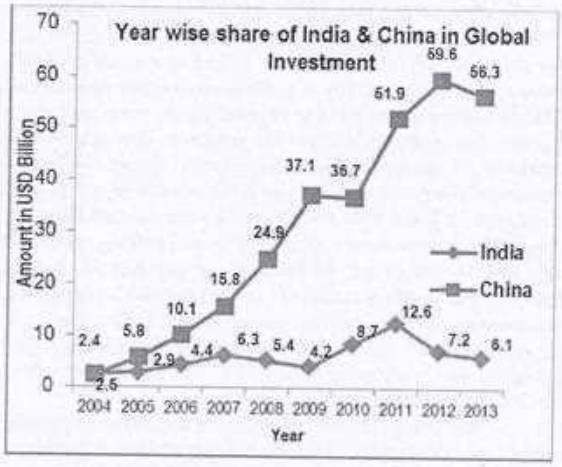
II. FUNDS REQUIREMENTS TO CREATE THE TARGETED RE CAPACITY BY 2022

In monetary terms, creating the targeted RE capacity, means an additional capital requirement of about Rs 6.05 lakh crore, during the period (2012-22), calculated at the prevailing market costs. The estimated requirement of funds over the period of next 8-10 years will thus be about Rs 50,000 to 60,000 crore per year. In addition, the United Nations' Sustainable Energy for All Initiative has also estimated that India shall need an investment of Rs 30,000 to 40,000 crore annually till 2030 for facilitating energy access. Hence, finance will play a key role in the development of India's RE sector. However, GOI through budgetary sources can provide on average, about Rs 3000 to 4000 crore annually during 12th and 13th Plan periods. Therefore, raising the requisite funds from the commercial sources including the key financial institutions is a major challenge for the development of the RE sector.

III. TRENDS IN INVESTMENT IN RENEWABLE ENERGY

It may be observed from the Table and line Graphs given below that India and China were almost equal in terms of investment in renewable energy sector in 2004. However, thereafter, gap widened so fast that share of China in total global investment in renewables increased from about 6% in 2004 to 26.3% while India's share has declined from the same level of 6.3% to 2.85% during the same period.

			Amount in USD Billion		
			Investments in Renewable Energy:		
Year	India	China	Global Total	Share in %	
				India	China
2004	2.5	2.4	39.5	6.33	6.08
2005	2.9	5.8	64.5	4.50	8.99
2006	4.4	10.1	99.6	4.42	10.14
2007	6.3	15.8	145.9	4.32	10.83
2008	5.4	24.9	171.2	3.15	14.54
2009	4.2	37.1	168.4	2.49	22.03
2010	8.7	36.7	226.7	3.84	16.19
2011	12.6	51.9	279.4	4.51	18.58
2012	7.2	59.6	249.5	2.89	23.89
2013	6.1	56.3	214.4	2.85	26.26



Source: Global Trends in RE Investment, 2014, Frankfurt School-UNEP Centre for Climate and Sustainable Energy Finance, 2014

The obvious reason for such a widening gap has been the fact that Indian economy has not been able to attract the investment – both domestic and FDI- in renewable energy sector. The factors leading to such a unfavorable environment for investment in RE sector could be classified into two categories: (i) General factors making India a unfavorable destination for investment, and (ii) specific factors making RE sector as unattractive for investment in India.

III (A) General Factors Making India an Unfavorable Destination for Investment

In this context, three recent reports (I) World Bank Report on 'Doing Business, 2014' which sheds light on how easy or difficult it is for a local entrepreneur to open and run a small to medium-size business in India (ii) KPMG-CII also brought out

a Report in May 2014 on ' Ease of Doing Business in India, and (iii) The Global Competitiveness Report 2013–2014 by World Economic Form define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. The major outcomes of these reports are summarized as below:

III (B) Doing Business in India: Perception

The Doing Business 2013 report of the World Bank ranks India at only 134th of 189 countries in ease of doing business. India stands at 179th in ease of starting a business (e.g. it takes, on an average, 27 in completion of 12 procedures to start a business in India. Even in South Asian region- the regional average is 16.4 days and seven procedures), 182nd in ease of getting a construction permit, 111th in getting an electric connection, 158th in paying taxes, 92nd in registering property and 186th in enforcing contracts. Given this situation, it would not be surprising if many Indian businessmen would be rather investing abroad. It is only not that it takes much longer to start a business in India than most other countries, but the cost, adjusted for income levels, of setting up and getting permits in India is extremely high. In fact, all the problematic factors identified for " doing business" are related with regulation, governance (an inefficient government bureaucracy & corruption), policy issues including restrictive policies, policy instability and bottlenecks on account of inadequate supply of infrastructure facilities.

