# Multidisciplinary Research and Development

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India was very prosperous country till 18th century. This is clearly mentioned in the history. In the Bible also there is description of the ships carrying gold, Silver, diamond and other valuable Jewels to King Salomon from sea shore of sopara Bombay. Megasthenese (4th B.C.) traveler from Greece too has described about affluence of India. Pliny (Ist Centuary) writes that Roman Empire has business export of 5 crores sectors (50 Lakh dollors) from India. Chinese traveler Fahayan also writes that Indian people are honest, happy and prosperous.

Portugese and Italian businessmen were amazed to see prosperous Vijaynagar Empire (1336-1565). Arabian ambassador felt that such prosperity was seen no were in the world. The change in rule in 16th century checked the economic growth and Indian currency started passing to other foreign countries. Even after this India was without debt in 1947 and one rupee was equal to one dollar.

But today's India is with so many crucial problems and their solutions seem to be very difficult. The problems are seen mostly in cities while approximately 6 lakhs villages in India are to be seen having quiet, peaceful and happy society where different sacraments are being followed, despite economic backwardness.

The Economics which we are reading today is of Adam Smith and Marshall and is without Chanakya and other contemporary economists. This has led to think over three important points – Economic, Social and Environmental condition of today's life. Keeping these three things in balanced and unified way agenda of 2030 is recommended to implement in order to eradicate poverty and to attain goals of sustainable developments.

In various conferences of United Nations (Rio + 20 Conference) programme on large and sustainable development are put and supported. In all these summit emphasis is laid on that development that meets the needs of the present without compromising the ability of future generations to meet their own needs, as we have exploited natural resources to that extent.

Concluding things it seems very clear that India was very prosperous country in the past but due to change in political, economic and social circumstances, change in the development was also seen which weakened economic structure of India. In changing circumstances we have to look into research based plains with past experiences and present conditions.

Multidisciplinary research is a pursuit of truth with the help of numerous specialized branches of learning which aims at achieving a common aim with the aid of knowledge of other disciplines. In multidisciplinary research a number of fields are involved in a certain line of inquiry which is specific to a problem or region. But the individual findings of the disciplines involved are only brought together in a cumulative. Therefore, modern research is tending to be more and more multidisciplinary.

Multidisciplinary research is a technique of research in which the tools of different sciences and disciplines are utilized to find an explanation to the issue under study. 'Multidisciplinary research is needed to solve many, if not all, of the next decade's major research challenges.' This co-operative and co-ordinated research uses experts of different disciplines. They all pool their knowledge together for solving any problem." Objectivity and accuracy is the first and foremost goal of research. This purpose can be served by the help of multidisciplinary research. Multidisciplinary research aims at avoiding the defects of incompleteness. It has been widely applied to diagnose challenges and opportunities in development.

The human society at present has embraced the process of globalization, liberalization and open door policies. This approach has added quality and convenience to our life. But at the same time, they have brought many challenges which are quite complex and full of intricacies. The solution of such challenges cannot be reached at in absence of multidisciplinary research. Therefore, the recourse of multidisciplinary approach for research is must and essential.

# Health Insurance Pricing Model in Nigeria

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**Abstract** :- The quality of the health status of the citizens and other factors such as health costs are the pivots that propel the economy from under-development to industrialized ones. In view of this, many countries (of which our dear country, Nigeria, is not an exception) implement social intervention program in form of health insurance to help alleviate the cost of financing healthcare of their citizens. The focus of this study is on the variation in the estimates of average patients' costs of medical treatment through health insurance techniques. It explores different decision making tools that can gear towards informed and quality healthcare system in Nigeria. The geographical scope of the study is limited to Nigerian situations. The major secondary data were got from the internet, articles, journals and other publications of health or health related organizations. The major analysis was done on the utilization payments obtained from one of the leading health maintenance organizations in Nigeria. In other to standardize this research work, the International Classification of Primary Care (ICPC) was used to categorize the ailments. Different models and probability distributions were employed and analysed by EasyFit Software to arrive at decision making parameters. Analysis carried out on healthcare costs helps decision making strategies on matters relating to effectiveness and efficiency of healthcare services in Nigeria.

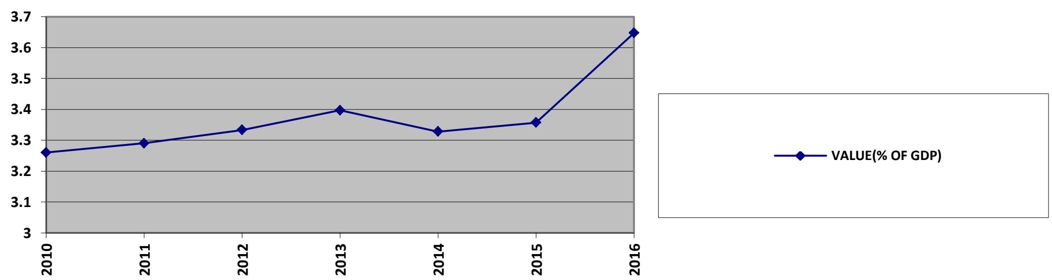
**Keywords** :- Health Insurance, Models, Pricing, HMO, Premium, Healthcare.

**Introduction :-** Costs in health insurance markets frequently do not reflect individual differences, either because consumers have private information or because prices are not usually risk rated. This creates inefficiencies when consumers are self-selected into plans. Whether competition in health insurance markets leads to efficient outcomes is a central question for health policy. Markets are effective when prices direct consumers and firms to behave efficiently. But in health insurance, prices often do not reflect the different costs of coverage for different enrollees. This generates two concerns: If insurers receive premiums that do not reflect enrollee risk, they have an incentive to engage in risk selection through plan design (Rothschild and Stigiltz, 1996). Similarly, if consumers face prices that do not reflect cost differences across plans, they may select coverage inefficiently (Fieldman et al, 2002). While it is widely recognized that these problems may impair the efficiency of competitive health insurance markets, evidence on their quantitative importance for social welfare is limited. In Nigerian health insurance, a menu of plans is created from which citizens select coverage. To address incentive problems in plan design, the actuaries have begun to "risk adjust" payments to plans (Van de Ven and Ellis, 2000). Consumer prices, however, are typically not adjusted for individual risk. In this research work, effect of plan costs on allocated efficiency will be analysed. A basic theoretical point regarding plan costs and efficient matching will also be made. Though existing work suggested that while poorly chosen contribution policies may lead to inefficient outcomes, the problem can be solved by choosing an optimal uniform contribution even in the presence of substantial asymmetric information. The analysis, however, assumes perfect correlation about the relationship between preferences and plan costs. It will be shown that if assumptions are violated, a uniform contribution policy (which is a policy under which individuals face/pay the same prices for plans) cannot induce efficient consumer choices. In principle, risk-adjusted contributions can correct or mitigate this distortion. As a matter of fact, observed pricing policies are less efficient than what could be achieved with risk-rated plan contributions. Approximately, one-quarter of inefficiency can be attributed to non-optimal uniform contributions, capturing the remainder would require setting premiums for people in the same firm. Possibility that consumers choose plans based on private information about their health status will be accounted for. It is often observed that consumers select into the plans based on both household preferences and health status, but in contrast to some other studies, we do not observe any single plan experiencing serious adverse selection. Consumers face a choice between different physicians and provider organizations, as well as differences in cost sharing.

**Review of Relevant Literatures**

**Health Insurance In Nigeria :-** Insurance in one form or the other remains a veritable and sustainable tool for financing the hardware, delivery structure and management systems of healthcare. It is only recently being applied by poorer developing nations to address the glaring problem of inadequate healthcare provision, which was financed exclusively from public budget only. Ever since Emperor Otto Von Bismarck of Germany enacted the mandatory legislation on the sickness fund for working Germans in 1883, different models for health insurance have continued to evolve worldwide with the same general principle. Insurance can be described as a risk transfer mechanism whereby the proposer (insured) agrees to make small periodic payments called premium to another person (the insurer) in return for the payment of a larger benefit on the occurrence of a specified event. In the context of health insurance, the premium is the amount charged by the insuring organization or health provider with the promise to pay for any covered medical treatment for the designated coverage. In line with this, health insurance makes it possible to substitute a small but certain cost (premium) for a large but uncertain loss (claim) under an arrangement in which the healthy majority compensate for the risks and costs of the unfortunate ill minority. Therefore, pooling of health risk is a fixture of every society and takes many forms. It was even practiced in our traditional society where the overall contributions are placed into a pool of funds from which payment is made. Health insurance is based on the principle of probability and all parties involved predicate its sustainability on the law of large numbers and the meticulous observation of the principles of insurance. The regulator, the HMO, the providers, the payers and the Users are the major parties in the Nigerian health insurance system. Health insurance in Nigeria can be applied to few instances: free healthcare provided and financed for all citizens, healthcare provided by government through a special health insurance scheme for government employees, or private firms entering contracts with private healthcare providers. However, there are few people who fall within the three instances. Healthcare provision in Nigeria is a concurrent responsibility of the three tiers of government in the country. However, because Nigeria operates a mixed economy, private providers of healthcare have a visible role to play in health care delivery.

Figure 1: Health Expenditure (% of GDP) - Nigeria

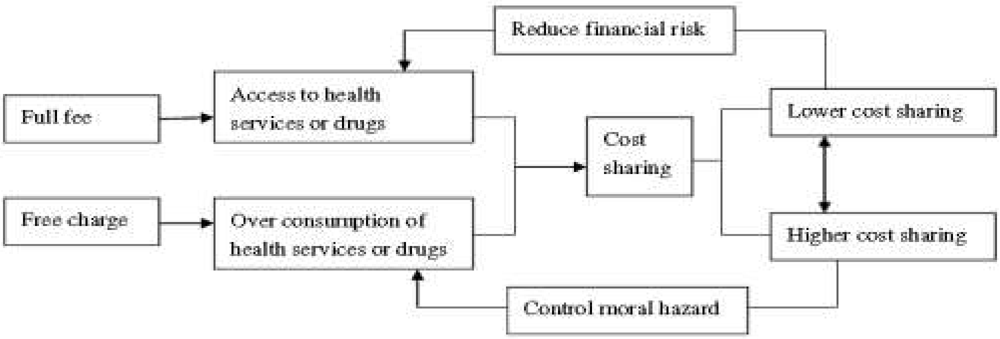



Source: https://data.worldbank.org/indicator/

In order to curb huge sum of medical bills expended by the general public, health insurance is a mechanism protecting people against high cost of healthcare by making payment prior to falling ill. This serves as a special social security arrangement in which everybody will be his brother's keeper and it also ensures that healthcare providers have ready-made patient pool where capitation (a fixed amount of money per unit of time paid in advance to the physician, clinic or hospital for the delivery of healthcare services for each enrolled person whether or not that person seeks care within the time frame) will be paid in advance while specialist doctors are paid on fee-for-service. Health insurance, being the insurance against the risk of medical expenses among individuals, estimates the overall risk of health care and health system expenses among a targeted group by developing a routine finance structure such as a monthly premium or payroll tax to ensure money is available to pay for the healthcare benefits specified in the insurance agreement. The benefit is administered by a central organization such as a government agency, private business or not-for-profit entity. In health insurance terminology, the Provider is a clinic, hospital, doctor, laboratory, healthcare practitioner or pharmacy. The Insured is the owner of the health insurance policy (that is, the person with the health insurance coverage). In some countries (e.g. UK, Canada) with universal healthcare coverage, health insurance is commonly provided by the state and seen as every citizen's right. It is grouped along with public education, the police, firefighters, street lighting and public road network, as a part of public services for the nation. Conversely, health insurance coverage is seen somewhat differently in Nigeria. It is the individual's responsibility to be insured or covered. The question here is whether health insurance coverage is a human right or another product one can buy. Everybody at some time in their life and often on many occasions will need some kind of medical attention or treatment. When medical care is required, ideally the patient should be able to concentrate on getting on better rather than wondering whether he/she has got the resources to pay for all the bills. This view is becoming more commonly held in nearly all the developing and underdeveloped nations. It is known that health insurance covers medical expenses for illness, injuries and other health conditions According to a Harvard University study, 62 percent of personal bankruptcies were the result of medical expenses. Many bankrupt filers in the study had rare or serious injuries and high medical bills often wiped out their savings, education or retirement funds. Health insurance could help to pay some of these bills and protect policyholders from financial distress. This shows how important it is to have health insurance. The dream of universal health insurance may not be attainable in Nigeria except major factors militating against its attainment (such as the low awareness, poor education, inadequate information and lack of modern technology) are addressed (Premium Times Newspaper, 2012).

In a simple health insurance model, donor funds can be used to catalyze the development of a more sustainable health system by stimulating investment and risk pooling mechanisms. In this way, both the demand and supply sides are addressed. Health insurance providers, administrators and the government require considerable technical assistance to expand health coverage to lower income groups. Clear understanding is needed between the partners about mutual benefits, sharing of responsibilities and obligations as well as clarity on partner's starting level of capacity (technical and managerial skills, information system etc.). In developing a model for health insurance, knowledge about the group/customer behavior and the emphasis on mobilization and marketing are important. Incentives in the form of subsidies can make coverage affordable and motivate people to participate in the health insurance, since higher enrollment reduces adverse selection. Medical data on the target population and actuarial data on health care utilization and costs are vital to accurately determine size and cost of healthcare package and calculate premiums (Duta and Hongoro, 2013). Cost sharing in health insurance is a crucial method that would influence both healthcare utilization and financial burden of the insured population. According to O'brien (1999), the categories of cost sharing methods used by different countries are diverse.

**Figure 2**: Conceptual Framework of Cost Sharing Analysis




**Source**: William M. Mercer/Foster Higgins

In brevity, cost sharing policy plays different roles in controlling moral hazard and changing financial risk in health insurance. As a matter of fact, the way a country finances its healthcare system is a key determinant of the health of its citizenry. Selection of an adequate and efficient method(s) of financing in addition to organizational delivery structure for health services is essential if a country is set to achieve its national health objective of providing health for all. Health care in Nigeria is financed by tax revenue, out-of-pocket payments, donor funding and health insurance (private, social and community). However, achieving successful healthcare financing system continues to be a challenge in Nigeria. The first wealth of a nation is its health. There is empirical evidence that the health of a nation significantly enhances its economic development and vice versa (Adeleke and Ibiwoye, 2008). HIV/AIDS, maternal mortality, infant mortality, malaria, tuberculosis, polio etc. have undermined development and impoverished many developing nations such as Nigeria. Nonetheless, it has been enunciated that the pursuit of better health should not await an improved economy. Measures to improve health will themselves contribute to economic growth. A healthcare financing system involves the means in which funds are generated, allocated and utilized for healthcare. It has three basic functions of collecting revenues, pooling resources and purchasing services. The mechanisms for implementing health systems are not mutually exclusive (Soyibo, Olaniyan, Lawson2009). In fact, most health systems adopt a mixture of various methods. The success of the different health financing methods can be measured by the overall effect on equity of access and health outcomes, revenue generation and efficiency, and the effect on user behaviour and provider. It is necessary to propose a framework for managing health systems where most health systems can be successfully managed by employing managed care tools such as managing cost (managing insurance risk, provider and supplier prices and utilization of services); managing care (developing and managing community-wide practice guidelines, care pathways, case management processes, and disease management across the continuum of care) and managing health (development and management of population-based interventions and pooling/shifting resources among health and other sectors). The success of these tools depend on some features of a country's health system which include: structure of provider market, proportion of population covered by health insurance, information and communication system, infrastructure, consumer expectations and socio-political values. While all of the managed care tools may not apply in all the systems in the overall health system of a nation, they do provide a useful basis for analyzing the management of health systems. Cost management procedures include explicit underwriting criteria, adoption of a drug formula, laboratory and procedures price list and concurrent review. Consumer cost sharing, through the use of co-payment for drugs, is used to counter moral hazard and also helps to control costs. Managing health is limited to health education provided to enrollees through an actuarially determined scope and prevention of cost over-runs resulting from claims that may go beyond financial capacity.

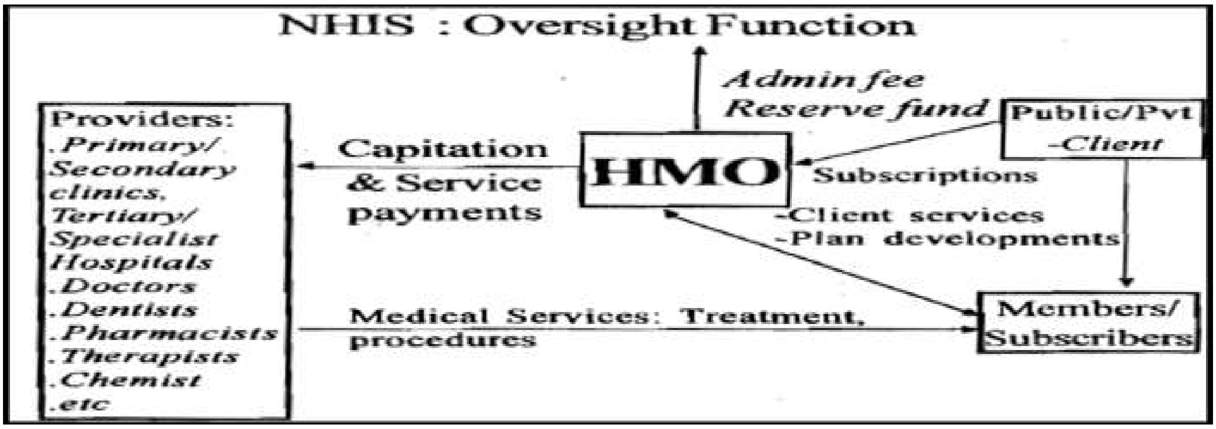
**Major Parties Involved In Health Insurance**

**The National Health Insurance Scheme (NHIS) :-** The National Health Insurance Scheme (referred to as the "Scheme") was established for the purpose of providing health insurance. It entitles insured persons and their dependents the benefit of prescribed good quality and cost effective health services. There is no denying the fact that Nigeria's healthcare index is very poor, and that the poor are suffering (Agba et al 2010). In order to address a number of problems plaguing the health system in Nigeria and to improve service access and coverage, the National Health Insurance Scheme was promulgated in 1999 (Decree 35,1999 now Act 35 of 1999) by the military regime of Abdulsalam Abubakar and launched in 2005 by the Obasanjo Administration. Although the idea was conceived in 1962 (Halevi committee's) Lagos Health Bill, it was only executed forty three years after because of lack of political will to actualize the dream by successive (military and civilian) governments (Falegan, 2008). In general, Government under the Scheme provides not only standards and guidelines but ensures the enforcement of the programme. The scheme covers civil servants, the armed forces, the police, the organized private sector, students in tertiary institutions, self-employed, vulnerable Persons among others. NHIS is a mixed bag of two broad categories of stakeholders – government and the private sector. Participation in the scheme is optional except for workers in the organised private and public sectors who are expected to contribute percentages of their basic salary to the scheme, while their employers also contribute on their behalf. This entitles a contributor, a spouse and four children to access medical care from any approved service provider. As at February 2009, the scheme has registered over 4 million federal civil servants and their dependents (Agba 2010). According to Kujenya (2009), this figure just represented 3% of Nigerian working population under formal sector. There are concerns that this figure is still currently low, but it represents a step forward towards the right direction of providing adequate health insurance coverage for all Nigerians. It is universally accepted that improved national health indices can only be possible if the health services delivered are acceptable, available, accessible, accountable and affordable. For this to happen, a strengthened and evidence-driven health system must be in place. Kujenya maintains beneficiaries have been limited to employees of the government and large corporate bodies. Out-of-pocket expenditures still account for about 70% of health care financing in Nigeria, therefore, making healthcare services economically inaccessible especially to the populations in greatest need.