A more recent study conducted by CII-KPMG (May 2014) also presents complementary results. It finds that in addition to construction permits, there are a range of permits and no-objection certificates or NOCs required from various government departments that make starting a business an extremely difficult process. Environmental permits features prominently in this list. But getting all the requisite permissions is not the only challenge faced by new businesses, gaining access to essential services notably water, sewerage and electricity is also, for the most part, not easy. Particularly very difficult, however, is gaining access to land. For instance, the average small business in India is subject to more than 15 inspections a year from a variety of departments, including labor, health and sanitation, fire safety, pollution control, no name just a few. It seems that the last-mile government machinery has become systematically predatory in its dealings with the private sector. Almost 90 per cent of respondents in the CII-KPMG survey identified corruption as a "moderate to major obstacle" to doing business.

III (C) India ranks at 60th Position in Global Competitiveness Ranking

India has slipped to 60th position in terms of its competitiveness globally from amongst 148 economies, while Switzerland has retained its top rank. This is India's lowest ever rank and also 31 places below its peer - emerging market China ranked 29th in the global competitiveness order. At 29th, China remains by far the best of the four largest emerging market economies, ahead of South Africa (53rd), Brazil (56th), India (60th) and Russia. The Global Competitiveness Index (GCI) introduced by the WEF in 2004, defines competitiveness as "the set of institutions, policies and factors that determine the level of productivity of a country". The GCI scores are calculated by drawing together country-level data covering 12 categories - institutions, innovations, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size and business sophistication and innovation. The report identifies inadequate supply of infrastructure, inefficient bureaucracy, and corruption and tax regulations as four of the top-16 most-problematic factors for doing business in India. India is ranked 96th in the "basic requirements", which includes infrastructure, macroeconomic environment and health and primary education.

The estimated requirement of funds over the period of next 8-10 years will thus be about Rs 50,000 to 60,000 crore per year. In addition, the United Nations' Sustainable Energy for All Initiative has also estimated that India shall need an investment of Rs 30,000 to 40,000 crore annually till 2030 for facilitating energy access. Hence, finance will play a key role in the development of India's RE sector. However, GOI through budgetary sources can provide on average, about Rs 3000 to 4000 crore annually during 12th and 13th Plan periods. Therefore, raising the requisite funds from the commercial sources including the key financial institutions is a major challenge for the development of the RE sector.

III (D) Specific Challenges and Barriers to Investments in Indian in Solar and Wind Energy

As stated above, substantial amount of investments are required to meet the targets for renewable energy. However, the renewable energy projects are considered to be quite expensive and complex, that is why; many investors do not want to put in money into the projects. As the cost of the project rises, the risks in that projects increase. There is no doubt that; in order to persuade the investors, risks pre and post completions of the projects have to be determined, allocated and additionally mitigated. In terms of the challenges and the barriers that the renewable energy project owners have been dealing, can be categorized under four categories: (i) Financial market related barriers (ii) policy level barriers; (iii) Market-related risks; and (iv) Barriers to Rural Off-grid projects, (v) Barriers to Commercial Off-Grid Projects. other sector

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specific challenges.

III (E) Financial Market Related Barriers

High Financial Costs: India has a cost advantage in renewable energy as labour and construction costs, for instance, are significantly lower in India than in countries like the U.S. or Germany. Furthermore, India is blessed with renewable resources like wind and sun that are comparable to good locations in other countries. Yet, despite these advantages, the cost of renewable energy can be as high in India as in the U.S. or even significantly higher. The difference is often due to financing costs. In comparison to conventional power generation sources such as coal or gas, renewable energy is characterized by a relatively high initial investment, followed by low variable costs. Since a much greater share of the cost of energy is determined by the initial investment, higher financing costs have a disproportionate impact on renewable energy. This puts renewable energy at a relative disadvantage in India.

Equity vis-à-vis Debt Funds: Generally speaking, debt investors are more conservative, accepting lower returns in exchange for lower risk. As such, their primary concern is that the project does not fail. Equity investors are willing to take more risk in exchange for higher returns, and therefore focus equally on risk and the prospects of a project performing even better than expected. Under most circumstance, a project will be least expensive when it is funded by a mix of debt and equity, either at the project level, or through debt and equity secured at the corporate level. Renewable energy financing can become costly when either debt or equity investors demand too high a return or when either is simply unavailable. It is important to point out that debt tenors are relatively less important in India than they would be elsewhere given that the spread between the cost of debt and equity is smaller. Therefore, the value of maintaining a higher level of debt throughout the life of the project decreases. If the cost of debt was to decrease and the spread between debt and equity expands, we would expect the impact of shorter debt tenors to increase significantly. It is estimated that an increase of debt tenor by seven years would lead to a decrease of 6% in the LCOE of a generic solar power project. In India, it is generally not very difficult to find equity at a reasonable cost, but renewable energy debt is both limited and expensive.

High Cost of Debt: As a rapidly developing country, growth in India comes with a need for investment in new infrastructure, creating competition to raise debt; and general inflationary pressures that need to be controlled through higher interest rates. As a result, benchmark interest rates in India are significantly higher than in developed countries.

Non-availability of Long term Debt: We observed that the short debt tenors in India play a significant part in keeping the costs high compared to developed nations. But long-term debt is not easily available in India mainly on account of asset-liability mismatch of financial institutions and underdeveloped corporate bond market. Banks dominates infrastructure financing in India as the corporate bond market is under-developed, but face severe constraints in lending long-term debt due to the short-term nature of the funds they raise. The growth of the corporate bond market in India has been limited (e.g. India's total outstanding bonds amounted to 53% as a percentage of GDP as compared 247% in Japan, 176% in U.S, 76% in Malaysia and 60% in China) largely due to stringent regulations and under- developed financial markets. Government regulations restrict investments from banks and insurance companies in corporate bonds and also impose a ceiling on foreign investments in rupee-denominated government and corporate bonds. Under-developed financial markets in India do not offer adequate liquidity for corporate bonds and risk mitigation instruments, such as credit default swaps. Indian financial markets also appear to lack diversity of investors, which could limit the trading activity and instruments available. Furthermore, uncertainty around the Government of India's future borrowing needs and the value of the Rupee create a longer-term uncertainty that constrains the development of longer-term debt markets.

Limited Access to Debt: With the limited availability, access to debt is becoming more difficult now and will very likely become even more difficult in the longer term for several reasons:

- Banks have sector limits to limit their exposure to any one market, sector, or technology. As renewable deployment increases, more banks are nearing their sector exposure limits.
- Commercial banks in India cap investments in infrastructure at 10-15% of their total domestic advances based on the Reserve Bank of India (RBI) prudential lending norms. At present, the renewable energy sector is coupled with the power sector, which is governed by (implicit and self-enforced) sub-sector limits in the range of 4.5-5.0%. During the last few years, due to large capacity additions — primarily of coal based power projects — commercial banks in India almost reached their lending limits for the power sector potentially leaving limited funds for renewable power projects.
- While many banks have sector limits, others will not lend to the renewable energy sector at all due to the novelty of the sector, immature technology, and uncertain regulation.
- Banks and other investors are increasingly insisting that developers get a better grip on the potential electricity output from solar and wind power plants so that they can more accurately predict cash flows.
- Sources from foreign banks restricted due to regulations
- Finally, state-level issues, including the poor financial condition of many of the Stat Electricity Boards (SEBs) who are the counter- parties to many of the contracts that pay the renewable energy projects, will restrict lending in those states.
- In India, the role of development financial institutions

(DFIs), a major source of long-term funding for energy infrastructure prior to the 1991 financial reforms, has markedly diminished in recent years. Because of the deregulation of financial markets, DFIs have been obliged to compete with commercial banks to raise funds at market rates. This undermined the business model of the DFIs; many were forced to convert them- selves into commercial banks. This change, combined with the shallowness of the corporate bond market, has left a gap in funding for renewable energy.

To compound the problem, access to potentially lower cost international debt is limited due to regulatory barriers, the cost and risks associated with long-term currency swaps, and perceived country risks. As a result, the cost of debt to a renewable energy project in India will typically be in the 10-14% range, as compared to the 5-7% range typical in the United States. Despite the higher cost, debt in India also suffers from inferior terms, including shorter tenors and variable rather than fixed interest rates. In the case of the solar PV projects, the higher interest rate on the debt alone added 19% to the project cost, while it added 10% to the wind project.