**Primary Health Care (PHC) :-** Primary Health Care (PHC) is at the core of the Nigerian health system and key to providing basic health services to people with their full participation. The principles of PHC allow individuals and groups particularly rural communities, active participation in planning, implementing, monitoring and evaluating health interventions. Planning for any intervention is therefore incomplete without clear mechanisms for collectively monitoring and evaluation which allow people to articulate strategies and make informed decisions on matters relating to their health. Nigeria has systematically decentralised the delivery of basic services in health to locally elected governments. PHC being an entry point into the health system is highly ineffective and has deteriorated due to lack of political will in the country (Ekunwe, 2006). In 1998, the Federal Government of Nigeria, in collaboration with UNICEF, integrated child survival programmes such as immunization and oral rehydration therapy into the primary healthcare model. Despite this effort, Nigeria still has high infant and child mortality rates. As a result of this, the Nigeria Academy of Science (NAS) organised a two-day workshop with the theme "Effective Primary Health Care Delivery in Nigeria" which was held in Abuja on Tuesday 20th May and Wednesday 21st May 2008. It was discovered by experts at this workshop that factors contributing to the decline of primary healthcare delivery in Nigeria include: inequitable and inadequate distribution of health personnel; top-down minimal community involvement; and political/constitutional impediments. Thematically, presentation of papers and discussions at the workshop further explored challenges and possible solutions relating to health policies; community participation; financing of primary healthcare services; inter-sector collaboration; staff development and retention strategies; primary healthcare service delivery and the typical problems of basic healthcare needs. To address these, a conference speaker noted that the federal government in improving access to primary healthcare services has made provision for the construction of modern ward primary healthcare centres nationwide. Participants however commented that due to massive violations of the electoral processes, non-elected leaders emerge thus creating a wide gap between the expectations of the community and that of its leaders who rarely involve them in health project implementation. The communication gap between the people and that of the leadership at the local government level means that the basic health needs of the community such as water, education, and a clean environment, remain unmet. For maximum efficiency of the workforce in primary healthcare, it was also pointed out that indicators for assessing health workforce performance include: availability; competence; responsiveness and productivity. The conclusion was that sustainable change within the primary healthcare system is impossible without specific funding and participation of the community and other stakeholders.

**Health Maintenance Organization (HMO) :-** HMO is an organization that offers prepaid, comprehensive healthcare coverage for doctors' and hospital services. The financial risk of over-using health services is borne by the HMO and/or its service providers. The major activities of HMO are best depicted in figure 3 below.

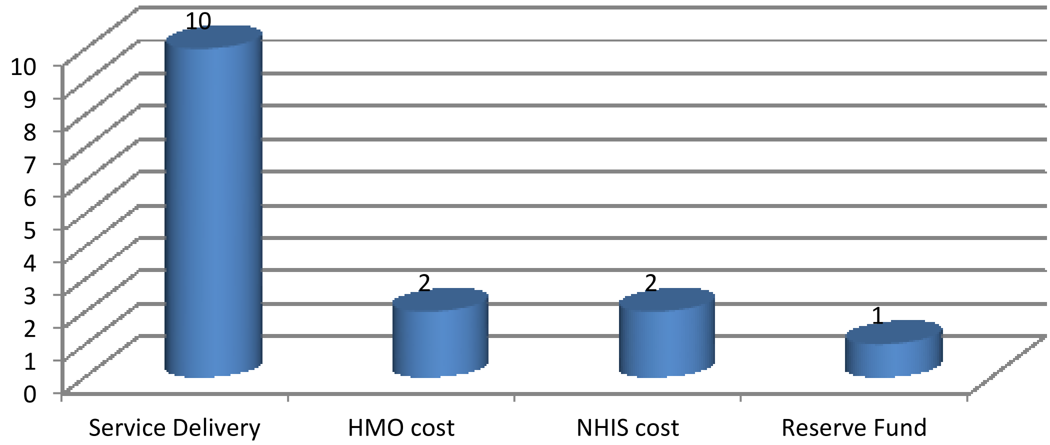
**Figure 3: HMO ACTIVITIES**




**Source**: Annals of Ibadan Postgraduate Medicine

HMOs could be staff model, group model or a mix of both. They could also be for profit or not-for-profit (Awosika, 2005). Staff model HMOs own their clinics or hospitals and employ their own full time medical staff, while group model HMOs operate with independent providers at all levels. The mixed model HMOs share group and staff models characteristics. Objectively, the HMOs are responsible for the collection and disbursement of contributions; provision of care and administration of providers. The incorporation of HMOs into the National Health Insurance Scheme is said to be underpinned by the desire of the government to promote an economic policy based on pursing a private sector driven economy of which health sector is regarded to be a significant part. Due to the numerous functions performed by these organizations on healthcare delivery, there is no doubt that much of the success or otherwise failure of the NHIS depends on how well the organizations are operated and managed (Robinson and Steiner 2011). Conversely, HMOs like to pride themselves as having predated the NHIS but up till this moment, they have failed to effectively carry out the functions assigned to them within the framework of the NHIS. They are expected to mobilise contributors to the scheme, set up health funds and creatively expand coverage through market segmentation to reach a greater proportion of the population. At best, many of them only act as third party administrators rather than as vehicles for integrating, financing and providing healthcare (FGN, 1999). The mainly functional programme covering government employees has attracted nearly all sorts of persons and organizations to set up HMOs in order to have their own piece of the pie. Otherwise, how come there are over 50 HMOs in the country catering for health needs of just 4 million beneficiaries, while the vast majority of the population (of over 150million) are without any form of cover? This state of affairs added to the myriads of capacity issues of HMOs, has also been largely attributed to the weak regulatory framework of the NHIS. Meanwhile, there are few progressive HMOs that are maturing into significant corporate entities and fit for purpose. Experts have argued that NHIS lacks understanding as to its purpose of existence. Is it a regulator, an organization or just a scheme? In the course of implementation of NHIS, its council has assumed several functions which include mobilization of funds and registration of enrollees that should have been done by HMOs, and therefore not able to undertake its expected oversight duty. According to Table 1 and figure 4, it is interesting to note that funds disbursement to providers out of the total contributed by both the employer and employee is based on fixed ratios.

**Figure 4**: Disbursement of Contribution




Accordingly, about 67% of the premium being spent on service delivery, about 27% spent on administrative charges while less than 7% is set aside for the reserve fund. It is palpably clear that the administrative cost is very high compared to 5-15% of premium recorded in other developing or developed countries where health insurance is well established and considered as a good practice. It is also not that clear how the expenditure pattern will be monitored in order to ensure that only payment for services rendered will be deducted. A major goal in establishing a network is the arrangement on a method and rate of payment for providers on some bases other than bill charges, which are inherently inflationary. The major payment mechanisms currently in use are: per Diem; per case; fee-for service; capitation and retainer basis/global budget. In per diem payment, a daily rate is paid to the provider(s) to cover all services and expenses (medical treatment, drugs, consumables, admission fees etc.) of the patient per day of confinement, but sometimes adjusted according to type of institution involved. This method is suitable when the provider charges on "bed space" method. Per case payment method is based on a single case rather than on a treatment act. That is, a provider gets paid for every case handled. In other words, a flat rate is agreed upon for the treatment of a particular illness or illnesses in a category or Diagnosis Related Groups (DRGs). If the cost of treatment is greater than the agreed flat rate, then the provider incurs a loss. But if less than the agreed flat rate, profit is made. This method is generally used for specialist or tertiary services. Fee-for-service payment method pays debtors, hospitals and other providers based on the bill they charge for specific services rendered on a fee schedule that represents an upper or lower limit on the prices that may be charged. In most cases, the secondary and tertiary providers are paid through this method. Capitation method is a negotiated per capita (or per member) rate payable to the provider who is then responsible for delivery or arranging health services required by the beneficiary over a certain period irrespective of utilization. This method is the commonest method. Global budget is adopted when a given amount is paid to the provider(s) as whole, who are then responsible for covering the total cost of services consumed by beneficiaries during a given period of time. The advantages of one method may be the disadvantages of the other. The comparison of two of the methods listed is shown in Table 2.

**Table 2:** Comparison of Fee-For-Service and Capitation Methods

| FACTORS | FEE-FOR-SERVICE | CAPITATION |
|---|---|---|
| Variability | Payments depend on number and type of services provided | Payments do not vary with the number or type of services |
| Timing | Payments received after services provided | Capitation is prepaid at regular interval |
| Risk | HMO is at risk for higher than expected cost and utilization | Provider is at risk for higher than expected cost and utilization |
| Economic incentive to provider | Perform more services and more expensive services. That is, expenses are directly related to services rendered. | Perform few services and less expensive services. That is, expenses are not directly related to services provided |

**Source**: William M. Mercer/Foster Higgins

**Modeling Risk, Underwriting And Pricing :-** The model of health insurance adopted by Nigeria allows each insured person decide which health centre or clinic he/she intends to use as first point of contact, and registers with the facility. A monthly capitation is paid to the health centre that has been designated to provide healthcare services as and when necessary to the insured. The activities of the health centres and clinics are coordinated by intermediary organisations known as the Health Maintenance Organisations (HMOs), while the overall regulation of the scheme rests squarely on the shoulder of the council of the National Health Insurance Scheme (NHIS). Haberman and Pitacco (2009) offered advanced approach of health insurance modeling based on Markov processes. Such model allows specifying actuarial estimations used for underwriting; claims policy; risk management; premiums estimation and reserves evaluation for the appropriate health plans. A special type of such kind of a model is the model of diagnostic and treatment process which allows representing state “sick” from the basic model as a process itself. Risk process is a very important aspect of the effectiveness of actuarial modeling for health insurance costs. The classical model is based on a series of implicit assumptions for the model simplification in order to improve an informational support. The diagnostic and treatment processes can be modeled with a random process. The use of Markov processes (especially Markov Chains) would allow constructing the model more effectively from mathematical point of view. In Markov, some of initial states concerning a particular sequence of diagnostic and treatment manipulations could be united in aggregated ones which describe the sequence as a unit (Kemeny and Snell, 1990). The basic problem is to find the degree of aggregation in order to achieve Markov property, but not to decrease the adequacy of the model. Underwriting is a method by which the contribution and access to health insurance scheme are determined. The number of insured may determine the level of individual contribution such that, the larger the number in the insured pool, the less the individual premium. The costs and effectiveness of specific drugs are determined through the use of drug formulary. A formulary is a list of pharmaceutical products with details of their use, preparation, properties and formulas, which the providers in a program may prescribe at all times. According to Lurie (2007), the health insurance world changes gradually. The pricing of contribution rates has the following components.

Pricing of contribution rates = Central estimate of future payments + administration expenses allowance + risk equalization allowance + risk margin – investment income allowance.

**Research Methodology :-** This section gives insight into how materials were gathered in relation to the research work. It focuses on the various measures that are aimed at providing empirical support for the study. The collection of data was not limited to a particular method. Visits were made to experts, friends and family members in the relevant organizations for personal interviews and/or corporate observations. The major secondary data were got from the internet, periodic reports, textbooks, newspapers, paper presentation, seminar talks, articles, journals and other publications of health or health related organizations. Also, the major analysis will be done on the utilization payments obtained from one of the leading health maintenance organizations in Nigeria. The focus of this study is on the variation in the estimates of average patients' cost of medical treatment in Nigeria through health insurance techniques. The geographical scope of the study is limited to Nigeria**.** In order to have an incomparable success of the study, the sample contains about sixty thousand utilization payments on behalf of the beneficiaries of health insurance. The data obtained shows dates of birth of beneficiaries, utilisation dates, ailments/diagnosis billed, categories of ailments/investigations, provider payments and HMO payments. The sample size is based on the large size of the study population. Some admitted that the major reason was to prevent competitors from having the opportunity or access to their secret through the detailed analysis or presentation of their raw data, while some hid under the pretense that a letter must come from the office of the "President of the Federal Republic of Nigeria (GCFR)" before any data could be released for research purpose. Due to this, the sample size of the study may not totally reflect the complete and true situation in the health insurance practice in Nigeria, but steps were taken to reduce this effect to the barest minimum through structured and carefully formulated research questions. Nevertheless, the quality of data collected/ used was highly commended and recommended by concerned lovers of this area of study. Health insurance is not yet at its peak in Nigeria.

**Summary, Conclusion And Recommendations :-** Based on the data collected, analyzed, presented and interpreted, this section summarizes, concludes and gives recommendations on the whole findings of the study.

**Summary :-** As it was earlier quoted, the health of a nation's citizens shows the wealth of that nation. In this research, series of situations concerning health insurance have been extensively discussed. They include; various health conditions in Nigeria, modes of operations of health insurance system, health risks, modeling, underwriting, healthcare costs, forecasting and variation in the estimates of the average patients' health costs as it affects preference. Quality healthcare delivery constitutes a high profile challenge in Nigeria. The drive by government to ensure universal access to health care and at low cost is proving even difficult. The study revealed that some citizens have more access to healthcare services than the others. Specifically, it demonstrated that there is discrepancy among employees or households in their access to quality healthcare delivery. According to World Health Organization (WHO, 2010), the provision of quality, accessible and affordable healthcare remains a serious problem in Africa because of inadequate funding and lack of government commitment to the provision of healthcare policies that cover all citizens. It was pointed out in the course of this study that people in rural areas seem not to participate in full capacity in any form of health insurance as compared to the people living in the urban areas. Findings showed that it was not because they were not well informed about any form of health insurance, but it was due to costless access to cheaper purported healthcare alternatives. They prefer to use free/cheap herbal drugs of any prescriptions from native doctors or traditionalists. This may be attributed to high level of poverty in Nigeria as vast majority of the population live below poverty line.

**Conclusion :-** As it has earlier pointed out, curbing the rising costs of health plans should not be limited to prices only. The primary healthcare system provides Nigeria with a strategic framework for mass movement towards achievement of the health-related Millennium Development Goals (MDGs). Monitoring and Evaluation (M&E) is the burning platform of that movement which will enable us to stay on track. The use of advanced data mining techniques to improving decision making has already taken root in insurance industry as well as many other industries. However, the application of such techniques for more objectives, consistent and optimal decision making in health insurance is still in a nascent stage. This research has described ways data mining and multivariate analytical techniques can be used to improve decision making processes and functions such as; health insurance underwriting, modeling, pricing and forecasting. Most people would agree with the idea that all individuals should have access to health services and should not face financial hardship if they fall ill or are injured. However, more than 100 million people suffer financial catastrophe and fall into poverty due to out-of-pocket health expenditures every year. The call for universal healthcare (health systems providing both access to health services and financial protection) challenges the governments to make efforts towards achieving this goal in the near future. More fundamentally, the need for reliable and instructive measure of healthcare pricing is increasing and new sectors of the healthcare industry are demanding such information. Systematic evaluation of the standard tools for health plans effectiveness and performance is critical.

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# The Effect of Remittance on Economic Growth of Eastern African Countries

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**Abstract** :- This study examined the effect of remittance on economic growth of Eastern African countries. Currently, the flow of workers remittance from developed to developing countries has received great attention among scholars and policymakers. This is because the flow of remittance is increasing over time. Despite its increasing inflows, there are conflicting views regarding the effect of remittance on economic growth. The optimists argue that remittances have a positive effect on economic growth through subsequent increase in investment and human capital development whereas the pessimists argue that remittances negatively affect economic growth. To examine those contradicting views, generalized least square method of estimation is used for the panel data spanning from 2000 to 2014 for Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The findings of the study show that remittance has a positive and significant effect on economic growth of eastern African countries. Remittance spurs economic growth. The governments of Eastern African countries should create conducive environment for remitters to promote the inflow of remittances. Other sources that account for economic growth of eastern African countries includes foreign direct investment and investment in human capital development. The finding also indicated that foreign aid and trade openness have an adverse effect on economic growth of the region. Countries in this region should minimize the inflow of foreign aid to promote economic growth. The finding also suggested that eastern African countries should take appropriate policy measures on trade openness. Since the majority of industries in the region are infant, there should be protection from foreign competition.

**Key Words :-** Remittance, Economic Growth.

Currently, workers remittance flows from developed to developing countries have received great attention among scholars and policymakers. This is because the flow of remittance is increasing over time. According to Abdullaev (2011) these transfers of workers remittances now represent more inflows to the developing countries next to foreign direct investment and exceeding foreign development assistance transfers.

The Bank estimates that officially recorded annual remittance flows to low- and middle-income countries reached \$529 billion in 2018, an increase of 9.6 percent over the previous record high of \$483 billion in 2017. Global remittances, which include flows to high-income countries, reached \$689 billion in 2018, up from \$633 billion in 2017. Among countries, the top remittance recipients were India with \$79 billion, followed by China (\$67 billion), Mexico (\$36 billion), the Philippines (\$34 billion), and Egypt (\$29 billion). In the decade between 2007 and 2016, India surpassed China to become the top receiving country for remittances.

In 2016, remittances to Africa totaled almost \$60 billion with Nigeria in the fore front then Egypt and Morocco receiving more than half of the total (World Bank, 2017). Eastern Africa was ranked third in remittance receiving next to North Africa and Western Africa.

For more than half a century, there have been heated debates on the sources of economic growth in developing economies. The perceived factors of economic growth have ranged from surplus labor to capital investment and technological change, foreign aid, foreign direct investment, investment in human capital, increasing returns from investment in new ideas and research and development (Fayissa & Nsiah, 2008 ). Scholars Sukar, Ahmed, and Hassan (2006) have also considered the institutional factors like the political freedom, political instability, voice and accountability have an important role on economic growth and development.

The benefits from international remittances to recipient countries are numerous. Remittances can finance the much needed investment in developing countries and contribute to increased productivity and economic growth. They are believed to reduce poverty since it is usually the poor in developing countries who migrate and send back remittances. By raising incomes of households, remittances can also lead to higher consumption that can have a multiplier effect on aggregate demand and output. While development loans come with a liability and obligation to pay interest, remittances do not. Moreover, they cannot be wasted by governments since they are sent directly to the individuals for whom they are intended. It has also been argued that they are a more stable source of funding than foreign direct or foreign portfolio investments which tend to be particularly volatile in developing countries ( Pradhana & Upadhyayac, 2008)

Despite the above mentioned roles of remittance, some theories indicate that remittances have a negative effect on growth. Remittances can generate demand greater than the economy's capacity to produce when this demand falls on tradable goods it can induce an appreciation of the real exchange rate. The overvalued exchange rate reduces the competitiveness of domestic industries in the foreign markets by expensive exports, in the home markets by cheap imports and shifts resources from the tradable sector to non-tradable sector the so called Dutch disease effect. This further leads to balance of payment pressure, a slower growth of employment opportunities and consequently to a further increase in the incentive to emigrate. (OECD, 2006)

This theory was empirically tested by Straubhaar, Bettin, and Elitok (2012) and found that remittances have insignificant Dutch disease effect because remittance can used for the importation of additional capital goods and productivity of domestic industries increases then competitiveness increases in this case economic growth can be achieved. Therefore, in this study the effect of remittance on Eastern African Economy was examined using the data on five east African Countries.

**Statement Of The Research Problem** :- There are different conflicting perspectives regarding the impact of remittance on economic growth. These are optimists (remittances have a positive effect on economic growth through subsequent increase in investment and human capital) and pessimists (remittances negatively affect economic growth through inflation and moral hazards resulting from reduced labor supply). The pessimists argue that remittance results in deterioration of balance of trade by stimulation of import and appreciation of local currency, deterioration of the 'social balance' dependency on remittances and neglect of local productive activities by families (Sukar et al., 2006)

Different researchers came up with their own different findings on the effect of remittance on economic growth of different countries in the world. For instance, the study by Salahudin (2013) examined the relationship between migrants' remittances and economic growth for a panel of some Asian countries and he found that the long run positive relationship between remittance and economic growth meaning remittance inflow spur economic growth in these countries. Another study by Pradhana et al (2008) examined the effect of workers' remittances on economic growth in a sample of 39 developing countries using panel data from 1980–2004. The finding of the study indicate that remittances have a positive impact on growth. Another study by Alphonse (undated) relates to the role of governance in the relation between remittances and economic growth in Sub-Saharan African countries, based on panel data over the period 2002-2006 showed a negative effect of remittances on the growth of the GDP per capita.

The results of the reviewed works above show a conflicting result on the effect of remittance on Economic growth. Some of the findings show that remittances have a positive effect on economic growth and others examined a negative effect of remittance on economic growth. Therefore, still there is a need to empirically test the views of optimists and pessimists on the effect of remittance on Economic growth. There are few studies conducted in Eastern African region for instance the study by Mikias (2014) on the role of international remittance on economic growth in Ethiopia and Aboulezz (2015) on remittances and economic growth nexus on Kenyan economy and both of them concluded that remittances have a positive role in economic growth. But both of the studies were based on a single economy simple time series data. The time and country specific effects were not studied. There is no any study conducted before on the effect of remittance on economic growth of eastern African countries based on country and time specific analysis. Therefore, in this study the conflicting theories of the optimists and that of pessimists regarding to the effect of remittance on economic growth are empirically tested by using panel data spanning from 2000 to 2014 for five East African countries (Ethiopia, Kenya, Rwanda, Tanzania and Uganda).

**Theoretical Literature** :- Currently there is a huge flow of remittance from developed to developing countries. But its effect on economic growth is becoming a debatable area. There are different views on the effect of remittance on economic growth.

The first view by Ratha and Maimbo (2010) argues that remittance helps to improve economic growth, especially if used for financing children's education or health expenses. Even when they are used for consumption, remittances generate multiplier effects, especially in countries with high unemployment. In many other countries, a large part of remittances is invested in real estate, reflecting both a desire of migrants to provide housing to families left behind, and a lack of other investment instruments in the recipient community. Whether remittances are used for consumption or buying houses, or for other investments, they generate positive effects on the economy by stimulating demand for other goods and services. They represent a substantial share of the Gross Domestic Product (GDP) in many countries, often surpassing other significant financial sources, surprisingly powerful macroeconomic outcome to attribute to simple fund transfers intended primarily to support families. There are microeconomic, macroeconomic and communal effects of remittance.

From microeconomic point of view remittances are income transfers from relatively richer to relatively poorer individuals and constitute a family welfare system that smoothie's consumption, alleviates liquidity constraints, and provides a form of mutual insurance. Most remittances reach family members—especially spouses or parents—and many recipient households are headed by women. Remittances are used primarily for consumption and investment in human capital (education, health, better nutrition). Investment in land, livestock, and housing is also relatively common but secondary to satisfying daily needs and meeting expenses related to human capital. Still less remittance money is used for investments in either savings or in business, or to repay debt, such as a loan for the expenses of going abroad. Insecurity in the migrant's situation tends to be a main motivator for investment; the home-country context affects the type of investment made

**Source of Foreign Exchange for an Economy** :- High remittance receiving countries have provided foreign exchange to meet the need of the economy. This is visible in countries such as Bangladesh where it has risen to the second or third foreign exchange earner after foreign direct and portfolio investments. Remittances are incorporated into the national accounts, hence go directly into the expenditure pattern of the economy, saving or investments.

**Infrastructural Development :-** Remittances serves as additional investments for physical and human capital developments where existing financial system and institutions allow remittances to be well intermediated and freely utilized (Englama, 2009).

**Boost development of the Financial Sector in recipient countries :-** This is done through well-developed financial products and institutions. Such as the Diaspora bonds, Mortgage, e.g., to attract funds from the Diaspora.

**Poverty Alleviation and Reduction in Income Gap :-** Several household studies have concluded that a country at the initial stage of receiving remittances has a high income gap. But subsequently the increase in income attributed to remittances over time reduces the income gap and poverty level.

**Dutch Diseases :-** Remittances has a potential negative impact where there recipient's country switch from expending the inflow from tradable to non-tradable. There would be an increase in importation of goods and eventually to Dutch diseases.

Remittances have also a communal effect. Some migrants participate in diaspora, community, or church groups in their host countries that send collective remittances to the home communities. Often these remittances are collected through fundraising events and are applied to a range of investments, including building or renovating schools or churches.

Therefore, from the above views one can understand that remittances are an important source of economic growth. From microeconomics perspective, remittance is a source of welfare for the household. It is used for consumption expenditure, investment in human capital and investment in physical capital developments. From macroeconomic viewpoint, it is source of foreign exchange, used for infrastructural development, boosting the development of financial sectors in the recipient countries, Poverty alleviation and income gap minimization. If remittance is misuse it results in a Dutch diseases effect.

**Theories of Migration and Remittance** :- There are five theories on migration and remittance. These are Classical or developmentalist, Neo- classical, Structuralist and Dependency theory, Neo- Marxist theory and Social Network theory (Englama, 2009). The arguments of the theories are different. For instance, classical and social network theories are in favor of migration and remittance. They argued that remittances received from migrant workers have a positive effect on economic growth whereas Neo-classical, Structuralist and Neo-Marxist theories argue against migration and remittance. The detailed view of each theory is given below.

Classical or Developmentalist theory (1950s and 1960s) states that large-scale capital transfer and industrialization to poor countries would move their economies towards rapid economic development and modernization.

Neo-Classical theory states that unconstrained labor migration would lead to scarcity of labor, resulting in a higher marginal productivity of labor and increasing wage levels in migrants sending societies.

Structuralist and Dependency Theories state that: Migration would result in dependency on the global political economic systems dominated by the powerful (Western) states. .

Migration was seen as having ruined traditional peasant societies by undermining their economies and uprooting their populations. Migration is detrimental to the economies of underdeveloped countries, but also as the very cause of the "development of underdevelopment"

Neo- Marxist Theory states that migration and remittances produce and reinforce the capitalist system based on inequalities.

Migration and remittances were seen as detrimental as exposure to wealth of migrant families causes a change in local taste that increases the demand for foreign goods.

Social Network theory emphasizes the social rather than the economic role that remittances play in the lives of the migrants and their families. Remittances seen as resources which are exchanged between members of a social network where a social network is defined as a set of recurrent association between groups of people linked by occupational, familial, cultural or affective ties (Englama, 2009).

**Empirical literatures** :- There are different empirical literatures on the link between remittance and economic growth. For instance, the study by Pradhana etal (2008) examined the effect of workers' remittances on economic growth in a sample of 39 developing countries using panel data from 1980–2004. The finding of the study indicates that remittances have a positive impact on growth. Another study was undertaken by Tassew and Rao (2016) to assess the impact of remittances on Ethiopian economic growth over the period 1981 – 2012. They used

ARDL model for time series estimation. An empirical result from the study reveals that there is a short run significant impact of remittances on economic growth while it affects the economy negatively in the long run.

The study by Rubyutsa (2012) examined the contribution of remittances from Rwandan Diaspora to the national development of the country. The results revealed that the amount of money remitted during the four years assessed i.e. from 2006 to 2009 is an important contribution to the national income which exerts a positive impact on consumption and production as money circulates in various sectors.

According to Senbeta (2012) remittances have conflicting effects on the two sources of growth: capital accumulation and productivity growth. Remittances have a significantly positive impact on capital accumulation while the impact on Total factor productivity growth is insignificant. These findings suggest that while remittances enhance investment and contribute to physical capital accumulation, the lack of efficiency enhancing effect or possible adverse impact on TFP growth would make the net effect on economic growth ambiguous.

Another study by Salahudin (2013) investigated the relationship between migrants' remittances and economic growth for a panel of some Asian countries namely; Bangladesh, India, Pakistan and Philippines. The findings indicate that there is a long run positive relationship between the two variables meaning remittance inflow spur economic growth in these countries. However, use of remittances in more productive sectors such as infrastructure, education, health might contribute to reducing poverty in short run in these countries especially in small economies like Bangladesh, Pakistan and Philippines.

**Model Specification** :- To determine the effect of remittance on economic growth the study adopted the model developed by Fayissa and Nsiah (2008) with some improvements of its specification. The other traditional sources that accounts for economic growth considered in this study includes foreign aid and official development assistance, investment in physical capital, investment in human capital, trade openness of the economy as measured by the ratio of the sum of imports and exports to the GDP (OPEN), and foreign direct investment (FDI). In the previous model investment in physical capital (GCF) was measured as a percentage of real GDP to approximate investment in physical capital formation and TOT was also used as a proxy for openness of the economy. Openness of the economy was not significantly affecting economic growth because of taking TOT as a proxy for openness. In this model GCF is taken as gross capital formation in current US$ and Openness is taken as the ratio of the sum of imports and exports to the GDP not proxied by TOT. Following Fayissa and Nsiah (2008) the following simple Cobb-Douglas production function is specified as;

$$\begin{aligned} RGDP_{it} &= \beta_0 + \beta 1REMIT_{it} + \beta 2lnAID_{it} + \beta 3lnGCF_{it} \\ &+ \beta 4lnENR_{it} + \beta 5OPEN_{it} + \beta 6lnFDI_{it} \\ &+ \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots . . (3.1). \end{aligned}$$

Where $RGDP_{it}$ is real GDP per capita of country $i$ and time $t$, $REMIT_{it}$ is personal remittance received measured in current US$, $lnAID_{it}$ is the log of inflow of official development assistance and foreign aid measured in current US$ and has a negative effect on economic growth ( Fayissa & Nsiah, 2008 ). $lnGCF_{it}$ is log of gross capital formation in current US$ used to measure investment in physical capital and it is an important macroeconomic variable in any economy. It has a positive impact on economic growth (Tassew & Rao, 2016), $lnENR_{it}$ is log of the secondary school enrollment which measures total number of pupils enrolled both in public and private schools and it is the main variable which spurs economic growth ( Fayissa &Nsiah, 2008 ), $OPEN_{it}$ is Openness of the country's trade measured by the ratio of the sum of imports and exports to the GDP and according to Aboulezz (2015) it is one of the determinants of economic growth, $lnFDI_{it}$ is log of foreign direct investment net inflow in current US$.

**Fixed Effect and Random Effect Models**

**Fixed effect Model** :- Fixed effect explores the relationship between predictor and outcome variables within an entity (country, person, company, etc.). Each entity has its own individual characteristics that may or may not influence the predictor variables (for example, being a male or female could influence the opinion toward certain issue; or the political system of a particular country could have some effect on trade or GDP; or the business practices of a company may influence its stock price). The equation for fixed effect model can be formulated as follows as; (Torres, 2007).

$$Y_{it} = \beta 1 X_{it} + \alpha_i + \varepsilon_{it} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (3.7)$$

Where t= 1, 2, 3…T

$\alpha_i$ is the unknown intercept for each i entity i=1…n)

$Y_{it}$, is the dependent variable where i= entity and t= time

$X_{it}$ is the dependent variable

$\beta 1$ is the coefficient of the dependent variable

$\varepsilon_{it}$ is the error term.

Averaging equation (1) gives

$$Y_i' = \beta 1 X_i' + \alpha_i + \varepsilon_i' \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (3.8)$$

, averaging the equation means getting only cross section component, that means if we have different consecutive time periods and if we take the average of it we will remain only with the cross-section element symbolized by $Y_i'$

Now subtract equation (3.8) from (3.7)

$$Y_{it} - Y_i' = \beta 1 (X_{it} - X_i') + \varepsilon_{it} - \varepsilon_i' \ldots \ldots (3.9)$$

, now unobserved effect i.e. $\alpha_i$ is getting rid off

Then we can use OLS on time demeaned Y (This is called Fixed Effect Model).

**Random Effect Model** :- In random effect model the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model. An advantage of random effects is that you can include time invariant variables (i.e. gender). Random effects assume that the entity's error term is not correlated with the predictors which allows for time-invariant variables to play a role as explanatory variables (Torres, 2007),

The random effect can be formulated as follows (Greene, 2003);

$$Y_{it} = \beta 1 X_{it} + \alpha + U_i + \varepsilon_{it} \ldots \ldots (3.10)$$

where $U_i$ is between entity error and $\varepsilon_{it}$ is within entity error

$\alpha$ is the mean of unobserved heterogeneity

For each of the models there is a command in Stata which allows us to regress our model. To choose the appropriate model from fixed effect and random effect models, Hausman test is used. Before conducting regression diagnostic tests like serial correlation, heteroscedasticity and cross-sectional dependency tests are also conducted.

**Hausman Specification Test** :- The Hausman test can be used to differentiate between fixed effects model and random effects model in panel data. It is a general implementation of Hausman's (1978) specification test, which compares an estimator $\hat{\beta} o$ that is known to be consistent with an estimator $\hat{\beta} 1$ that is efficient under the assumption being tested. The null hypothesis is that the estimator $\hat{\beta} 1$ is indeed an efficient (and consistent) estimator of the true parameters. If this is the case, there should be no systematic difference between the two estimators. If there exists a systematic difference in the estimates, then we may have reason to doubt the assumptions on which the efficient estimator is based.

Given the following equation;

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \alpha_i + \varepsilon_{it} \ldots \ldots (3.11)$$

where $\alpha_i$ is unobserved effect, and $\varepsilon_{it}$ is error term

**Assumptions**

$Cov(\alpha i, X_{it}) = 0$

$\hat{\beta}$ Of the random effect and $\hat{\beta}$ of fixed effect are consistent.

$se(\hat{\beta} RE) < se(\hat{\beta} FE)$

If the above assumptions don't hold, fixed effect estimate is solely consistent.

The hypothesis for Hausman test can be formulated as follows;

Ho: $\mathrm{Cov}(\alpha i, \mathrm{X_{it}}) = 0$ or, difference in coefficients not systematic. This means random effect is appropriate for estimation against the alternative that fixed effect estimation is better.

**Levin-LIN-CHU Unit- Root Test** :- This panel unit root test was developed by Levin, Lin and Chu (2002). The test assumes that each individual unit in the panel shares the same AR (1) coefficient, but allows for individual effects, time effects and possibly a time trend. Lags of the dependent variable may be introduced to allow for serial correlation in the errors. The test may be viewed as a pooled Dickey-Fuller test, or an Augmented Dickey-Fuller (ADF) test when lags are included, with the null hypothesis that of non-stationary (I (1) behavior). After transformation, the t-star statistic is distributed standard normal under the null hypothesis of non-stationarity (Bornhorst &Baum, 2006).

The hypothesis of the panel unit root test based on **Levin-Lin-Chu** test are formulated as follows

Ho: Panels contain unit roots

Ha: Panels are stationary

**Country specific Descriptive Statistics** :- The following tables show the country specific summary statistics for Ethiopia, Kenya, Rwanda, Tanzania and Uganda on the variables Real GDP, Remittance, natural logarithm of AID, natural logarithm of FDI, natural logarithm of GCF, natural logarithm of enrollment and trade openness for the period of 2000-2014.

Table 4. 1: Summary Statistics for Ethiopia (2000-2014)

| stats | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| **N** | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| **mean** | 290.1804 | 2.91e+08 | 21.53877 | 19.70702 | 19.79298 | 14.83711 | 34.59514 |
| **p50** | 272.3912 | 2.62e+08 | 21.65997 | 19.47941 | 20.84124 | 14.99077 | 36.49627 |
| **variance** | 7615.711 | 5.07e+16 | .2747169 | .5736618 | 11.15335 | .2000587 | 36.38764 |
| **range** | 258.9113 | 6.06e+08 | 1.731532 | 2.97772 | 9.103611 | 1.371161 | 20.9962 |
| **min** | 193.8669 | 1.83e+07 | 20.34901 | 18.50261 | 14.67031 | 13.98691 | 21.18828 |
| **max** | 452.7782 | 6.24e+08 | 22.08054 | 21.48033 | 23.77392 | 15.35807 | 42.18447 |
| **SD** | 87.26804 | 2.25e+08 | .5241344 | .7574046 | 3.339664 | .4472792 | 6.032217 |
| **cv** | .3007372 | .7734381 | .0243345 | .0384332 | .1687297 | .030146 | .174366 |
| **kurtosis** | 1.926194 | 1.704321 | 2.715786 | 3.284972 | 1.497891 | 1.919079 | 2.736328 |
| **skewness** | .5112502 | .325458 | -.8175674 | .6380271 | -.3066273 | -.5008763 | -.8305312 |

**Source: Own Computation, 2017**

The above summary statistics describes 15 observations for the given data set on Ethiopia and tells us the average value (mean), median, variance, range, minimum, maximum, SD, cv, kurtosis and skewness for each of the variables. For instance, the mean of real GDP per capita is 290.180, and median is 272.3912. The variance of real GDP is 7615.711. Its minimum and maximum values are 193.8669 and 452.7782 respectively. The kurtosis for the data set is around 3. So, the data is standard normal distribution.

Table 4. 2: Summary statistics for Kenya (2000-2014)

| stats | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| **N** | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| **mean** | 920.4144 | 6.40e+08 | 20.85297 | 18.40248 | 22.36173 | 14.85792 | 22.22716 |
| **p50** | 912.3767 | 6.31e+08 | 21.00352 | 18.52418 | 22.60085 | 14.81025 | 21.91899 |
| **variance** | 7144.927 | 1.89e+17 | .5172938 | 1.801359 | .446405 | .0824771 | 9.231487 |
| **range** | 252.5468 | 1.39e+09 | 2.14253 | 5.182271 | 1.935193 | .9116656 | 11.58458 |
| **SD** | 84.52767 | 4.35e+08 | .7192314 | 1.342147 | .6681355 | .2871883 | 3.038336 |
| **cv** | .0918365 | .6790419 | .0344906 | .072933 | .0298785 | .019329 | .1366948 |
| **min** | 823.0919 | 5.09e+07 | 19.77708 | 15.48371 | 21.41157 | 14.45719 | 16.92445 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **max** | 1075.639 | 1.44e+09 | 21.91961 | 20.66598 | 23.34676 | 15.36885 | 28.50903 |
| **skewness** | .4583711 | .355807 | -.0187224 | -.2698958 | -.1067739 | .2856387 | .2967618 |
| **kurtosis** | 1.936884 | 2.295248 | 1.595629 | 2.994266 | 1.500651 | 1.989394 | 2.802192 |

Source: Own Computation, 2017

Table 4.2 above shows the summary statistics of the given data set for Kenya for the year 2000-2014. The number of observations are 15. The mean and median of RGDP are 920.4144 and 912.3767. The minimum and the maximum values are 823.0919 and 1075.639 respectively.

Table 4. 3: Summary Statistics for Rwanda (2000-2014)

| stats | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| **N** | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| **mean** | 490.5218 | 7.17e+07 | 20.29549 | 17.31624 | 20.34539 | 12.34698 | 11.58848 |
| **p50** | 482.1399 | 6.78e+07 | 20.39485 | 17.56105 | 20.39779 | 12.31568 | 12.18778 |
| **variance** | 12855.99 | 4.19e+15 | .2469235 | 2.577705 | .7573797 | .3301476 | 8.149698 |
| **SD** | 113.3843 | 6.47e+07 | .4969139 | 1.605523 | .8702756 | .5745847 | 2.854768 |
| **range** | 345.6521 | 1.76e+08 | 1.421914 | 4.716465 | 2.189136 | 1.636457 | 9.563962 |
| **min** | 327.0968 | 6626257 | 19.53471 | 14.77486 | 19.24131 | 11.48891 | 6.319815 |
| **max** | 672.7489 | 1.82e+08 | 20.95662 | 19.49133 | 21.43045 | 13.12537 | 15.88378 |
| **cv** | .2311503 | .9030619 | .024484 | .0927178 | .0427751 | .0465365 | .2463452 |
| **skewness** | .1129209 | .3602965 | -.3505285 | -.1794119 | .0858674 | .006024 | -.478588 |
| **kurtosis** | 1.713549 | 1.682585 | 1.633775 | 1.545981 | 1.374167 | 1.698761 | 2.227308 |

Source: own Computation, 2017

The above table shows a summary statistics of the given data set for Rwanda for the year 2000-2014. For instance, the mean and the median of remittance are 7.17e+07 and 6.78e+07 respectively. The minimum and maximum values of remittances are 6626257 and 1.82e+08 respectively.