Debt is not strictly non-recourse: One area of controversy is the extent to which project finance exists for renewable energy in India. Project finance, or non-recourse finance, is where money is lent or bonds are sold solely on the basis of the project's cash flows. Typically, the project is set up as a separate company and the loan is made to that company. Since the lender only has recourse to that project, if the project company fails, the lender loses their investment. The project owner, meanwhile, loses only their investment in that specific project company. That is, there is no recourse to the parent company of the project developer. Developers often prefer this type of financing because it is less risky to their company and they can leverage the balance sheet of the parent company more aggressively. Developers typically pay a significant premium for project debt over recourse debt at the parent company level, because the lower risk to the parent enables them to take on additional projects.

III (F) Policy-related Barriers

These barriers have emerged either as a result of the absence of appropriate policies and regulations or the limited impact of existing ones.

Feed-in Tariffs: FiTs are one of the most successful and effective policy instruments globally for promoting RE generation. However, FiTs have to be designed carefully, keeping in view the prevailing market conditions, state of technology development and availability of resources. If the FiT is too high, it leads to unwarranted profits for developers, while if set too low, the FiT can lead to very low financial returns leading to low investments in the sector. The other challenge lies in adjusting the FiTs, as experience is gained, technology improves and costs fall. This instrument may also lead to concentration of projects in regions with better FiTs. In India, the FiTs are determined by the SERCs on a year-by-year basis. Different states in India have different Feed In Tariffs (FITs) for renewable energy, yet these tariffs do not follow the international best practices of digression rates. SERCs sometimes do not have the appropriate analytical tools, databases and sector experts needed to undertake an appropriate market analysis and capture prevailing market costs or adjust FiTs based on resource quality. For example, the state of Tamil Nadu announced a preferential tariff of Rs 3.51 per kWh for wind energy projects across wind zones. Projects availing this tariff and selling it to the state distribution company are only able to generate low equity returns in the range of 10 to 12 per cent. On the other hand the state of Madhya Pradesh has attracted lot of investors due to its attractive FiT at INR 5.92 per kWh (U S cent 9.5 per kWh). There is a need for a consistent approach, robust processes and methodologies for determining FiTs that include detailed due diligence on costs and performance parameters of various technologies, so as to make these attractive for both debt and equity investors. FiT is by far the single-most important investment mover for solar PV, if determined as suggested?

Reverse Bidding: Reverse bidding led to a significant decline in solar power procurement prices. However, this also led to concerns about the long-term viability of projects that actually qualified. Almost half of the projects that needed project financing from FIs were not able to get such financing. As a result, these projects had to utilize either equity financing or balance sheet financing. For example, FIs were extremely concerned about the bid out tariffs on several of the projects and were unwilling to finance as they felt that they were unviable for commercial finance. Reverse bidding led to competition in an environment where capital costs, technology performance and access to financing are still at infant stage. Besides the issues around unviable bids, reverse bidding suffers from some other disadvantages too:

- Capacity addition becomes episodic, dependent on government auctions, and as a result developers are unable to create project pipelines and leverage economies of scale.
- Reverse bidding also reduces the interest of private equity investors, as ability to scale up appears uncertain.
- A number of states have been negotiating with the developers to match their tariffs with the lowest tariff discovered through the reverse bidding process. This process has delayed the project allocation and also made projects unviable for few developers.

Renewable Purchase Obligations and Renewable Energy Certificates: The RPO and the REC regime were designed to provide market-based instruments to stimulate RE investments. However lack of RPO enforcement has led to weak markets for RECs and a loss of credibility for similar market-based mechanisms. The key limitations of the RPO and REC schemes have been poor enforcement, uneven cash-flows for generators, irrational floor prices for solar RECs, lack of

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price certainty post 2017, and constraints in trading and managing liquidity for RECs. To encourage investments through the REC mechanism, there is a need to ensure enforcement of RPOs and assure consistent demand and stable prices for RECs.

Accelerated Depreciation: In order to promote RE, the GOI provides a higher depreciation rate (80 per cent for plant and machinery) for non-wind RE projects vis-à-vis 7.84 per cent for thermal power plants and 15 per cent for other power equipment. An additional 20 per cent depreciation is available for all manufacturing and production companies in the first year of operation. Thus, non-wind RE assets and wind assets can be depreciated 100% and 35% respectively in the first year. Given that accelerated depreciation can only be utilized by profit-making entities with appreciable tax liabilities and cannot be transferred, it effectively excludes most IPPs and investors who plan on using a SPV route for project development. This limits the impact of the instrument and constrains the level of investment entering the sector.