Table 4. 4: Summary Statistics for Tanzania (2000-2014)

| stats | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| **N** | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| **mean** | 645.2691 | 1.41e+08 | 21.44805 | 20.54615 | 22.37931 | 13.61393 | 18.1984 |
| **p50** | 651.9037 | 2.55e+07 | 21.56942 | 20.65661 | 22.67816 | 13.83581 | 18.5626 |
| **variance** | 9439.48 | 3.17e+1 | .135283 | .452946 | .603590 | .601505 | 3.5581 |
| **min** | 497.2042 | 8000015 | 20.78554 | 19.57882 | 21.26139 | 12.4757 | 13.36491 |
| **max** | 806.1501 | 4.10e+08 | 21.95687 | 21.45912 | 23.39894 | 14.48198 | 21.28531 |
| **SD** | 97.157 | 1.78e+08 | .3678086 | .6730126 | .7769107 | .7755681 | 1.886304 |
| **range** | 308.9459 | 4.02e+08 | 1.171333 | 1.880296 | 2.137548 | 2.006277 | 7.9204 |
| **cv** | .1505682 | 1.266022 | .0171488 | .0327562 | .0347156 | .0569687 | .103652 |
| **skewness** | .0418709 | .7151457 | -.39020 | .0618309 | -.235680 | -.2300 | -.7416 |
| **kurtosis** | 1.869927 | 1.54309 | 1.845168 | 1.465525 | 1.542286 | 1.404768 | 4.191431 |

Source: Own Computation, 2017

Table 4.4 shows summary statistics for Rwanda for 15 observations over the period 2000-2014 for the given data set. For instance, the mean of natural logarithm of AID is 21.44805 and its median is 21.56942. The minimum and maximum values are 20.78554 and 21.95687 respectively.

Table 4. 5: Summary Statistics for Uganda (2000-2014)

| stats | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| **N** | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| **mean** | 533.6612 | 5.77e+08 | 21.01112 | 20.00745 | 21.76134 | 13.71665 | 27.65232 |
| **p50** | 538.0394 | 4.52e+08 | 21.18652 | 20.28362 | 21.72192 | 13.76876 | 27.6742 |
| **variance** | 7031.528 | 6.73e+16 | .0956 | .5613029 | .4853509 | .1166314 | 13.04453 |
| **SD** | 83.85421 | 2.59e+08 | .3091925 | .7492015 | .6966713 | .3415134 | 3.611721 |
| **range** | 231.6119 | 7.03e+08 | .8908169 | 2.073997 | 1.887951 | .9861812 | 11.33353 |
| **min** | 412.1964 | 2.38e+08 | 20.41263 | 18.83607 | 20.84312 | 13.15953 | 22.09762 |
| **max** | 643.8082 | 9.41e+08 | 21.30345 | 20.91007 | 22.73108 | 14.14571 | 33.43116 |
| **cv** | .15713 | .449499 | .0147157 | .0374461 | .0320142 | .0248977 | .1306118 |
| **skewness** | -.070566 | .1343047 | -.816187 | -.428098 | .0441438 | -.253876 | .0473186 |
| **kurtosis** | 1.505518 | 1.335737 | 2.100484 | 1.63699 | 1.456964 | 1.616707 | 1.812838 |

Source: Own Computation, 2017

The mean of Real GDP per capita for Uganda is 533.6612 for the year 2000-2014 USD and the median is 538.0394 USD. The minimum and maximum values of real GDP per capita are $412.1964 and $643.8082 respectively. The standard deviation is 83.85. It shows the variation from the mean.

Table 4.1: Cross country summary Statistics

| stats | Real GDP | REMITANCE | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| N | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| mean | 576.0094 | 3.44e+08 | 21.02928 | 19.19587 | 21.32815 | 13.87452 | 22.85231 |
| variance | 51762.15 | 1.18e+17 | .4439132 | 2.528685 | 3.695903 | 1.12743 | 76.12246 |
| sd | 227.513 | 3.43e+08 | .6662681 | 1.590184 | 1.922473 | 1.061805 | 8.724819 |
| p50 | 563.491 | 2.99e+08 | 21.17609 | 19.47941 | 21.52737 | 14.03986 | 21.62597 |
| min | 193.8669 | 6626257 | 19.53471 | 14.77486 | 14.67031 | 11.48891 | 6.319815 |
| max | 1075.639 | 1.44e+09 | 22.08054 | 21.48033 | 23.77392 | 15.36885 | 42.18447 |
| range | 881.7718 | 1.43e+09 | 2.545834 | 6.705466 | 9.103611 | 3.879944 | 35.86466 |
| cv | .3949813 | .9965963 | .0316829 | .0828399 | .0901378 | .0765292 | .3817916 |
| skewness | .2867399 | 1.097774 | -.4156427 | -.9603015 | -1.696069 | -.5145355 | .332619 |
| kurtosis | 2.338891 | 3.744183 | 2.412015 | 3.458071 | 5.926885 | 2.255994 | 2.438459 |

Source: Authors computaion, 2017

The above summary statistics describes 75 observations and tells us the average value (mean) for each of the variables. The minimum and the maximum values in the data set are indicated. For instance, the minim value of real GDP per capita is 193.8669 US$ and the maximum value is 1075.639US$. The average of real GDP per capita is 576.0094 . From the table, we can see that the variation of the data from the mean for some of the variables especially the variance of RGDP, laid and openness but the value of standard deviation compared to the mean for each of the variable is not so high, therefore the data does not have problem on its distribution. Kurtosis and skewness deals about the nature of the distribution. The kurtosis for the standard normal distribution is 3 (Ssekakubo, 2016). From the above descriptive statistics result the kurtosis for all the variables are around three. Therefore, the distribution has a polygon which has shoulders. For some of the variables the mean is greater than the median for instance, for RGDP, REMIT and Openness the mean is greater than the median while for lnAID, lnFDI, lnGCF and ln ENR the mean is less than the median. But for all the variables there is no great variation between the mean and the median, therefore the data is normally distributed.

**Table 4. 6: Correlation matrix**

| | RGDP | REMIT | lnAID | lnFDI | lnGCF | lnENR | OPEN |
|---|---|---|---|---|---|---|---|
| RGDP | **1.0000** | | | | | | |
| REMIT | **0.5343** | **1.0000** | | | | | |
| lnAID | **0.1006** | **0.4532** | **1.0000** | | | | |
| lnFDI | **0.0995** | **0.3631** | **0.7953** | **1.0000** | | | |
| lnGCF | **0.6716** | **0.5382** | **0.4659** | **0.3704** | **1.0000** | | |
| lnENR | **0.3292** | **0.5997** | **0.6629** | **0.4694** | **0.3448** | **1.0000** | |
| OPEN | **-0.2541** | **0.3435** | **0.5254** | **0.4593** | **0.0500** | **0.7098** | **1.0000** |

**Source: Authors calculation, 2017.**

As we can see from the correlation matrix above, all the variables are positively correlated except openness and real GDP per-capita. When variables are positively correlated it mean that when one of the variable increases the other will also increase. Some of the variables are strongly positively correlated, like log of gross capital formation(lnGCF) with RGDP, openness with log of secondary school enrolment, lnGCF with REMIT, lnENR with REMIT, lnENR with lnAID and openness with lnAID. The data does not have a problem of perfect correlation.

**Results of Panel Unit Root Test** :- All the variables are stationary at level except log of Gross capital formation using Levin-Lin-Chu unit-root test. LnGCF is stationary at first difference. The majority of the variables are stationary at level when time trend is included but log of AID and log of secondary school enrolment are stationary at level when time trend is not included. The null hypothesis of the LLC test states Panels contains unit roots against the alternative that Panels are stationary.

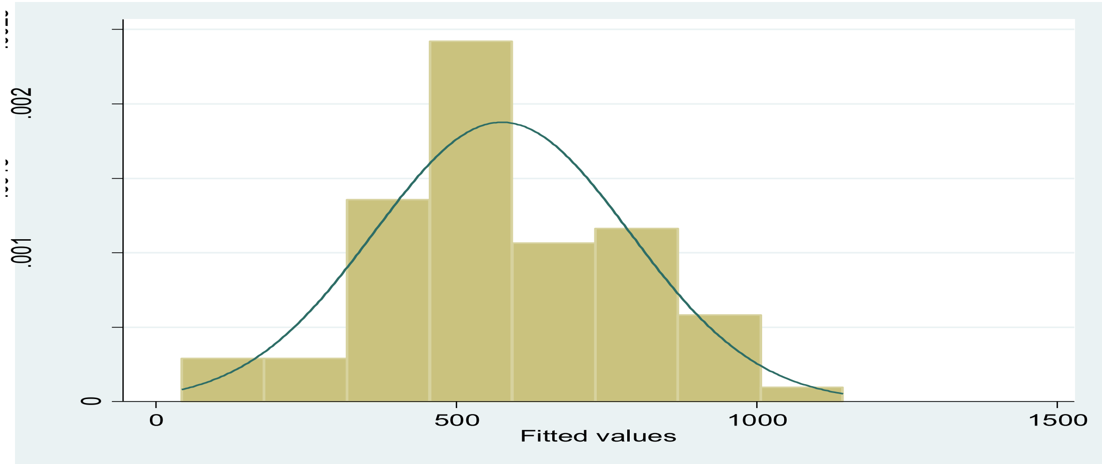
**Table 4. 7: Results for Panel Unit Root test**

| Variables | P-Value | Order of Integration | Trend |
|---|---|---|---|
| **REAL GDP** | 0.0007*** | I(0) | Trend included |
| **REMITTANCE** | 0.0063*** | I(0) | Trend included |
| **lnAID** | 0.0207** | I(0) | Trend not included |
| **lnFDI** | 0.0209** | I(0) | Trend included |
| **lnGCF** | 0.0002*** | I(1) | Trend included |
| **lnENR** | 0.0062*** | I(0) | Trend not included |
| **OPEN** | 0.0106** | I(0) | Trend included. |

***, ** indicates the variable is stationary at 1% and 5% respectively.

From the panel unit root test, the p-values for all the variables are less than 0.05(5%). In this case we reject Ho (the null hypothesis) and conclude that all the variables are stationary. This means that the mean, variance, covariance and Correlation of the variables do not change over time. Time does not cause the change in the shape of the distribution in the data set.

**Results for normality Test :-** The following histogram shows the normality test of the data set used for this study.




The histogram above shows there is no big difference between the distributions of the actual data set and the theoretical normal distribution. This is because the histogram is bell-shaped. Therefore, the data set used for this study are normally distributed.

**Hausman Test** :- To choose between fixed and random effect models Hausman test is used. The following table shows the result for Hausman test.

**Table 4. 8: Hausman Test**

| | (b) Fe | (B) re | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E. |
|---|---|---|---|---|
| REMIT | **7.67e-08** | **1.28e-07 -** | **5.09e-08** | - |
| lnAID | **-.9558422** | **- 203.5781** | **202.6223** | - |
| lnFDI | **19.89861** | **38.94302** | **-19.04441** | - |
| lnENR | **104.3766** | **183.0469** | **-78.67034** | - |
| OPEN | **-.6891622** | **-19.89147** | **19.2023** | - |
| lnGCF | **5.990294** | **57.82804** | **-51.83775** | - |

**Test: Ho: difference in coefficients not systematic**

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 4788.48

Prob>chi2 = 0.0000

The null hypothesis of the Hausman test says random effect is appropriate against the alternative that fixed effect model is appropriate. From the result the P-value of the chi2 is too small less than 1%. So we reject the null hypothesis and conclude that fixed effect model is appropriate. Before using the fixed effect model, fixed effect diagnostic tests are conducted.

**Fixed effect Diagnostic Tests**

**Heteroscedasticity Test** :- To test the heteroscedasticity problem in fixed effect model, Modified Wald test is used. The null hypothesis says the result is homoscedastic against the alternative that there is heteroscedasticity problem in the model. The result of the test is indicated in the following table.

**Table 4. 9: Modified Wald test of heteroscedasticity**

H0: sigma(i)^2 = sigma^2 for all i

chi2 (5) = 32.68

Prob>chi2 = 0.0000

Source: Authors Calculation, 2017.

The command xttest3 used to check the heteroscedasticity problem in the model. From the result it is clear that the null hypothesis is rejected. This is because the p-value of chi2 is 0.0000 which is less than 5%. The result of modified Wald test indicates that the model has heteroscedasticity problem.

**Panel Serial correlation test** :- To check the existence of serial correlation in error terms, Wooldridge test is used. The following table shows the result of serial correlation test.

Wooldridge test for autocorrelation in panel data

H0: no first order autocorrelation

F(1, 4) = 28.455

Prob > F = 0.0059

Here the null hypothesis is rejected and the alternative is accepted which says there is autocorrelation in the model because the p-value of the F test is less than 5%. Therefore, we conclude that the model suffers from serial correlation problem.

**Cross sectional Dependence Test** :- To check the cross-sectional dependency in the model, Pesaran's test of cross sectional independence was used. The command used is "xtcsd, pesaran abs". The null hypothesis is stated as there is cross sectional independence in the model while the alternative is formulated as there is no cross-sectional independency. The result of the test is indicated as below.

Pesaran's test of cross sectional independence = 1.445, Pr = 0.1485

Average absolute value of the off-diagonal elements = 0.274

From the test, we accept the null hypothesis which says there is cross sectional independence in the model because the p-value is more than 5%.

From the diagnostic tests, the fixed effect model suffers from heteroscedasticity and serial correlation problem. Therefore, it is not appropriate to use for this analysis. The model which solves such kind of problems is GLS.

**GLS Estimation Results**

**GLS Estimation Results** :- To avoid serial correlation and Heteroscedasticity problems GLS method of estimation is used. This method removes diagnostic problems which appeared in fixed effect model. The command used for this estimation is xtgls. The following table shows the result of the GLS regression.

**Table 4. 10: GLS Regression result**

| RGDP | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| REMIT | 2.35e-07 | 4.60e-08 | 5.12 | 0.000 | 1.45e-07 | 3.26e-07 |
| lnAID | -185.243 | 38.74115 | -4.78 | 0.000 | -261.1743 | -109.3118 |
| **lnFDI** | 50.51464 | 13.45963 | 3.75 | 0.000 | 24.13425 | 76.89502 |
| **lnENR** | 207.19 | 22.16451 | 9.35 | 0.000 | 163.7484 | 250.6317 |
| OPEN | -24.66547 | 2.224805 | -11.09 | 0.000 | -29.02601 | -20.30493 |
| **lnGCF1** | -36.08 | 37.1798 | -0.97 | 0.332 | -108.9511 | 36.79107 |
| **_cons** | 1130.87 | 551.8806 | 2.05 | 0.040 | 49.20379 | 2212.536 |
| Log likelihood = -423.109 Prob > chi2 = 0.0000 | | | | | | |

Source: Authrs computation, 2017

From the table 4.10 regression result the following estimation is drawn;

$$\mathbf{RGDP = 1130.87 + 2.35e - 07\ REMIT\ - 185.243 lnAID + 50.51464\ lnFDI + 207.19 lnERN - 24.66547OPEN.}$$

**Interpretation of the Results** :- As it is shown in the above GLS regression result, remittance has a positive and significant effect on economic growth of eastern African countries. When remittance increases by one-dollar real gross domestic product per capita increases by 2.35e-07(

0.000000235) USD. The positive effect of remittance is as expected and similar with the results made by Fayissa and Nsiah (2008); Pradhana (2008). All the five explanatory variables are significant at 1% level of significance. The only variable which is not significant is the first difference of logarithm of gross capital formation (lnGCF1). Overall, the model is significant at one percent level of significant.

The logarithm of foreign aid and official development assistance has negative and significant effect on economic growth of East African economy. When AID increases by one percent, real gross domestic product per capita decreases by 1.85 dollars. This is as expected and consistent with the previous studies by Ekanayake and Nsiah (undated). But some of the literatures concluded that foreign aid has a mixed effect on economic growth (Gillanders, 2010).

Foreign direct investment has a positive and significant effect on economic growth of east African countries. When FDI increased by one percent, real GDP per capita of the countries will increase by 0.5 USD. This is consistent with the findings of (Sukar et al., 2006; Alfaro, 2003; Alfaro, 2006).

The secondary school enrolment as a proxy for investment in human capital (lnENR) has a positive and significant effect on economic growth of Eastern African Economy. When the number of enrollment to secondary school increases by one percent, real gross domestic product per capita will increase by 2.07USD. Therefore, investment in human capital is a very important determinant of economic growth in eastern African economy. It is consistent with the findings of (Fayissa &Nsiah, 2008 ).

Another significant variable which affects economic growth of the region negatively is trade openness. When trade openness of the countries in Eastern Africa increases by one unit, real gross domestic product per capita will decrease by 25 USD. Therefore, the more the economy of the region is becoming open, the less the economic growth. In the previous study by Fayissa and Nsiah (2008 ) trade openness of the country was not significantly affecting economic growth.

**Summary and conclusion**

**Summary and Conclusion** :- The main objective of this study was to examine the effect of remittance on economic growth of Eastern African countries. Panel data spanning from 2000 to 2014 used for the selected five eastern African countries. To choose between fixed effect and random effect models, Hausman specification test was conducted. The Hausman specification test showed that fixed effect model is an appropriate one. But fixed effect model suffered from serial correlation and heteroscedasticity problems. Generalized least square method of estimation is used after conducting fixed effect diagnostic tests.

The findings of study using generalized least square method indicate that remittances have a positive and significant effect on economic growth of Eastern African economy. The inflow of personal remittances to the region can spur economic growth.

Other sources that account for the growth of Eastern African Economy includes foreign direct investment, investment in human capital, trade openness and foreign aid. From these sources, the findings of this study showed that foreign direct investment and investment in human capital boosts economic growth of the region. But trade openness and foreign aid have an adverse effect on economic growth of the region. The more the trade is open, the less the economic growth of the countries in the region. The flow of foreign aid to the region affects economic growth negatively. This is because it promotes corruption and it makes the countries more debt-laden, more inflation prone, hidden agenda of donors that affect long run growth, conflict and unrest.

Generally, the finding of this study is consistent and similar with optimists view on remittance and its effect on economic growth.

**Recommendation** :- The Remittance inflow to the Eastern African region boosts economic growth. It improves social welfare in the society. Therefore, the governments of Eastern African countries should create conducive environment for remitters to promote the inflow of remittances. This can be made through establishing easy remittance channels which minimizes the cost of sending money from outside. Like remittance, investment in human capital and foreign direct investment plays a vital role in economic growth of the region. The countries should invest on human capital development since it is the major determinants of economic growth. Foreign direct investment should also be encouraged.

Foreign aid has an adverse effect on economic growth of eastern African countries. The governments in those countries should discourage the inflow of foreign aid. This is because foreign aid results in corruption, dependency, terrorism and unrest. Trade openness has a negative effect on economic growth of the region. This is because trade openness affects domestic producers. When the economy is more open, domestic producers will face competition from outside. Since, the majority of industries are infant, there should be protection for them. In general, it is better to have optimal level of trade openness that encourages domestic producers in eastern African countries.

Finally, the study recommends further investigation on how remittances have Dutch Diseases effect.

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# Utilization of Online Learning Tool to Calibrate Communicative Competence of EFL Learners

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**Abstract** :- Previous studies highlighted the impacts of technology-mediated environments to language learning and teaching. The Rajamangala University of Technology Lanna, after having developed technology-based software to build confidence and improve communication skills of the students, carried out the Phase II of its English Development Program project to test its validity. This quasi-experimental research was undertaken to investigate the effectiveness of EngWow as an alternative online learning resource in empowering the communicative competence of language learners in an EFL classroom. Within a period of three months, data were collected from an intact class of 41 students specializing in Engineering-related courses. The participants were subjected to undergo 10 lessons from the EngWow. Through teacher-made Communicative Competence Test, a pretest and a posttest were administered, and a semi-structured open-ended questionnaire was utilized to validate the quantitative data. Mean and t-test were employed in the treatment of data. Results yielded significant improvement in the communicative competence of the students after having exposed to EngWow. Qualitatively, findings revealed that students favor EngWow due to flexibility of time, accessibility to technology and internet, self-paced learning and researching, face to face interaction, and comfortable environment. Thus, EngWow connives with foregoing researches that technological development is very significant and effective in learning a foreign language.

**Keywords** :- communicative competence, EFL learners, English proficiency, EngWow, online learning tool, technology.

# Contemporary Status, Role and Challenges for Indian Agricultural Development

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I feel privileged to deliver the Keynote address in the 4th international conference of International Social Science & Management Welfare Association. I am wholeheartedly thankful to the organizer and members of the Association for giving me this opportunity. I have chosen to address on the area of "Agriculture" which has remained an integral part throughout my life since childhood and my sincere contributions and work revolves around thisspecific area.

Lewis (1954) wrote **"industrial and agrarian revolutions always go together and economies in which agriculture is stagnant do not show industrial development".**

This statement of Lewis given about two centuries after the Industrial Revolution was based on the empirical analysis of the all the countries in different parts of the world. The hegemony of the developed nations is also based on a strong agricultural base which made them self-reliant in food grains, provided the inputs for the industries and there was transformation in the favour of industrialization. The catastrophe brought by the two World Wars made the dirigiste governments of the developed European and American countries to shift the focus from agriculture to industry in order to establish the supremacy of the market. Though this was in contradiction to the basic nature of market economies but the great depression of the nineteen thirties indicated the role that state had to play (Keynes, 1936). The entire period from nineteen fifties to nineteen nineties was marked specifically towards enhanced technology and industrial production in the developed nations. On the other hand, the developing nations were caught in the quagmire of issues left behind by their colonial rulers, trying to keep themselves economically and socially afloat. Agriculture was the mainstay of all these economies, but lack of capital made the growth process slow and often painful as they had to rely on foreign funds to improve agricultural efficiency. This lead to bringing more complexities. This period also accomplished the emergence of number of theories and models, showing the interaction between farm and the non-farm sector and how this interaction contributed to economic growth and development (Lewis, 1954, Ranis and Fei 1961, Jorgenson, 1961). India was no different than the other colonies of the world, following the same path of evolution, going through similar struggles and crisis brought about by the contradictions of market economy. This paper discusses the various aspects of agriculture in the context of the Indian economy, revealing the evolution made, the problems which arose and the road ahead. The different aspects discussed in the paper are as follows:

1. Agriculture contribution in Income & employment
2. Agriculture for food and nutrition security
3. Agriculture and development
4. Over utilization to efficient utilization of natural resource
5. Agro processing and agricultural produce management

**1. Agriculture contribution in Income & employment :-** Various development theories have suggested that as economies grow and evolve, the contribution of the primary sector to GDP and employment should continuously decline. The results of the developed nations have revealed this transition which was expected to be replicated in the developing nations too. Table 1 indicates the structural transformation of some of the emerging economies who initiated towards liberalizing their economies at the same time. The time period taken is that of the last twentyfive years after the adoption of New Economic Policy in India and this has been the same period when theother emerging economies also started changing their policies although the political structures of these countries being very different from that of India. The decline in the share of agricultural income in the GDP of the country is maximum in case of China followed by Vietnam and Malaysia. In case of share of workforce of agriculture in the total employment, Brazil, China and Malaysia have declined their share by more than half and in case of Vietnam, there has been a decline of about forty percent. India has experienced this transition at the lowest rate because of the slow growth of the non-farm sector of the country. Studies by Mellor 2000, Delgado, Hopkins and Kelly 1998 show that the non-farm sector acts as the bridge between under-development, under-employment and wage-employment which decreases the burden on agriculture. In case of Vietnam, the government policies have transformed from command economy to a more market led economy and after becoming the member of WTO in 2007, there was change in the outlook leading to rapid transformation in the economy.

**Table 1: Structural Transformation of Some Emerging Economies**

| Country | Share in National Income % | | | | Share in employment Income % | | | |
|---|---|---|---|---|---|---|---|---|
| | **1991** | **2001** | **2011** | **2018** | **1991** | **2001** | **2011** | **2018** |
| India | 27.3 | 21.6 | 17.2 | 14.5 | 63.0 | 59.0 | 49.0 | 43.9 |
| Brazil | 6.8 | 4.8 | 4.3 | 4.4 | 22.4 | 19.9 | 15.4 | 9.4 |
| China | 24.0 | 14.0 | 9.2 | 7.2 | 59.7 | 50.0 | 34.8 | 26.8 |
| Malaysia | 14.4 | 8.0 | 11.5 | 7.7 | 22.0 | 15.1 | 11.5 | 11.1 |
| Vietnam | 40.5 | 23.2 | 19.6 | 14.6 | 68.6 | 64.0 | 48.3 | 39.8 |
| World | 7.60 | 4.77 | 3.70 | 3.43 | 43.8 | 39.7 | 32.2 | 28.3 |

**Source: World Development Indicator, World Bank.**

The Indian economy is an interesting case study as it presents a unique case of rural economy provided by NSSO data where the number of cultivators have remained constant at 138 million between1993-94 and 2017-18.However, there was an increase in the intervening inter-weaning period but eventually it declined to remain constant.On the other hand, the number of agricultural labourers has declined at a rapid rate. It was ninety one million in 1993-94 which decreased to fifty million in 2017-18 (NSSO, 2018). Although this is a good sign for the economy but the decrease in the female labour force mitigates the focus of the policy makers on increased feminization of agriculture. In the period between 1993-94 and 2017-18, the number of female agricultural workers declined from thirty seven million to twenty million which is not a good sign for the economy. In India, the policy makers gave importance to the small and cottage industries during the seventies and eighties but the simultaneous increase in the skill sets was not there which did not fulfill the aspirations of the agricultural youth to shift to the non-farm sector. In the first five years of the NDA government, there has been constant focus on skill development of the youth which is expected to increase the flow of youth from farm to the non-farm sector. Different programs, like, Skill India is a worthy initiative by the government to improve the skills of the rural youth which will move them from the low paid rural agricultural work.

**2. Agriculture for food and nutrition security :-** The main aim of promoting agriculture is to achieve sufficiencyin food and secure adequate nutrition for the population of the country.The supply side factors of agriculture in terms of its production and productivity are essential for food security and nutrition of the country, but the demand side is also equally important. India still has a large population of 194.4 million who are undernourished which is 14.5 percent of the total population. This share is noticeable, although it has declined over the years.. The IADP of the nineteen sixties made the country self-sufficient in food grains with bumper crops in wheat and paddy, however, the problem of distribution as raised by Amartya Sen prevailed, thus keeping the problem of malnourishment and undernourishment intact. The total supply of cereals, pulses, edible oil, sugar, milk, eggs and fish and meat have increased in almost all the countries studied in this paper in the two time periods taken for the study. In China, the supply of pulses have gone down as it focused on increasing the supply of milk, eggs and meat & fish so as to

**Table2: Annual Food Supply per capita in kgs.**

| Commodity | Year | India | China | Malaysia | Vietnam | Brazil |
|---|---|---|---|---|---|---|
| Cereals | TE 1982 | 144.7 | 160.0 | 147.1 | 153.0 | 111.5 |
| | TE 2013 | 148.7 | 150.4 | 149.2 | 164.8 | 115.0 |
| Pulses | TE 1982 | 12.0 | 4.6 | 2.7 | 1.8 | 16.3 |
| | TE 2013 | 14.1 | 1.4 | 3.1 | 3.1 | 16.3 |
| Edible oil | TE 1982 | 5.1 | 3.4 | 15.2 | 0.6 | 11.7 |
| | TE 2013 | 8.7 | 7.7 | 15.3 | 2.7 | 17.7 |
| Sugar | TE 1982 | 19.3 | 5.7 | 34.5 | 6.0 | 50.5 |
| | TE 2013 | 22.9 | 7.1 | 43.6 | 10.2 | 42.6 |
| Milk | TE 1982 | 40.6 | 3.2 | 40.1 | 1.4 | 80.9 |
| | TE 2013 | 84.7 | 32.6 | 29.4 | 16.1 | 150.3 |
| Eggs | TE 1982 | 0.7 | 2.7 | 9.0 | 0.9 | 5.6 |
| | TE 2013 | 2.5 | 18.6 | 14.6 | 3.7 | 8.9 |
| Meat & Fish | TE 1982 | 6.2 | 6.9 | 47.4 | 13.1 | 38.2 |
| | TE 2013 | 8.5 | 43.6 | 95.4 | 48.0 | 92.0 |

**Source: FAO Statistics 2019.**

improve the nutrition levels of the masses. In Malaysia too, the supply of milk went down drastically but it was more than offset by the increase in the supply of eggs and meat & fish. If India and China are compared, the change in the nutrition level can be gauged by the supply of eggs and meat and fish which shows a change in the dietary pattern of the population of the two countries. India ranks very poorly in the World Hunger Index with the ranking of 102 out of 117 countries in 2019 with a score of above 30 which shows that the hunger problem is serious in the country (GHI, 2019). Over the years, the government has introduced a lot of schemes like the mid-day meal scheme so as to improve the nourishment level of the students. This will help in enriching the human capital of the country.

**Table 3 Share of Undernourished Population in Total Population**

| Country | Number of people Undernourished (millions) | | | Share of Undernourished to population (%) | | |
|---|---|---|---|---|---|---|
| | **1995/97** | **2004/06** | **2016/18** | **1995/97** | **2004/06** | **2016/18** |
| Brazil | 16.2 | 0.1 | 0.1 | 9.8 | 0 | 0 |
| China | 164.4 | 206 | 122.4 | 12.8 | 15.1 | 8.4 |
| India | 204.4 | 253.9 | 194.4 | 20.8 | 22.1 | 14.5 |
| Indonesia | 11.5 | 44.1 | 22 | 5.8 | 19.5 | 8.3 |
| Vietnam | 14.1 | 15.3 | 8.8 | 18.5 | 18.3 | 9.3 |
| World | **787.5** | **940.5** | **809.9** | **14.0** | **14.4** | **10.7** |

**Source: FAO-SOFI**

The problem of undernourishment is not limited to economically backward class but is found in the economically upper classes as well as the intake of quantity of food is not the only criteria but the contents in the food are also important (Chand and Jumrani, 2013). Brazil has made the most significant improvement in terms of reducing hunger and malnourishment. It went out of the United Nations Hunger Map in 2004 as the government gave adequate importance to the catastrophe of hunger by adopting the program called Fome Zerowhich takes poverty, hunger and encouragement to small agriculture together and this has helped the country to bring down the share of undernourished people to zero percent.

**3. Agriculture and development :-** Agriculture is considered to be the engine of growth for most of the emerging economies of the world and India is not altogether different from them. In the past seven decades, the growth of agriculture has had direct or indirect impact on the growth rate of the economy, depending upon the priority sector of the country. Economic development of a country primarily depends on the core sector which generates income and employment for the economy and fuels the growth rate year after year. The Hindu rate of growth of the Indian economy till the mid-eighties have been because of the slow growth of the agricultural sector and burgeoning dependency on this sector for employment. Developmental indicators like education, health, roads, power supply, total fertility rate, infant mortality rate and others have been affected by agriculture especially in the rural areas.

Technological intervention in the form of High Yielding Variety of seeds resulted in the exponential increase of production of cereals and pulses, without taking care of productivity and the distribution of the surplus production. In the eighties, productivity became a focal point for the policy makers as it was understood within a decade of the Green Revolution that per hectare productivity was more important than total production. The advent of globalization and liberalization paved the way for agriculture as it was now opined that with market led growth, decontrol of agriculture would also take place which would increase the income of the farmers, thereby bringing about drastic change in the rural economy. But it was disappointing that the state intervention loosened in the name of the role of the invisible hand which became detrimental for Indian agriculture. Farmers could not compete with technology brought in by the big corporates and they also lacked access to credit which made the small and marginal farmers more susceptible to the vagaries of weather and markets, thereby reducing their income and progress. The rural youth is also not willing to stay back in agriculture as they feel that it involves hard work with very low returns. Nonetheless, this surplus labour of agriculture is not easily absorbed by the non-farm sector as their requirements are different which puts the rural youth at a disadvantage. This hinders the development process and givesrise to many social problems.

**4. Over utilization to efficient utilization of natural resource :-** The demand and supply of agricultural products is key to set the price of these products. Till the time supply exceeds demand, the prices can be kept lower than the international level so as to make exports more profitable. In India, Minimum Support Price (MSP) mechanism followed by the government does the reverse as this sets the internal price of agricultural products more than the international price which makes the exports sheen less. Along with MSP, the government also gives away a lot of sops to this sector in the name of welfare without looking at the capital formation of the sector. Fertilizers and insecticides are subsidized along with power and other farm inputs which takes away the importance of these inputs, thereby leading to injudicious use of them which leads to crisis in agriculture.

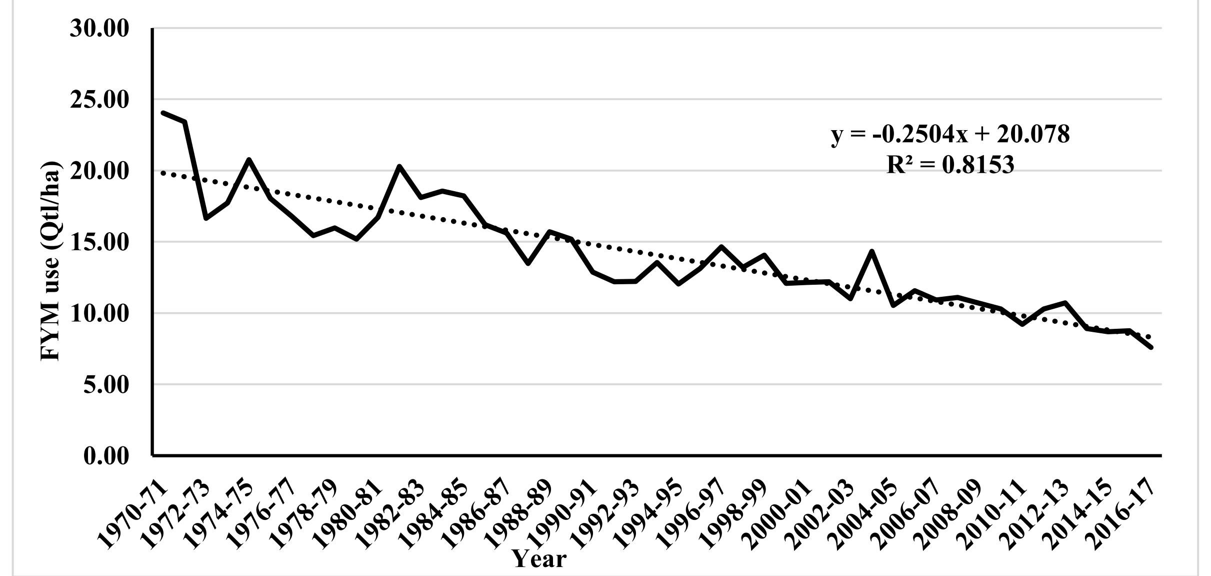


Fig. 1 Farm Yard Manure Use (Qtl/ha)

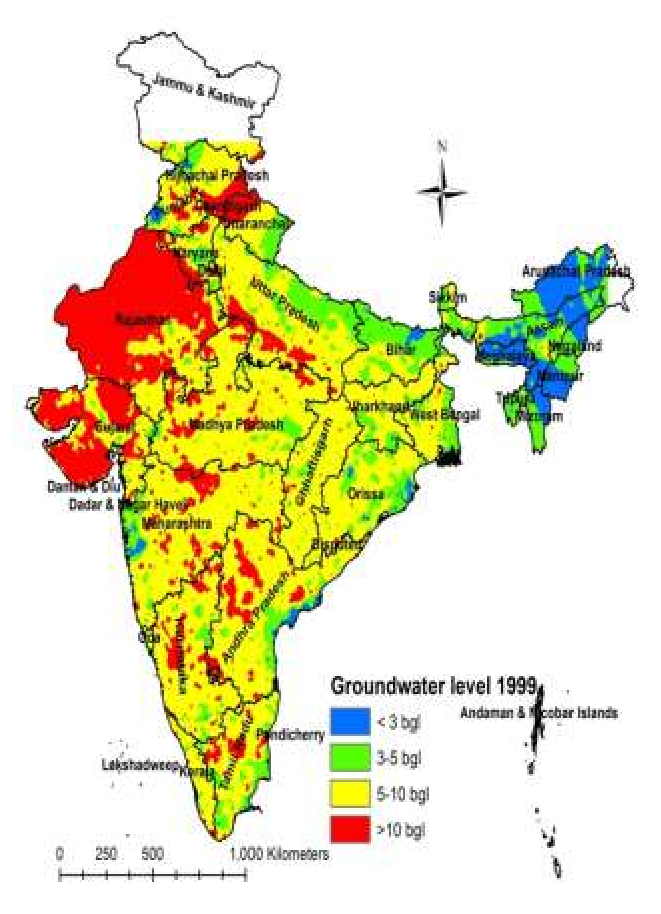


Fig : Pre monsoon Groundwater level in India during 1999

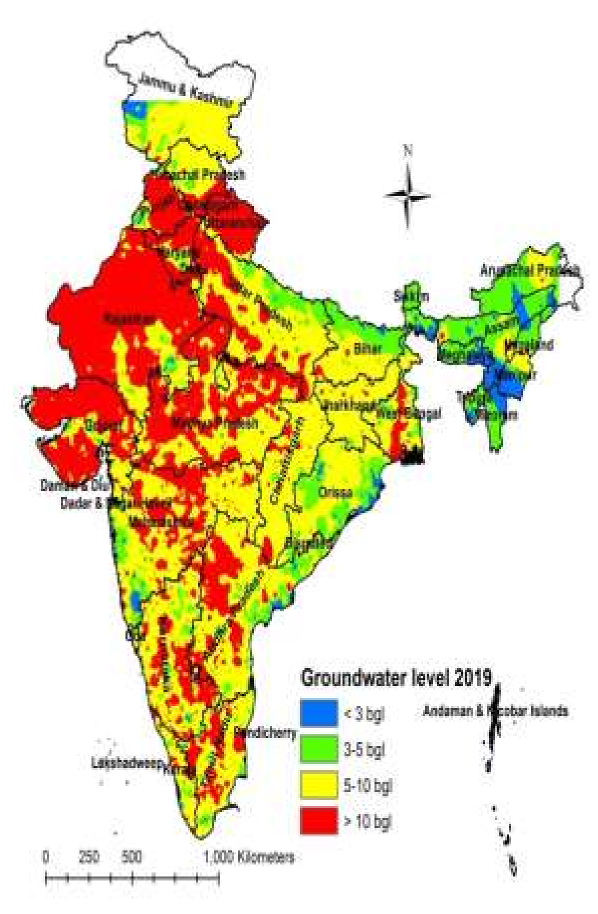


Fig : Pre monsoon Groundwater level in India during 2019

In the initial days after independence, technology was used intermittently which kept the productivity low but also conserved the soil and the water table of all the states. The farm yard manure use per hectare has declined over the years as the subsidies for chemical fertilizers went up and there was a rush to reap the benefits of Green Revolution by all the states. The decline in the use of FYM has been very high as this clear from the beta value of the OLS equation. Though the country has adopted modern methods of cultivation but the indiscriminate use of these inputs have also led to the decline in the ground water level in all the states as is evident from figure 2 which shows the map of ground water level at two different points of time. In advanced countries, area specific techniques are being used with high precision level yielding better results.