The accelerated depreciation benefit has been a very effective tool for mobilizing funds for RE technologies like wind. The accelerated depreciation benefit was initially available for wind energy projects and was the key driver for capacity addition in the country's wind sector. However, the benefit was withdrawn in April 2012. This withdrawal negatively impacted the growth of wind capacity. Accelerated Depreciation should however be linked with a minimum threshold for generation, in order to curtail windfall profits from tax breaks on non-functional renewable energy projects. This will encourage only serious and genuine players to invest in the renewable energy sector

Development Approvals and Risks:Wind, biomass and solar projects typically require fewer approvals than conventional energy projects. The number of approvals required for projects under different RE technologies is given in Annexure. Small hydro projects however require many government approvals, and long development cycle times (more than 3 years). This leads to an escalation in costs. For example, obtaining clearances and getting access to evacuation infrastructure has been reported to take over 60 percent of the time required to develop a project from its concept to its commissioning. Last year, even solar and wind projects have faced challenges due to long permitting processes, land acquisition issues and community tensions.

Indian Electricity Grid Code: Under the IEGC 2010, RE projects will be required to forecast and schedule their power supply to the grid and are subjected to pay additional charges in case of slippage. Since RE is infirm in nature except for technologies such as biomass, significant capacity building and investments will be required for forecasting and scheduling by developers and DISCOMs.

Open Access: Third party power sales by RE projects are charged an open access levy, which includes a cross subsidy surcharge and an electricity duty (except in states where these have been exempted). The levy of these charges makes third party sales more expensive.

Curious Paradox: Though more and more solar energy is being produced in India - installed capacity rising exponentially from just 20 megawatts (MW) in 2009 to 2647 MW by May 2014 - domestic solar panel manufacturers are in the doldrums. All those setting up solar power plants prefer to buy their equipment overseas, especially from China. Additionally, the soft loans - at near-zero interest rates - being provided by the Export-Import Bank of China to those buying from the Chinese are making all the difference. India's solar mission does stipulate some domestic sourcing, but it makes a significant exception. Solar panels are of two kinds: those made of crystalline silicon, and those employing the more contemporary 'thin film' technology. The latter are not necessarily better - indeed globally, only 10 per cent of installed solar power capacity uses thin film. But the local sourcing restriction does not extend to thin films and almost all Indian solar power producers have plumped for it.

Policy Instability at State level: In India, especially at state level, one can never be certain whether successive governments will continue with the policies of their predecessors. This creates a barrier to investments. For example, Andhra Pradesh, which carried out bidding for an allocation of 1,000 MW earlier this year, has not got many takers. The developers were required to meet the lowest tariff being offered by any other developer for a given sub-station in the state. In a sudden change of process, after the bidding process was complete, the state announced that it could only offer a tariff of Rs 6.49 per unit while the average bid was for around Rs 8.7 per unit. As a result, it could only commission projects for around 400 MW so far. The recent petition by GUVNL to the Gujarat Electricity Regulatory Commission, seeking to reduce the tariff from the average tariff of Rs 12.54 per unit for 25 years to Rs 9 per unit, proved to be the last straw. GUVNL claims that the developers have made windfall gains and mislead the government.

III (G) Market-based Barriers

RE technologies face a number of market-based barriers. These include off-taker risks, technology and resource risks, barriers in accessing evacuation infrastructure, and acceptance by local communities where the projects are sited. Some of these have been described in the paragraphs below:

Off-taker Risk: The creditworthiness of the off-taker (the state distribution companies in the case of sales to the state) plays a key role in determining the bankability of a PPA. Very few DISCOMs, such as those in Gujarat and Maharashtra, are in good financial health. In other states, DISCOMs have poor financial health, the risk of off-taker default and delayed payments is high (for example, developers have receivables of up to 12 months in states like Rajasthan and Tamil Nadu). But apparently in some states, the electricity boards are super-efficient. For instance, in Gujarat the board pays the developer

in the first week of the month (instead of the last week) and takes a 1% deduction for the advance payment.

Fuel Risk: Fuel risk is high for biomass projects (except for captive projects that use bi-products as fuel) as these projects are competing for fuel with several alternative uses; and which has to be procured from a variety of producers (who are reluctant to enter into long term supply agreements).

Technology Risks: Banks consider relatively newer technologies riskier, especially those with high technology design requirements such as CSP and biomass (using new feed stocks such as rice stalk, poultry litter). The perception of risk is due to their unfamiliarity with the technology and poor performance of earlier projects.