Most of the crops grown in India are water intensive and with free or subsidized power supply, the farmers are not changing the crop patterns. As a result of this, the Green House Gas emission is also on the rise. States like Punjab and Haryana, known as the Bread Basket of the country have increased paddy cultivation, thereby using more water and the 2019 maps clearly indicates that these states have ground water level so depleted that it has gone down below 10 meters. This is the case when still about fifty percent of the cultivable land is outside the purview of irrigation and rainfall still remains the main source of water. The net sown area of the country is 140130 thousand hectares and net irrigated area is 68385 thousand hectares. If water for cultivation of one ton of food grain is taken, then India uses about three times more water than the advanced countries.

Agriculture is responsible for seventeen percent emission of greenhouse gases which is almost equivalent to its contribution to GDP. For the past three to four years, residual burning has become a national issue as the city of Delhi become unbearable to live because of the rise of SPM in the air, mainly because of the paddy residuals burnt in Punjab and Haryana. The government has to take proper steps to curb the menace if it wants optimal utilization of resources. Another factor that needs to be kept in mind is that fifty percent of the land of the country is being used for agriculture, thereby reducing the quantum of land available for non-agricultural purpose. Thus, it is crystal clear that if agriculture wants to contribute to development it has to make judicious use of the resources.

**5. Agro processing and agricultural management :-** Food Processing Industry of the country has been named as the Sunshine Industry with state policy directed towards improving the forward linkage of the sector. Apart from this, the horticulture department has also initiated a lot of policies especially in the North Eastern states with the aim of increasing the income of the farmers. The liberalization policy initiated by the state in the beginning of nineteen nineties was believed to be the initiation from where the primary sector would take off. The economic growth rate of the country doubled to about 9 percent from the previous decade but agriculture continued to grow at the rate of about 2.3 percent. The per capita income of the country doubled in 17 years which previously took 37 years whereas agricultural income doubled in 23 years as earlier. These gaps in the growth rate of the economy and of this sector has not seen much improvement in the income of the farmers. The non-farm sector person earns almost three times the income of the farmer (Chand, 2019). Currently the government is striving to double the farmers' income by 2022.

One of the major obstacles for the farmers' to increase their income is the lack of markets and marketing opportunities. Infrastructure for storage is insufficient and lacks maintenance wherever it is present. In case of food grains, pulses, cereals, the government and farmers are satisfied with the MSP without looking for a step ahead. In many states, the farmers are getting less than MSP even for wheat and paddy which is mostly bought by FCI. If only the governments in all the states ensure that farmers get the MSP, it would increase their income by about 32 percent. Further, the policy makers are not treating pricing as a way to increase the income of the farmers. If the price of the output increases by 10 percent, then farmers' income goes up by 16 percent. Competitive market is the urgent need of agriculture where the farmers sell the agricultural commodities like any other commodity. Corporate farming is another initiative that is being promoted by NITI Aayog but it needs to be cautious so that the farmers' rights are not targeted.

Agriculture Product Market Committee Act 2003 and 2017 have been enacted so as to give the states the power to notify products that can be sold in the regulated markets. There are about 2477 principal regulated markets and 4873 sub market yards. The reason the central government is encouraging all the state governments to enact this act is to have better facilities and amenities for the farmers to sell their product.

A paradigm shift in agriculture is needed so that it becomes a business of profit, far away from the vagaries of weather, a sector which is seen to be dependent on the state for its growth. Coordination between the Central and State governments' is required so as to implement the policies in a more effective manner. Technology has to play a better role and it needs to be focused and pinpointed. Private sector needs to invest more without exploiting the farmers and the environment.

**Disclaimer :-** Views expressed in the paper are personal and do not represent the organizations with which the author is associated.

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# Sustainable Agriculture Development in India and its Challenges

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**Abstract :-** Indian economy is an agricultural economy because 75 percent of people depend on agriculture. In the present Paper, we have studied the issues and Challenges of the Agriculture Sustainable Development in India. Sustainability entails and attains the equilibrium amid the demand and supply of agriculture produce. The green revolution may fetch the efficiency in the agriculture produce and thus, the productivity enhanced. The eventual performance of agriculture depends on the performance of a variety of resources, the strategies and the methods that should be adopted. To face the aridity due to the decrease in the rainfall, the agriculturists have to make use of the pioneering strategies. Agriculture is the main occupation in our country because the large population is living in rural areas and having agriculture as their source of revenue. Sustainable development in the agriculture sector aims to amplify the output, efficiency and the level of employment with more aims to keep and conserve the natural resources by the over-consumption.

**Keywords :-** Agricultural production, Sustainability, Agriculture, Biodiversity, climate change, Water Resources.

**Introduction :-** The development of Sustainable agriculture combines the three most important goals. Economic prosperity, Environmental health and livelihood sustainability. On the other hand, sustainability rests the opinion that we should convene the needs of the present with no compromising the ability of the future generations to assemble their own needs. Therefore, the maintenance of both natural and human resources is of prime importance. The conservation of human resources includes thought of the social responsibilities such as the working and living conditions of the farm families, needs of rural communities, and consumer health and safety both in the existing and the future. The conservation of land and natural resources involves maintaining and enhancing this vital resource base for the long term. Sustainable agriculture is one that produces the plentiful food with no depleting the earth's resources or polluting its surroundings. It is crop growing that follows the principles of nature to expand systems for raising crops and livestock that are, like nature, self-sustaining. Sustainable agriculture is also the agriculture of social standards, one whose success is interchangeable from exciting rural communities, rich lives for families on the farms, and nourishing food for everybody. But in the first decade of the 21st Century, sustainable agriculture, as a set of commonly accepted practices or a model farm economy, is still in its infancy more than an idea, but only just. The agriculture sector also contributes to the sustainable development of a country. Sustainable agricultural development depends upon the availability of the natural resources of the country. India is a country where about two third of the population lives in the rural areas and having agriculture as their livelihood.

**Characteristics of Sustainable Agriculture :-** While reducing the impacts on environment and

- A Produce safe and healthy food characteristics of sustain
- Conserve natural resources
- Ensure economic viability
- Deliver services for the ecosystem
- Manage the countryside
- Improve the quality of life in farming areas
- Ensure animal welfare
- Ensures sufficient production for current and upcoming generations
- Supports the multi functionality of agriculture

**Pointed For The Study :-** Agriculture plays an important position in economic growth and development and has, therefore, remained the largest platform. Agricultural performance in the 90s has randomly fluctuated extensively with a waning trend over the period. The close association between the performances of agriculture and that of the economy apparently entails that agriculture must grow at a high rate for it to stimulate economic growth. On the other hand, for agriculture to grow at the expected rate, and it is essential that quality investments are done in key areas that have potential for growth. In the last three decades, the government has realized that non-targeted investments in agriculture could be unacceptable. some future investments in agriculture should consequently be focused to shun such disappointments and attain the planned objectives. For example, even with the wide-ranging poor performance of the agriculture, few sub-sectors such as horticulture and dairy have performed glowing. Accordingly investments in agriculture ought to be targeted to the areas that are liable to attain the high productivity.

**Objectives Of The Study :-** The study has the following objectives:

1. To study the problem and challenges with the position of the agricultural sector and development.
2. To examine that how and to what amount of sustainable development is touching the production policy in agricultural sector in India.
3. To recognize the areas of intervention that could attain the sustainable agricultural growth.
4. To analyze the extent of sustainable development in the agricultural sector in India.
5. To find the future prospects and solution for India.

**Data Source And Methodology :-** The study is based on the secondary data that is obtained from the following sources :-

- Books, Articles, Reports, Journals, Magazines, News Papers and Government websites.

**Agriculture Sector of India :-** Agriculture the most well-known sectors of the Indian economy. It is the source of income for approximately two third of the rural population workers in the country residing in the rural areas. Besides Indian agriculture provides the employment opportunities to 65% of the labor force, accounts for about 27% of GDP, contributes 21% of total exports and raw material to more than a few industries. The livestock sector contributes an predictable 8.4% to the country GDP and 35.85% of the agriculture production.

In India about 75% people are living in rural areas and are still dependent on agriculture, that is why Indian economy is an agragrian economy and about 43% of India's geographical region is used for agriculture actions. Thus the estimated production of food grains is about 211.17 metric tones in our country. The total geographical area comes under the agriculture are 329 MH out of which 265 MH represent varying degree of potential production. The net sown area is 143 MH out of which 56 MH are net irrigated area in the country.

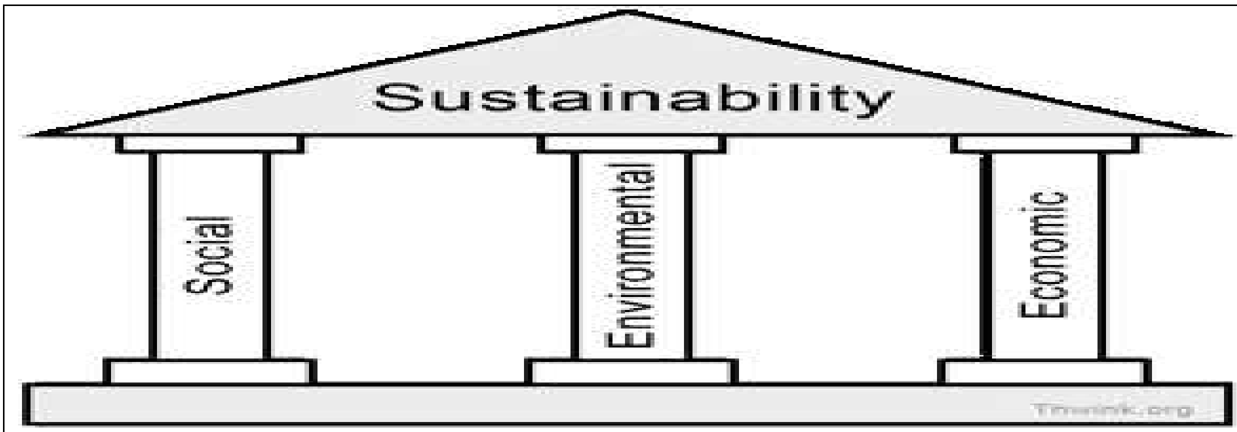
**Agricultural Production In India :-** The Agriculture production of india and in the most parts of the country is closely associated to the most favorable use of the available natural and human resources of the country. Therefore, riding on the back of agro climatic circumstance are rich in natural resource base, today india has become the world's leading manufacturer of the several commodities. India is a leading manufacturer of different commodities like coconuts, mangoes, milk, bananas, dairy products, ginger, turmeric, cashew nut, pulses and black pepper. India is also the second major producer of rice, wheat, sugar, cotton, fruit and vegetables. Indian agricultural production is intimately associated to the adequate and wise water management practices. Most of the agricultural practices in our country cramped to a few monsoon months. During the monsoon season, India is generally capable with generous rainfall; even though not infrequently, this abundant monsoon turns into the terror, causing unmanageable floods in the different parts of the country and ultimately affecting the agricultural production.

**Tabular representation of Agricultural productivity in India.**

| **Agricultural productivity in India, growth in average yields from 1970 to 2010** | | | |
|---|---|---|---|
| Crops | **Average yield, 1970-1971** | **Average yield, 1990-1991** | **Average yield, 2010–2011** |
| | kilogram per hectare | kilogram per hectare | kilogram per hectare |
| Rice | 1123 | 1740 | 2240 |
| Wheat | 1307 | 2281 | 2938 |
| Pulses | 524 | 578 | 689 |
| Oilseeds | 579 | 771 | 1325 |
| Sugarcane | 48322 | 65395 | 68596 |
| Tea | 1182 | 1652 | 1669 |
| Cotton | 106 | 225 | 510 |

Source: http://en.wikipedia.org/wiki/Agriculture_in_India

**Sustainable Agriculture Development :-** The problems of sustainable development can be discussed below the three extensive types of farming systems viz. customary production system, modern agriculture system and sustainable agriculture system. Besides, we can contrast them diagonally into the three dimensions, environmental, economic, and social sustainability.




**The three Pillars of Sustainability**

The principle of The Three Pillars of Sustainability says that for the complete sustainability problem to be solved all three pillars of sustainability must be sustainable. The three pillars are social sustainability, environmental sustainability, and the economic sustainability.

**Ecological Sustainability :-** The majority of the traditional and conservative farm practices are not economically sustainable. They use wrongly the natural resources, tumbling the soil fertility which causes soil erosion and contributing to the global climatic transformation. Although the sustainable agriculture has some main advantages over the traditional practices.

**Soil Fertility :-** The constantly reduction in the soil fertility is one of the foremost problems in several parts of India. With the help of Sustainable agriculture the fertility and soil structure of the earth is improved.

**Water :-** Irrigation is the prime consumer of fresh water, and fertilizer and pesticides polluted both the surface and ground water. Sustainable agriculture amplify the organic matter content of the top soil, therefore raising its ability to preserve and store water that falls as rain.

**Biodiversity :-** Sustainable agriculture practices involves the mixed cropping, accordingly increasing the variety of crops produced and raising the diversity of insects and other animals and plants around the fields.

**Health & Pollution :-** The Chemicals, pesticides, and fertilizers defectively affects the local ecology as well as the population. Haphazard utilisation of pesticides, inappropriate storage etc. may leads to health problems. With the help of Sustainable agriculture it reduces the use of dangerous chemicals and control pests.

**Land use Pattern :-** Over-exploitation of land causes soil erosion, landslides, and flooding clogs irrigation channels and reduces the arability of the land. With the help of Sustainable agriculture we can avoid these problems by improving the productivity and conserving the soil.

**Climate :-** The conservative agriculture contributes to the production of greenhouse gases in different ways like tumbling the quantity of carbons stored in the soil and in vegetation, through the production of Methane in irrigated fields and the production of artificial fertilizers etc. By adopting sustainable agriculture system, one can easily beat this trouble.

**Economic Sustainability :-** The economic sustainability is the capability of an economy to sustain a defined level of the economic production indefinitely.For agriculture to be sustainable, it must be economically feasible over the long term. Conservative agriculture involves more economic risk than sustainable agriculture in the long term. Sometimes governments are tending to view the export-oriented production systems as more significant than the supply of domestic demands. This is not exact, but focusing on the exports only involves the unseen costs in transport and in assuring the local food security etc.The policies must be care for the domestic demand and in exacting food security as similarly vital to the visible of the trade balance.

**Social Sustainability :-** The capability of a society and to develop the processes and structures which not only meet the needs of its current members but also maintain the ability of the future generations to preserve the healthy community. The Social sustainability is in the farming techniques is associated to the ideas of social acceptability and justice. Development cannot be sustainable unless it reduces the poverty.The sustainable development aims at increasing the productivity as well as growing the level of employment in the country. Development is worthless if it is not able to reduce the level of poverty. Many modern technologies are unsuccessful because of their inadequacy like complexities in use and are not easily reachable to the poor farmers. In old method of the agriculture system the women's had more burden of work.

**Emerging Challenges and Opportunities :-** The session on 'Emerging Challenges and Opportunities' began with a keynote address by Dr M.S. Swaminathan, Member of Parliament and Chairman, MSSRF. He cherished the timely proposal of TAAS in organizing the workshop since its recommendations could afford a new policy direction to the new government. Such efforts were required to address the current challenges like management of global food crisis, adaptation to climate change, and the cooperatives of increasing farm incomes. His address focused on the following five major issues:

The first and leading issue was of conservation and, wherever possible, enhancement of ecological foundations for sustainable agriculture, which included land, water, biodiversity, and marine resources. Urbanization was exerting the terrific pressure on available of land and water resources. Prime agricultural land was getting converted to non-agricultural uses, which required to be reversed through the appropriate land use policy. Common property resources required to be protected as well. There was a noteworthy innovative development in small farm management in respect of all the sub-sectors, i.e., crops, animal husbandry and fisheries. This process required to be confident and to provide the power of mass production to production done by the mass of small farmers. The Institutional mechanisms enabling this process should encompass (i) a decentralized production for growing the availability of quality seeds with the essential insurance coverage, (ii) delivery of enhanced technology and associated services to the farmers, and (iii) aggregation of produce to get better market access, which basically should target 'end-to-end' or 'farm-to-plate' approach covering production, processing, marketing, etc. In addition, the agriculture should be made a efficiently pleasing and rationally satisfying occupation to attract the youths to farming.

The direction of the agricultural development should shift from increasing production to raising farm income. This was the significant to check the widening rural-urban inequality and to diversify rural livelihood options, covering crops, livestock, fisheries and horticultural activities. Consequently, linking farmers to market must receive the high priority.

**Issues & Challenges :-** The middle issue in agricultural development is the obligation to improve the productivity, generate employment, and afford a source of income to the poor segments of population. Studies by FAO (Food and Agriculture Organisation) that have shown small farms in the developing countries that contributes around 30-35% to the total agricultural output.

The speed of adoption for the modern technology in India is slow and the farming practices are too messy and unscientific. Some of the basic issues for the development of Indian agriculture sector are renaissance of the cooperative institutions, improving rural credits, research, human resource development, trade and export promotion, land reforms and education.

**Future Prospects and Solution for India :-** The Agriculture sector is an important donor to the Indian economy approximately which shows the socio and economic rights and deprivations rotate and any change in its structure is likely to have a corresponding blow on the existing pattern of social equity. Sustainable agricultural production depends ahead the efficient use of soil, water, livestock, plant genetics, forest, climate, rainfall, and topology. Indian agriculture faces resource constraints, infrastructural constraints, institutional constraints, technological constraints and policy induced restrictions.

Sustainable development is the organization and protection of the natural resource base and the direction of technological and institutional change in such a manner as to make certain the accomplishment and continued satisfaction of human needs for the present and future generations. The sustainable development in the agriculture, forestry and fisheries sector, conserves land, water, plant and animal genetic resources, and is environmentally non-degrading, technically appropriate, economically possible and socially satisfactory. Therefore, to achieve the sustainable agriculture development and the optimum use of natural resources, human resources, capital resources and technical resources are necessary.

In India, the crop yield is profoundly dependent on rain, which is the main reason for the declining growth rate of agriculture sector. These uncertainties hits the small farmers and laborers worst, which are frequently leading a hand to mouth life. Therefore, something must be done to the support farmers and sufficient amount of water and electricity must be supplied to them as they feel anxious and carry on to die of drought, flood, and fire. Our country is the second largest country of the world in terms of population and it must be realize that it is a great resource for the country. India has a enormous number of idle people. So there is a need to find the ways to explore their endowment and make the numbers which donate towards the growth, particularly in the agriculture and inactive unemployment can be noticed.

The sustainable development in India can also be achieved by the fuller utilization of human resources. A large part of poor population of the country nearly 75% is engaged in the agricultural sector, unless we increase their living of standard, and on the whole the growth of this country is not possible. If we keep ignoring the poor and this inequality will keep on the increasing between classes. Debt traps in the country were forcing to the farmers to commit suicides. People are migrating towards the cities with the great hope of better livelihood, but it is also rising the slum population in the cities. Therefore, the rural population should be given employment in their areas and a opportunity to grow. India has been carrying the label of "developing" country for quite long now; for making the move towards "developed" countries, we have got to get rid of this huge dependence on the agriculture sector.

**Conclusion :-** Thus we may conclude that for a growing country like India the practice of sustainable agriculture is of quite importance as it accelerates the productivity, efficiency, employment, and providing guidance to reduce the practices which affect the quality of soil, water resources and degradation of other natural resources. It essentially aims at the adopting of interest and using the environment friendly tools to protect and conserve the environment as well as to improve the level of production without harming to the environment. As we see the performance of agricultural sector of India we will be recognize without doubt that the performance have been increased in a considerable manner over the years. Despite of many challenges like urbanization, Growth of secondary sector etc. it has achieved an important growth.

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# A Study of Global Warming and Its Impact of Climate Change in India

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**Abstract :-** Global warming is defined by the average temperature rise on Earth. As the earth is warming, disasters such as hurricanes, droughts, and floods are increasing frequently. In the past 100 years, the average air temperature near Earth's surface has risen slightly below 1 degree Celsius or 1.3 degrees Fahrenheit. Deforestation increases the intensity of global warming. The ocean is a huge carbon sink, with 50 times more carbon than the atmosphere. Like the past, the sea is no longer able to store carbon. Fossil fuels such as natural gas, coal, oil and gasoline increase carbon dioxide levels in the atmosphere, and carbon dioxide is the major contributor to greenhouse effect and global warming. Climate change will increase the number of people affected by heat waves, floods, storms and droughts, resulting in death, illness and injury. Floods are less likely, high impact events that can overwhelm the physical infrastructure and the human community. The last two decades have been major storms and flood disasters. Fossil fuels can help reduce demand, which in turn reduces global warming by consuming energy more wisely. Natural and human- induced, global warming can happen for a variety of reasons. Larger greenhouse gases, such as water vapours, carbon dioxide, methane, nitrous oxide and ozone, when trapped by the sun's heat and light from the atmosphere, increase global temperatures, and result in intense temperatures. This act is commonly referred to as greenhouse effect. This paper tries to highlight the present status of climate change in Indian context.

**Keywords :-** Global warming, Flood disasters, Heat waves, Greenhouse Gases.

**Introduction :-** Mankind equitable standard of living like adequate food, water, energy, safe shelter and healthy environment for present as well as future generations. But casual acts of emission of greenhouse gases by burning fossil fuels and deforestation has increased the earth's average surface hotness, which is defined as global warming. It is proved that the warming on the earth's surface over last 50 years is mostly clue to the anthropogenic activities. Further it is predicted that the global mean surface hotness will likely he in the range of 0.3-0.1% for the period 2016 -2035. Is rise in hotness may cause various changes such as sea level rise, melting of snow sheets and change in precipitation pattern. Hence, global warming can be considered as the major imperfection parameter in changing the earth's climate. Any significant change in climate may imperfections agriculture activities at larger scale. It is predicted that increase in hotness will show overall negative effects on agriculture activities in the wor1d. Generally agriculture productivity in developing countries is expected to decline by 9-21% because of global warming. In case of India, almost 70% of the population depends on agriculture activities for their livelihood. 23% of India's Gross National Product representing agriculture activities sector alone, which plays a major role in the country's development and shall continue to hold an important place in the national economy. It is globally accepted that precipitation is a leading factor imperfection especially rain fed crop yield. Too much precipitation can origin disease infestation in crops, while too little can be detrimental to crop yields; especially dry periods occur during critical development stages.

**Statement of Problem :-** The "green revolution" of the twentieth century has allowed the farmers of the world to use chemical fertilizers and machines to produce far more food than they ever did before. One of the primary components of the green revolution has been the development of nitrogen fertilizers that dramatically accelerate the growth and productivity of plants in the field. Plants "fix," or capture, nitrogen on their own as well, but green revolution technologies have become so popular that humans are now adding more nitrogen to the earth than all of the plants in the world combined.

**Research Objectives :-**

- To study the effectiveness of Global warming and its impact on agriculture sector.
- To study the impact of climate change on various sectors.

**Research Methodology :-** A collection of studies and documents have been studied and analysed. This is a comprehensive written paper; this study was developed with the help of secondary data. The main sources of secondary data have been collected from books, magazines, and research articles, and various online sites that provide relevant information on Global warming.

**India's Weather Situation :-** Like other countries, India has also started experiencing extreme weather events which lead to change the climate. As mentioned earlier, global warming is one of the major imperfection parameter to change the climate. In India, it is observed that the annual mean hotness has increased at the rate of 0.42°C. Indian agriculture activities system is based upon south-west and north-east monsoon Almost 80% of the total precipitation comes from south-west monsoon in India. Any Fluctuations and uncertainties in long range precipitation pattern may imperfection the agriculture activities sector and also lead to increase the frequency of droughts and floods at Bihar, Kerala, Madhya Pradesh, Assam, West Bengal and Maharashtra areas scale. A significant increasing trend in precipitation was reported along the west coast, north Andhra Pradesh and North West India and while significant decreasing trend was observed over parts of Gujarat, Madhya Pradesh and adjoining area, Kerala and northeast India. North western areas of India gets imperfection by western disturbances at small scale as such disturbances have impact only on Rabi season production only for not more than 20-30 days. Not only monsoon, but hotness has also shown its effect on agriculture activities.

**Effects Of Global Warming :-** Increasing global temperatures are causing a broad range of changes. Sea levels are rising due to thermal expansion of the ocean, in addition to melting of land ice. Amounts and patterns of precipitation are changing. The total annual power of hurricanes has already increased markedly since 1975 because their average intensity and average duration have increased (in addition, there has been a high correlation of hurricane power with tropical sea-surface temperature). Changes in temperature and precipitation patterns increase the frequency, duration, and intensity of other extreme weather events, such as floods, droughts, heat waves, and tornadoes. Other effects of global warming include higher or lower agricultural yields, further glacial retreat, reduced summer stream flows, species extinctions. As a further effect of global warming, diseases like malaria are returning into areas where they have been extinguished earlier. Although global warming is affecting the number and magnitude of these events, it is difficult to connect specific events to global warming. Although most studies focus on the period up to 2100, warming is expected to continue past then because carbon dioxide (chemical symbol CO2) has an estimated atmospheric lifetime of 50 to 200 years.

**Impact Of Increasing Hotness On Indian Agriculture :-** Research studies show that with the increase in hotness, crop productivity is likely to decrease in future. Hence, there is a need to study the dependency of hotness on crop productivity, stability, yield and quality to uplift the country's economy. Rise in global surface hotness would imperfection of Indian agriculture activities. Several climatic factors which imperfection agriculture activities productivity is heat waves, high hotness heavy and prolonged precipitation and excess cold. These factors have positive as well a negative effects on crop production. Almost every year India faces many weather events due to changes in such climatic parameters in various areas which reduces crop yield. In India, about 17% of the years during 1901-2010 were reported as drought years, which result into severe impacts on agriculture activities, water resources, food security, economy and social life in the country.

Variation in hotness and precipitation above threshold value may imperfections photosynthesis and transpiration process in crops. Excess precipitation and flood may leads to physical damage of the crops. Studies predicted that changing trends in hotness and precipitation will continue to have significant impact on agriculture activities. Decrease in agricultural productivity leads to increase food prices at state as well as at country level. Hence, hotness could be one of the noteworthy imperfection factor which results into greater instability in agriculture activities of India.

**Impact Of Climate Change On Agriculture :-** Climate change affects all these aspects of food security availability, access and absorption. When production decreases, availability of food decreases. Climate change hits poor the most. They do not have income to buy the food, so their access to it is affected. This, in turn, has an impact on health and affects absorption. The climate change has about 4-9% impact on agriculture activities each year. As agriculture activities contributes 15% to India's GDP, climate change presumably causes about 1.5% loss in GDP.

**Climate Change In India :-** One of the vital areas that will be impacted by climate change in its extremity in the near future is South Asia, especially India mainly because of its diverse terrain. Climate change is expected to have a serious impact in this area as the country is rapidly exhausting its natural resources thereby destroying its environment mostly due to "urbanisation industrialisation and economic growth." India faces an alarming environmental and socio-economic challenge in its effort to protect its fast depleting natural resources. Water and air quality are worsening day by day due to increase of various pollutants in the atmosphere. In addition, the sectors that will be subjected to the highest exposure to climate change are the country's coastal eco-systems, biodiversity and agricultural productivity. Besides, the areas is already subject to natural hazards, such as the 2013 Uttarakhand floods landslides, the 2015 Chennai flood and the 2016 drought. The adverse impacts of such disasters range from hunger, vulnerability seasonality to diseases, loss of income and livelihoods.

**Changing Climate Patterns And Crop Yield :-** About 65% population of India depends upon the agriculture activities for subsistence and it claims 22% share in India's Gross Domestic Product. One of the main features of the Indian agriculture activities is that it relies heavily upon the monsoons, as irrigation facilities are poor in most parts. Changes in climatic conditions severely affect the crops since increase in the hotness of the earth due to the anthropogenic activities modifies the precipitation pattern that results in decreased precipitation over all areas. In addition to having an impact on precipitation pattern, these conditions also affect yield, growth rates, soil moisture and water use pattern. Furthermore, higher levels of Carbon dioxide in the atmosphere cause the change in transpiration rules and crop diversity. Rising hotness will result in higher precipitation in semi-arid areas such as Gujarat, Maharashtra while areas that fall in the central areas will experience 10% to 20% decrease in the precipitation which will adversely affect the crop production in these areas.

**Food Security Concerns :-** Climate change due to global warming has become one of the crucial causes of concern over food security to support the Indian population. India, being one of the countries for having world's largest malnourished children and women, stands to be heavily impacted by climate change in many dimensions. Although efforts are being made in this direction but a lot needs to be done by adopting pragmatic policy measures so that India could achieve unique and dignified place in international arena.

**Strategies For Facing The Challenge :-** Specific measures can only provide a successful adaptive response if they are adopted in appropriate situations. A variety of issues need to be considered, including land-use planning, watershed management, disaster vulnerability seasonality assessment, consideration of port and rail adequacy, trade policy, and the various programmes countries use to encourage or control production, limit food prices, and manage resource inputs no agriculture activities. Important strategies for improving the ability of agriculture activities to respond to diverse demands and pressures include:

- Improved training and general education of population dependant on agriculture activities.
- Research on new variety development, incorporating various traits such as heat and drought tolerant, salt and pest resistant should be given prime importance.
- Food programmes and other social security programmes, to provide insurance against local supply changes.
- Infrastructure facilities like transportation, distribution and market need to be improved.
- Existing policies may limit efficient response to climate change. Changes in policies such as crop subsidy schemes, land tenure systems, water pricing and allocation, and international trade barriers could increase the adaptive capability of agriculture activities.

**Conclusion :-** Signals of climatic change are already visible. Global climate change is going to affect major crops like rice, wheat, maize in India. Climate is the least manageable of all resources. Hence, to avert the ill effects of climate change, more mention has to be paid to other resources and technologies viz. soil, irrigation water, nutrients, crops and their management practices, to sustain the productivity and to ensure food and environmental security to the country. Adaptive measures are to be taken in a timely fashion, both at the farmers' level and backed by strong agriculture activities and climate research and application oriented outputs as well as at the policy makers' level to enable the small and marginal farmers to cope with the adversities of climate change.

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# Deficiency of Blood platelets problem in rural area

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**Abstract :-** Blood is a fluid connective tissue derived from mesoderm, slightly alkaline salty viscous fluid composed of plasma and blood corpuscles. The blood corpuscles are three types viz. Erythrocytes, Leucocytes, and thrombocytes. The erythrocytes carry oxygen as it contains haemoglobin, Leucocytes play a role in immune system and fight against bacteria and viruses which invade the body. Thrombocytes [blood platelets], helps in blood clotting and prevents excessive bleeding, the total count of thrombocytes in normal healthy person is about 1.5 to 4.5 per micro liter of blood. Due to abnormal position blood platelets may increase or decrease, increase in blood platelets or thrombocytes is called as Thrombocytopenia, now a days Thrombocytopenia is serious problems found in many peoples of rural area due to bad habits, imbalance diet, dengue fever, etc.

**Introduction :-** Blood is a circulating fluid formed from mesoderm play a vital role in transports the gases like oxygen and carbon dioxide between the lungs and rest of body, blood also transport Nutrients, Hormones, water etc. And also controls the body temperature, removing the wastes from the body. Blood is composed of plasma and blood corpuscles, these blood corpuscles are of three types like erythrocytes, Leucocytes, and Thrombocytes. Franklin (2013), Erythrocytes are also called Red blood cells, leucocytes are also called White blood cells, and Thrombocytes are called blood platelets. Among these erythrocytes are are oxygen carrying blood cells and contains haemoglobin.white blood cells are play important role in immune system and fight against the bacteria, viruses and germs which invade body. The leucocytes are about 8000 per cubic meter of blood R.Nagabhusnaman,Kodarkar M. S. and Sorojini R.(1988),The Thrombocytes are helps in clotting of blood and prevents excessive bleeding from wounds all these blood cells are produced in bone marrow the formation of erythrocytes is called as erythropoiesis, formation of Leucocytes is called as leucopoiesis and formation of Thrombocytes is called as Thrombopoiesis, in normal conditions the number of Erythrocytes in healthy person is about 5.1to 5.8 million per cubic mm of blood in adult male and 4.3 to 5.2 million per cubic mm in adult female, the Leucocytes are about 8000 to 11000 per cu mm of blood, whereas Thrombocytes are about 1.5 to 4.5 lakhs per micro liter of blood R.Nagabushanam,Kodarkar M.S.and Sorojini R.(1988),however these count is not fix it may decreases or increases as per the conditions of body of persons. Increase in number of erythrocytes in body is called polycythemia whereas decrease is called as Erythrocytopenia. Formation of white blood cells is called leucopoiesis which taken place in red bone marrow, spleen, lymph node tonsils thymus and payer's patches. Increase number of white blood cells is called as leukocytosis, whereas decrease in number of white blood cells is called as leucopenia, blood platelets are non- nucleated Bi-convex cells.Blood platelets are also called as thrombocytes and they are about 1.54 to 4.5 lakhs per microliter of blood they are formed from larger cells in the bone marrow called as megakaryocytes under the influence of thromboprotein, the thromboprotein is a glycoprotein hormone produced by the liver & kidney which regulates the production of platelets it stimulates the production and differentiation of megakaryocytes to form blood platelets the formation of platelets is called as thrombopoiesis Increase in number of platelets is called as thrombocytosis whereas decrease in platelets is called as thrombocytopenia. now a days rural population facing the problems of decrease in count of blood platelets which creates many health problems, in present study attempt has been made to focus on the causes of low count of blood platelets and their effects on health of human beings in rural population of shivoor area.

**Material and methods :-** To study the effect of low count of blood platelet on human health from rural population of shivoor area author visited different pathology laboratory and local medical practioner and collects the data from the pathology, laboratory, different tests are regularly taken place by fully autohaemology clear counter technique, the various tests of hemoglobin, red blood cell count, total white blood cell count blood platelet count, blood group testing, Rh factor test etc. Among these test author concentrate on total blood platelet count and trying to show the different effect of low blood platelet count on human being from rural area shivoor these cases are observed in pathology laboratory and local medical practioner during July 2018 to Dec 2018. The six month of study period.

**Result and discussion :-** Blood is liquid connective tissue consist of blood corpuscles and plasma the blood corpuscles present in blood are erythrocytes, leucocytes and thrombocytes Merck(2012) abnormal increase in blood cells causes many diseases in human being as well as decrease in count of blood cells also causes diseases in human beings particularly from the rural area many peoples are suffering from the low count of blood platelets and show many symptoms there are many reasons of low count of blood platelets among these Dengue fever and alcoholism are the major causes of low count of blood platelets from rural area improper sanitation stagnant water, empty cans, tyers,water bottle containers etc around the houses. Which is good breeding sites for the mosquitoes, among these Aedes, Anopheles culex are the common species of mosquitoes. Particularly mosquito's aedes egypti are found in more in no. of months of July & august. These Ades aegypti causes dengue fever, dengue hemorrhagic feve,r which causes flu-like illness that effects older children & adults (Burke R. Clayborn D.2010) the symptoms of dengue fever such as pain in joints muscles sudden high fever sever headache, pain, loss of lappetite, loss of taste, rashes over chests, fever, nausea, vomiting are the common among patients the bleeding from nose, gums restlessness, difficulty in breathing also found in some patients and finally shows low count of blood platelets.

Another major causes of low count of blood platelets among the ruler people of shivoor are found to be is addiction of alcoholism. Alcoholism is common addiction among the rural people, many people are regularly drinks the local, impure alcohol which badly effects on their health and decreases their blood counts.

The people from rural area are not aware of their food also therefore there are many dietary deficiencies among them particularly there is deficiency of vitamin K, vitamin B12, vit. B9, etc. which causes lowering of Blood plates in their body. The patients which is under cancer treatment like radiation therapy also shows low counts of blood platelets.

During study period author found following many symptoms among the 155 people of rural area shivoor. the people which are suffering from low count of blood platelets shows weakness bleeding from mouth or gums. 19 also show bleeding from nose. Bruises on arms or legs with or without injury are also common among 31 people, as well as 25 people are with red or purples spots on skin 38 people of shivoor area shows brown or red urine black stool or bloody stool and in 29 people mucus in blood, blood in vomiting are also found in these area. long or heavy menstrual flow, vaginal spotting also observed in 13 girls and females. Head ache abdominal pain blurred vision are the common symptoms in about 38 people of low platelets.

**Conclusion :-** The low count of blood platelets in rural people of shivoor area is due to improper awareness about their health. Improper sanitation around houses. Storage of stagnant water in and around houses, bad habitat, alcoholism, imbalanced diet etc. author advice to these people to care about health and take some following food regularly which is not only helps to avoid the lowering of blood platelets but also increase the level of blood platelets for ex. Use of soybeans, spinach, black beans white of eggs, fish, white meat of chicken is rich source of Zinc and vit. 12, which is essential to reverse the effect of thrombocytopenia (jagdish mehrotra Gurgaon) as well as drinking of cut of wheat grass along with the drop of lemon juice many help to increase Blood platelets (Int.Jou of universal phar. & lifesci ) use of ripen papaya in diet also boost the blood platelet the pomegranate, is also rich source of minerals, vitamins and also used as anti-oxidants and known to booster the immune system & helps to increase the blood platelets, while carrot sweet potatoes which helps in protein formation cell division and growth of body helps in increases blood platelets formation . orange juice, green leaf of asparagus also increase blood platelets, vegetables, liver, meat, cabbage is rich in vitamin K which helps to increase blood platelets, pumpkin, seed bean, leafy greens asparagus are also rich source of vit B12 and all these sources are useful to increase blood platelets.

| **Sr. No** | **Symptoms** | **Months wise patients to be found** | | | | | | **Total** |
|---|---|---|---|---|---|---|---|---|
| | | July | Aug | Sept | Oct | Nov | Dec | |
| 1 | Bleeding from nose | 04 | 02 | 03 | 04 | 04 | 02 | 19 |
| 2 | Bruises on arms or legs | 05 | 08 | 04 | 05 | 06 | 03 | 31 |
| 3 | Red or purple spots on skin | 06 | 05 | 03 | 04 | 04 | 03 | 25 |
| 4 | Brown or red urine & black/bloody stool | 08 | 09 | 04 | 05 | 06 | 06 | 38 |
| 5 | Blood in mucus & vomiting | 07 | 06 | 05 | 04 | 04 | 03 | 29 |
| 6 | Long menstrual flow | 04 | 03 | 02 | 01 | 02 | 01 | 13 |
| 7 | Headache/blurred vision/abdominal pain | 10 | 10 | 09 | 08 | 05 | 06 | 38 |

**Chart showing different symptoms among the people of shivoor area during six months of study period.**

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# Reforming India's Financial Sector: An Overview

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**Abstract :-** Financial sector reforms have long been regarded as an important part of the agenda for policy reform in developing countries. Traditionally, this was because they were expected to increase the efficiency of resource mobilization and allocation in the real economy which in turn was expected to generate higher rates of growth. More recently, they are also seen to be critical for macroeconomic stability. This is especially so in the aftermath of the East Asian crisis, since weaknesses in the financial sector are widely regarded as one of the principal causes of collapse in that region. Following East Asia, soundness of the financial system has been elevated to a position similar to that of fiscal deficit as one of the 'fundamentals' for judging the health of an economy.[1] Developing countries can expect increasing scrutiny on this front by international financial institutions, and rating agencies and countries which fail to come up to the new standards are likely to suffer through lower credit ratings and poorer investor perceptions. In this background it is both relevant and timely to examine how far India's financial sector measures up to what is now expected.