Evacuation Risk: Evacuation is a generic problem afflicting wind, solar and the small hydro sector. A large number of renewable energy projects in India are in remote locations, since these locations provide the best natural resources to exploit; but due to the distance from load centres, quite a few of these projects are unable to get access to the grid. Lack of adequate evacuation facilities has led to scaling back the commissioning and partial commissioning of new generation and the reduction of generation during peak periods. This issue is constraining the development of small hydro projects across the northern and north eastern states (HP, Uttarakhand, and North Eastern states), solar development in the remote areas of Rajasthan and wind in Tamil Nadu. Banks and financial institutions are more cautious lending to RE projects given the poor state of the evacuation networks. This risk is high where there is a lack of evacuation capacity such as Tamil Nadu and Rajasthan, while the risk is low in states such as Gujarat.

Community Risk: Land acquisition is increasingly becoming a challenge for RE capacities. Land is typically procured after the permitting process, which can take significant time. By this time, local communities get aware that a project requires their land and can drive up its price, and delay land acquisition. Small hydro projects have faced delays due to community protests, as the rivers in which these projects are based or are nearby are considered sacred or due to problems with water diversion an important resource in hilly areas.

Lack of Exit Options for Existing Investors: A substantial portion of private equity investments in the Indian RE space is approaching five years, the normal time for making exits. Investors have not been able to find exits due to the limited opportunities in the capital markets. Raising new funds is proving difficult for these organizations, as they have not been able to provide exits, and thus, returns on existing investments to their organizations. This limits the ability of such investors to scale and fund new projects.

III (H) Barriers to Rural Off-Grid Projects

There are numerous barriers to financing off-grid rural RE projects in India. Challenges exist for both debt and equity investors, and are discussed below:

Small Ticket Size of Transaction: Off-grid projects are mostly small in size, and thus, the capital requirement per project is also very small. Unless there is a large corporate entity implementing a portfolio of such projects, the investment size usually falls below the minimum size of investment required by most FIs. Such projects find it hard to garner the interest of most lenders and equity investors.

Limited Penetration of Financial Institutions in Rural Areas: Most FIs have limited presence in rural areas. They are not as well connected to local communities and businesses in rural areas, which is crucial for establishing trust with local entrepreneurs.

Small Size of Projects makes it Difficult for Promoters to Exit: Companies that are into the business of owning and operating off-grid projects find it difficult to scale-up operations due to the distributed nature of demand, the small size of projects and the operational issues associated with each project. Equity investors find it difficult to exit through traditional routes, such as an initial public offering (IPO) or a buyout from a strategic investor.

Lack of Successful Scalable, Replicable Business Models

Only a few examples of successful business models for off-grid RE projects exist in India. For those that do exist, the scope for replication is limited, as conditions relating to RE resource, off taker risks, local support, differ from one area to another. Project operators, on their own find it difficult to enter into or enforce long-term contracts with local communities for either procurement of fuel or aggregation of demand

Limited Understanding of Off-grid Projects among Financers and Investors: Most investors and lending institutions lack the understanding and ability to assess risks inherent to off-grid projects. This makes it much more difficult to effectively analyze and prepare the project proposal for review by potential investors or by a bank's credit committee.

Viability Concerns due to High Upfront Costs: The initial cost per kW of off-grid systems is much higher than grid connected projects due to their small size and the additional investment required for distribution. This keeps the returns for such projects low, and acts as a deterrent to financing.

Long Gestation Period for Release of Capital Subsidy: The effectiveness of the existing subsidy programs is limited by the following reasons:

- Subsidies only guarantee capacity addition, while most financers would rather have an instrument that stimulates generation, as debt payback is dependent on generation.
- Most subsidies are available only after successful commissioning of the project, thus forcing the developer to raise full finance for the project's construction.
- The application processing time taken by the MNRE and other state bodies for subsidies is generally long (up to six months). Furthermore, the time required for disbursement of the subsidy ranges from six months to one year. The cumbersome and long process for subsidy approval reduces the attractiveness of these incentives. This puts additional stress on off-grid RE projects, and significantly

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reduces the rate of success, and extends the time for financial closure

- There is a high degree of uncertainty around the future of off-grid RE projects once those areas get electrified through grid

Although higher subsidies for off-grid application are desirable but institutionalisation of capital subsidy through accessible institutional structures is warranted. Some intervention in the form of a regulatory framework should also be introduced at the distribution level, in the form of a metering system, for example. Such a system will, in turn, increase distributed power generation from renewable sources.

Threat from Extension of the Grid The likelihood of future grid-connection, its impact on an off-grid project, and alternative options once it does happen need to be address specifically by the project developer and in discussions with investors.

III (I) Barriers to Commercial Off-Grid Projects

Commercial projects, like off-grid rural electrification projects face a number of barriers which impact their bankability:

Small Ticket Size of Transaction: Commercial off-grid projects are small in size (normally a few 100 kWs), and do not gain much attention from equity investors and lenders. They are not financed unless the user borrows directly based on its balance sheet and existing relationship with a bank.

Small Size of Commercial Projects: Developers that own and operate off-grid projects and sell power to consumers are small in size and find it difficult to attract funding from banks because of their limited balance sheet.

Off-taker Risk: Since these projects sell electricity directly to industrial and commercial customers, off-taker risk is inherent and the creditworthiness of the off-taker plays a key role in determining the bankability of these projects. Banks also find it difficult to look at these projects as a portfolio.

Non Availability of RECs: Current REC framework does not differentiate the projects developed for 100 percent on site (off-grid) captive consumption from projects developed to inject electricity into the grid. To make these eligible for RECs, these projects need to be connected to the grid. This leads to additional cost of connecting to the grid such as additional infrastructure and open access charges. These additional costs can be completely avoided with improving REC framework. Policy regime needs to be developed to support creation of micro-grids serving a group of customers.

III (J) RE Segment-specific Risks

Among the various kinds of risks some which associated with the specific renewable energy projects are listed below:

- Geothermal power: In geothermal power projects, risks can be numbered as drilling expenses risks, exploration risk, critical component failures, and long lead times.
- Large PV: Risks which can be faced are component breakdown, weather damage, theft, vandalism.
- Solar thermal: A typical risk of this kind of renewable energy is technology risks such as the issue of combining with the other solar towers, delays in construction due to the licensing procedure, accidents.
- Small hydropower: Flooding and seasonal resource availabilities are some key risks that the small hydropower projects encompass.
- Wind Power: Risks arising in wind power projects can be considered as long lead times, critical component failures, wind resource and offshore cable laying.
- Biomass power: Fuel supply availability, resource price variability and environmental liabilities are regarded to be the main risks.
- Tidal/Wave power: Small scale and long leads, technology risks and survivability in harsh marine environments are the types of risks that tidal/wave power projects contain. While some of the challenges were different for solar and wind, many of them were common.

IV. ABSENCE OF A NATIONAL LAW AND POLICY FOR RENEWABLE ENERGY

One of most critical challenges-or barrier-to the development of the renewable energy sector in the country is its dependence on multiple laws, regulations and governing agencies. No single legal framework governs the development of renewable energy in India. In the absence of a unified framework, there have been multiple targets in RE sector (e.g. NAPCC, India intends to have 15 percent generation from renewable energy by 2020, while the Integrated Energy Policy, 2006 sets a target of 6% by 2030). These multiple sets of legislations and policies create delays and conflicts, and, as a result, undermine investor confidence.

Unified mandatory target with supportive enabling policies will definitely help in faster and sustainable growth for the renewable energy industry in the country. Experiences from other countries such as Germany and Spain suggest that introduction of enabling policies and frameworks helps to successfully accelerate renewable energy growth rates in a relatively shorter period of time. It is believed that by adapting appropriate legislative frameworks and the possible introduction of a renewable energy law, the above-mentioned barriers can be overcome. This will help in accelerated exponential growth and the rapid development of the renewable energy sector in India.

India's decisions on energy supply and power are primarily governed by two drivers-the need to sustain GDP growth between 8 to 10%, and ensuring access to electricity for all. With a perpetual power deficit in the range of 10-12% in energy supply shortage, the biggest concern for Indian businesses and industries is long-term business sustainability via assured energy security for their operations. This is critical at a time when industrial production is slowing down by at least

7% due to shortages in electricity supply, resulting in a loss of 6%in GDP growth. On the other hand, as per Census 2011, 81 million households in the country still remain un-electrified, of which 55 million are from six States of UP, Bihar, Jharkhand, Oddisha. Assam, Wes Bengal and 97% households covered under RGGVY were using and spending on kerosene as an alternative source of lighting. Furthermore, NSSO Survey on Household Consumption Expenditure (66th round 2009-10) showed that out of 168 million rural households in the country, 87% of them used firewood and wood chips - Census of 2011, also suggests that 86% rural household uses traditional biomass sources for their cooking requirements. Therefore, until now, India has been unable to achieve these two objectives which itself presents a vast opportunity for renewable energy to fill the gaps which fossil fuel sources have not been able to fill during the last 65 years.

Another startling example for increasing use of RE sources of energy is the telecom sector, where a shift from highly polluting and climate impacting diesel, to clean and sustainable renewable energy in telecom towers in the mid-to-long term has an enormous potential. The consumption of diesel by the telecom sector currently is more than 3 billion litres annually, second only to the railways. For the telecommunication sector, this translates into an operational energy expense of Rs 12,600 crore, apart from other infrastructural costs, in order to operate their network towers, especially in off-grid locations. In turn, this constitutes around 30% of the sector's revenue from off-grid services, which is rising by 10% on a year-on-year basis. In addition to the high operational expenses for the sector, this also results in a loss of around Rs 2,600 crore annually to the exchequer, considering the indirect subsidies the sector benefits from in relation to diesel. The telecom sector in India (public, private, Indian and foreign), through its operations powered by diesel, contributes around 7 million tonnes of CO2 emissions (13 million tonnes overall) annually, and responsible for over 2% of the country's total greenhouse gas emissions. In future, these trends present a significant challenge to the economic sustainability and growth of the sector's business model, in addition to adding to its on-going contribution to climate change. The telecom sector's significant reliance on diesel to power its operations enhances its economic vulnerability, with increased expenses from operational costs resulting from the volatile prices of fossil fuels in general, and diesel in particular-besides the risk of access to depreciating fossil fuel resources. Moreover, increased consumption of subsidised diesel by the sector also translates to increased losses to the exchequer.

Recently, the Government of India, through the Telecom Regulatory Authority of India, has also issued a directive for all telecom operators in the country to adopt renewable energy technologies in a significant way to power their telecommunication towers by 2015. Although the directive does offer a solution to the rising energy crisis faced by the telecom sector, the proposed solution is far from realistic and does not explore the real potential of the telecom sector. Renewable energy is a feasible alternative to shift the telecom sector's business model away from the traditional, carbon-intensive growth model. While the current system of diesel-powered networks offers the sector short-term capital gains, it is likely to limit the growth and profit-generation prospects of the sector in the long term.

It would thus be prudent for telecom companies to commit to shifting the sourcing of their energy requirements significantly towards renewable sources and make clear investment plans for the co-development of renewable energy sources, along with the development of new telecom infrastructure. This will enable a low-carbon economy by playing a significant role in advocating strong climate and energy policy changes in favour of renewable energy sources and technologies, at the national and international levels.

Renewable energy development will be all the more important to boost economic development in states such as Arunachal Pradesh, Bihar, Himachal Pradesh, Uttar Pradesh, Bihar, Jharkhand, Assam, West Bengal and others which have a high renewable energy generation potential, but lag behind in terms of economic development. Developing renewable energy in these states can provide secure electricity supply to foster domestic industrial development, attract new investments, create employment, and generate additional state income by allowing the states to sell renewable energy trading certificates to other states. Investments to develop the attractive renewable energy potential of these states will thus give a huge boost to their economies

V. CONCLUDING OBSERVATIONS

With an ever-increasing demand for electricity, there is quite clearly a need for a fundamental rethinking and restructuring of India's power infrastructure and energy dependencies. However, the current thinking in the government on renewable energy development does not match the ground expectations and related progress on renewable energy technologies. The domestic renewable energy market faces a number of critical challenges, listed above, that contribute to its sluggish growth.

With ever-falling costs and abundant supply potential, domestic renewable energy development can provide answers to the sustainability concerns and energy insecurities of business operations, by way of distributed supply in an economically-efficient manner. This, in turn, helps businesses in particular-and India in general-to reduce their oil and coal import dependence, and also mitigate price volatility caused by depleting fossil fuel resources across the globe. Further, renewable energy technologies can revolutionise the current job market. It is estimated that around 4 million direct and indirect jobs can be generated by 2030 for the renewable energy sectors of solar, wind and biomass in India alone, spanning the entire value chain-research, manufacturing and

services. This translates into more than double the potential of the coal and oil sectors, if same investment is made in both over the next 20 years. Considering that a significant proportion of these jobs will be relatively low skilled, these could also be considered for alignment with national programmes focusing on poverty alleviation and skills enhancement, such as the National Rural Employment Guarantee Act.

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