**Keywords :-** Financial sector reforms, Indian Economy, Development.

**Introduction :-** India's financial landscape has changed dramatically over the last decade. While India's financial needs are growing, the current regulatory arrangements inhibit growth. This paper discusses the limitations of the present financial regulatory system. The evolving discourse on financial regulatory reforms recognises that the motivation for state intervention in finance must be guided by an understanding of the sources of market failure. This paper summarises the sources of market failure and identifies areas of state intervention in finance. Drawing on this approach, the Government backed Financial Sector Legislative Reforms Commission (FSLRC) prepared a single unified law- the Indian Financial Code (IFC) that seeks to modernise the Indian financial system by transforming the laws, the regulatory architecture and the working of the regulators. This paper discusses the components of the draft Indian Financial Code and describes the state of progress in implementing the IFC framework Financial Reform of the financial sector was identified, from the very beginning, as an integral part of the economic reforms initiated in 1991. As early as August 1991, the government appointed a high level Committee on the Financial System (the Narasimham Committee) to look into all aspects of the financial system and make comprehensive recommendations for reforms. The Committee submitted its report in November 1991, making a number of recommendations for reforms in the banking sector and also in the capital market. Shortly thereafter, the government announced broad acceptance of the approach of the Narasimham Committee and a process of gradualist reform in the banking sector and in the capital market was set in motion, a process that has now been under way for more than six years. In this overview,

**Objectives :-**

- Significant progress in reform of the regulatory side of the banking sector.
- The need for regulation in financial markets to be emphasized in part as a reaction against the problems

**Liberalization and Regulation: Parallel Not Contradictory Thrusts :-** Before examining the

[1] A weak banking system is viewed with some justification as a fiscal time bomb waiting to go off because banking crises typically force government to recapitalize the banks in order to avoid a larger systemic crisis, involving a fiscal burden which can be quite large as a percentage of GDP (see for example Caprio and Klingebiel, 1996).

specific achievements of financial sector reforms in India, it is useful to reflect on the principles underlying these reforms and their congruence with international practice. Financial sector reforms all over the world have been driven by two apparently contradictory forces. The first is a thrust towards liberalization, which seeks to reduce, if not eliminate a number of direct controls over banks and other financial market participants.. The case for liberalization of financial markets is based on efficiency considerations similar to those used to justify liberalization in the real sector. The efficiency losses generated by various types of direct controls over banks have been extensively discussed by economists concerned with the problems of 'financial repression' in developing countries.[2] Direct controls on interest rates, high cash reserve requirements, mandatory investments in government securities, and other forms of directed credit policies all amount to a tax on financial intermediation which has the effect of suppressing the level of intermediation below what would otherwise prevail and also of reducing the allocative efficiency of such intermediation. Both effects lead to a loss of efficiency and lower real growth in the economy.

The case for stronger regulation on the other hand derives from the perception that financial markets are different from goods markets in important respects and liberalization of such markets aimed at allowing market forces free play can lead to inferior outcomes[3]. Financial markets are characterized by significant asymmetries of information, moral hazard problems, and principal-agent problems and because of these features a free market equilibrium may not have the efficiency characteristics normally associated with market equilibrium in the goods market.

Financial markets are also special because of possible systemic effects and this provides another justification for regulation. The failure of an individual participant such as a large bank cannot be viewed in the same way as the failure of an individual supplier in the goods market Closure of a large bank can lead to panic and irrational behaviour by depositors with other banks in the system, regardless of the actual financial health of these banks, because depositors typically do not have full information on these issues.

**Progress In Liberalization Of The Banking Sector :-** On the liberalization side of banking sector reforms significant progress has been achieved in several areas, especially interest rate liberalization and reduction in reserve requirements, but not in the matter of directed credit.

**Interest Rate Liberalization :-** When the Reserve Bank of India (RBI) controlled the rates payable on deposits of different maturities and also the rates which could be charged for bank loans which varied according to the sector of use and the size of the loan. Interest rates on time deposits were decontrolled in a sequence of steps beginning with longer term deposits and the liberalization was progressively extended to deposits of shorter maturity. With effect from October 1997 interest rates on all time deposits, including fifteen day deposits, have been freed. Only the rate on savings deposits remains controlled by the RBI. The new arrangement implies a considerable reduction in the range of loans with subsidized rates compared to the position earlier.

The rationale for liberalizing interest rates in the banking system was to allow banks greater flexibility and encourage competition. Banks were able to vary rates charged to borrowers according to their cost of funds and also to reflect the creditworthiness of different borrowers.

Looking ahead, the remaining hybrid control on lending rates for small loans can also be phased out at an early date. The desire to control interest rates for small loans reflects an understandable desire to help small borrowers, but we must recognize that these controls may actually discourage banks from lending to these sectors or alternatively they may encourage

[2] See especially Shaw (1973) and McKinnon (1973) and a more recent review by Fry (1997).

[3] See Stiglitz and Weiss (1981) and Stiglitz (1994). For a skeptical view of the efficiency of stock markets in allocating capital and their role in developing countries, see Singh (1997).

corruption in determining access to such loans. There is overwhelming evidence that what matters for low income borrowers is timely availability of credit rather than low interest rates and a policy which keeps rates low but impedes the flow of credit does not help the target group. Banks forced to charge unprofitably low interest rates may also seek to protect their profitability by improving credit quality by insisting on higher levels of collateral than would otherwise be the case, thus effectively excluding precisely the groups which interest rate controls are meant to favour. Some segments of the banking system have already been freed from restrictions on lending rates. As the system gets used to higher rates being charged on smaller sized loans by these institutions, it should be possible to take the next step and remove existing controls on lending rates in other commercial banks.

**Reserve Requirements :-** Another important area where some liberalization has taken place relates to the cash reserve requirement (CRR) and the separate requirement for mandatory investment in government securities through the statutory liquidity ratio (SLR). In fact, most banks currently hold a higher volume of government securities than required under the SLR reflecting the fact that the attractive interest rate on these securities, combined with the zero risk-weight, makes it commercially attractive for banks to lend to the government. The CRR has varied between 10 and 11 per cent. This is definitely high by international standards and constitutes a tax on financial intermediation in the terminology of the financial repression literature.

The key constraint on reducing the CRR is the continuing high level of the fiscal deficit, which cannot be financed entirely from the market and therefore requires substantial support from the RBI[4]. Reducing the CRR is not a viable option in this situation because the expansionary impact on money supply via the money multiplier (which is a function of the CRR), would need to be offset by a monetary contraction elsewhere. In effect the RBI would have to refrain from monetizing the deficit to the extent that it does at present which means interest rates on government securities would have to be allowed to rise.

**Directed Credit :-** An area where there has been no liberalization thus far relates to directed credit. Directed credit policies have been an important part of India's financial strategy under which commercial banks are required to direct 40 per cent of their commercial advances to the priority sector which consists of agriculture, small-scale industry, small-scale transport operators, artisans, etc. Within this aggregate ceiling there are sub-ceilings for agriculture and also for loans to poverty-related target groups. The Narasimham Committee had recommended reducing the 40 per cent directed credit target to 10 per cent, while simultaneously narrowing the definition of the priority sector to focus on small fanners and other low-income target groups. This recommendation was not accepted by the government and the directed credit requirement continues unchanged.

A step in the right direction would be to eliminate the present concessional interest rates applicable to loans below Rs.200,000, most of which fall in the priority sector. If priority sector credit does involve higher cost to the banks we should reflect this in the interest rate allowed to be charged. This would increase the willingness of banks to lend to. the priority sector and make the directed credit target less onerous. Another desirable step would be to expand the list of activities eligible under the priority sector as this would increase the range of economically viable activities for the deployment of priority sector credit and :.thus help improve the quality of the portfolio.[5] We should also consider redefining the

[4] The earlier practice of automatic monetization of the deficit through issue of ad hoc Treasury Bills has been abandoned but as long as fiscal deficits not controlled, this only forces the RBI to resort to market borrowing to finance the deficit. The RBI is therefore presented with a Hobson's choice—it must either accept the high interest rates generated by government borrowing or moderate interest rates by monetizing the deficit.

[5] The Committee on Banking Reforms referred to in the third section of the chapter has suggested including activities related to food processing, dairying, and poultry.

priority sector target as a percentage of the total assets of the banking system and not as a percentage of commercial advances as .at present. This is because the share of commercial advances in total assets is likely to increase over time as reserve requirements are reduced and fixing the priority sector target as a percentage of commercial advances means a rising percentage of total assets going to the priority sector which may be too onerous.

A somewhat theoretical sounding possibility, but one which should be examined, is that of introducing 'trading' of priority sector performance among banks so that banks which exceed their targets of priority sector lending may be able to 'trade' the excess to the credit of other banks which are falling short. To the extent that some banks are relatively more efficient in priority sector lending than others (e.g. because of broader spread of certain banks in agriculturally prosperous areas), it would enable the banking system as a whole to achieve the priority sector target at lesser cost. This would especially be so if interest rate ceilings are relaxed.

**REGULATORY REFORM OF THE BANKING SYSTEM :-** Significant progress has also been made in reform of the regulatory side of the banking sector. Prior to 1991 Indian banks did not follow uniform accounting practices for income recognition, classification of assets into performing and non-performing, provisioning for non-performing assets and valuation of securities held in the bank's portfolio. Nor were they subject to uniform capital adequacy requirements.

**ESTABLISHMENT OF UNIFORM PRUDENTIAL NORMS :-** Indian banks have adjusted well to the new standards and are in a stronger position today than they were Jul 1991. Very few banks had a capital adequacy ratio up to the 8 per cent level prior to 1991. By March 1998 only one of the twenty-eight public sector banks fell short of this standard and many banks were significantly above that level. Admittedly, the increase in capital in many cases was achieved only through additional contribution of capital by the government, and to that extent does not reflect an improvement in operational performance, but there were also substantial contributions from internal reserves resulting from improved profitability.[6] Some banks were also able to raise capita] from the market reflecting their ability to attract private investors. These are impressive improvements but it is also true that following the collapse in East Asia, and subsequent problems in Russia and elsewhere, the standards being demanded for regulating banking systems in developing countries have risen significantly. In anticipation of this 'development the government, in December 1997, appointed a Committee on Banking Sector Reforms (CBSR) to review the progress made in -reform of the banking sector and to chart a course for the future. The (Committee has since submitted its report outlining a comprehensive agenda for the second stage of banking sector reforms.

These are welcome steps, but the process of improving supervision is a continuing process especially since banking is likely to become more complex with banks exposed to more complex risks. A great deal will 'depend upon the ability of the RBI to upgrade the quality of supervisory skills. Bank supervision is an extremely difficult and highly skilled operation and skilled bank supervisors are a rare commodity even in industrialized countries. The Board has greater flexibility for lateral recruitment but a great deal of upgrading of existing personnel skills will be necessary.

**OTHER ISSUES IN BANKING REFORM :-** Bringing prudential norms up to international standards is only one part of the reform agenda. The more difficult part is to change the way banks function in practice so that their performance comes up to the more demanding requirements of the new regulatory environment. This means banks must function in a manner which brings NPAs down to acceptable levels while simultaneously showing

[6] Part of the profitability of banks reflects only the income earned from capitalization bonds but there were improvements in profitability even if their contribution is excluded.

sufficient profit to ensure growth of reserves to support additional lending. The challenge is all the greater because economic reforms and liberalization in the economy mean that bank borrowers now face greater competition (domestic and international) which increases the risk of commercial failure compared to the situation when banks were lending to clients operating in a protected economy. Banks have to upgrade their credit appraisal methods to ensure that the activities for which they lend are economically viable in the new more competitive environment. A more open economy also implies greater volatility in exchange rates and interest rates and banks must allow for the direct impact of-these uncertainties on their balance sheets because of their own exposure and also the indirect effect via the impact on their clients. Banks will have to make changes on several fronts to deal with these challenges including the upgradation of human skills, induction of information technology, an understanding with labour unions to phase out outdated work practices, etc.

**PROBLEM OF WEAK BANKS :-** How to deal with weak public sector banks is a major problem for the next stage of banking sector reforms. It is particularly difficult because the poor financial position of many of these banks is often blamed on the fact that the regulatory regime in earlier years did not place sufficient emphasis on sound banking, and the weak banks are, therefore, not responsible for their current predicament. This perception often leads to an expectation that all weak banks must be helped to restructure after which they would be able to survive in the new environment.

The usual recipe for revival of weak banks is to take care of the inherited burden of NPAs through some mechanism, such as, for example, an Asset Reconstruction Company as recommended by the CBSR, and then let the 'restructured' banks, with their cleaned up balance sheet compete with other banks. This approach may be worth trying in some cases but it must be recognized that it does not guarantee revival. Even if the backlog of NPAs is taken care of, many of the weak banks will also need to cut costs by closing loss-making branches and reducing excess staff if they are to have to any hope of surviving in competition with other banks in the more competitive environment of the future when margins will be under pressure. In short, revival may only be possible if it is preceded by a willingness to slim down and cut overheads drastically. It may also need a major overhaul of top and middle management which is not easy to achieve in a public sector bank.

Even after downsizing some weak banks may not be able to survive in competition against stronger banks which have better management cultures, stronger human skills, and better labour relations. In such a situation we must beware of repeated efforts at restructuring aimed at keeping such banks alive.

**MAJORITY OWNERSHIP OF BANKS :-** Perhaps the most difficult issue for the future is whether government should retain majority control over public sector banks. The prevailing international consensus is against government ownership and many developing countries are actively engaged in privatizing government banks as part of financial sector reform. Privatization is obviously not a guarantee against bad banking, as is evident from the many banking crises involving private banks in both developed and developing countries. However this argument is usually countered by conceding that while privatization alone is definitely not sufficient, and must be accompanied by improved regulation and supervision, it is nevertheless necessary because government ownership involves 'politicization' and 'bureaucratization' of banking[7].

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[7] The two phenomena are quite distinct. Politicization in the context refers to politically motivated credit decisions which may range from 'cronyism' in the sense of favouring individual, usually large, borrowers or politically directed populist loan programmes which are not based on sound credit appraisal, or even populist programmes of loan waivers. Bureaucratization refers to the conversion of public sector banks into organizations characterized by a layer of decision making with inadequate delegation which slows down decision making arid produces an inability to

The CBSR considered this issue and has recommended that the government/RBI holding in the public sector banks/State Bank of India be reduced to 33 per cent. Two reasons have been given by the Committee. One is that the capital requirement of banks will expand substantially because of the combined effect of growth of lending and enhanced capital adequacy requirements, and the additional capital needed is much larger than the likely growth of reserves through plough back of profit.

Majority government ownership of public sector banks has been an article of faith in many circles in India and it is important to consider carefully whether it is in fact inconsistent with sound banking. Vaghul (1998) has sought to finesse the problem by suggesting that government could retain majority ownership but the management of the bank must be entrusted entirely to a board of eminent professionals, which would appoint (and presumably also remove) the chief executive, and exercise all the functions of supervision over the management.

Government accountability to parliament makes it unlikely that government would be willing to distance itself sufficiently from management by delegating all powers of supervision to an entirely independent non-government Board of Directors. In any case, since the aboard must reflect the interests and perception of shareholders, it is difficult to envisage a board acting completely independently of the government as long as the government is a majority shareholder. In fact, there is real danger that such an arrangement might degenerate into one which gives an appearance of independence but allows informal and unstructured interference in practice. This would only continue the relationship of dependence without the transparency and formal procedures involved when government is formally responsible.[8]

respond quickly to commercial needs and an insensitivity to customer needs.

[8] Reference is appropriate in this context to the view expressed by Jeffrey Sachs to the author that 'the only thing worse than public sector banks is autonomous public sector banks'.

**CONCLUSION :-** The reforms currently under way in the banking sector and in the liberalization , combined with the agenda for reform identified for the other sector, represent a major structural overhaul of the financial system. It will certainly bring India's financial system much closer to what is expected of developing countries as they integrate with the world economy. As in so many other areas, reforms in the financial sector have been of the gradualist variety, with changes being made only after much discussion and over a somewhat longer period than attempted in most other countries. However the direction of change has been steady and in retrospect a great deal has been accomplished in the past seven years. It is essential to continue these reforms along the directions already indicated and to accelerate the pace of change as much as possible.

Finally, it is important to recognize that financial sector reforms by themselves cannot guarantee good economic performance. That depends upon a number of other factors, including especially the maintenance of as a favourable rnacro-economic environment and the pursuit of much needed economic reforms in other parts of the real economy. The impact of financial sector reforms in accelerating growth will be maximized if combined with progress in economic reforms in other areas.

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- The author is currently serving as Member, Planning Commission in the Government of India. The views expressed in this paper are those of the author and do not necessarily reflect the views of the Commission. Acknowledgements are due to Surjit Bhalla, M. Damodaran, James Hansen and C.M. Vasudev for helpful comments.
- A weak banking system is viewed with some justification as a fiscal time bomb waiting to go off because banking crises typically force government to recapitalise the banks in order to avoid a larger systemic crisis, involving a fiscal burden which can be quite large as a percentage of GDP [see for example Caprio and Klingebiel (1996)].
- See especially Shaw (1973) and McKinnon (1973) and a more recent review by Fry (1997)
- See Stiglitz and Weiss (1981) and Stiglitz (1994). For a skeptical view of the efficiency of stock markets in allocating capital and their role in developing countries see Singh (1997).
- It should be noted however that the particular explanation for a "repressed" interest rate does not justify repression through government control. It only implies that prudential behaviour by the banks would lead them to restrain interest rates below market levels on their own. If government does fix interest rates, the extent of the distortion is measured by the extent to which this forces banks to repress interest rates below the level they should themselves choose.
- See Diaz-Alejandro (1985)
- Export credit benefits from availability of refinancing from the Reserve Bank of India at a concessional rate which mitigates the burden of this particular control on the banking system.
- Because the net accretions to postal savings are shared with the states, State governments are likely to resist reduction in these interest rates for fear that it will impede mobilisation of resources. This resistance has to be overcome since otherwise the system will not be able to transit to a sustainable low inflation regime.
- Stiglitz (1994) has argued that directed credit may actually promote economic efficiency if it is used to push credit into areas where there are technological spin-off and other externalities. However, this argument is based on the usual argument that the government intervention is helpful whenever there is a market failure. The problem, as pointed out by Fry (1997) is that market failure does not mean government success.
- The Committee on Banking Reforms referred to in Section 3 of the paper has suggested including activities related to food processing, dairying and poultry.
- Part of the profitability of the banks reflects only the income earned from capitalisation bonds but there were improvements in profitability even if their contribution is excluded.

# Water Resource Management and Deveplopment in Different Area of Sehore District

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**Introduction :-** Water is most easy and necessary part of our life supporting system. However because of the Rapid climb of population urbanisation and industrialisation and ignorance river, Ponds, well, Canal, dam's lakes and other water resources are getting polluted. Groundwater container varied quantity of various form of Ions like carbonate, calcium, magnesium, sulphate, hardness, etc. Water play or necessary role in human life. Water pollution has caused 40% decline in life. Today sea and the rivers have become dustbin. The cities getting their drinking water from the rivers become victim of many diseases which produce health crisis in men. Due to the progress in Science and Technology, agricultural, chemical, and fertilizers are being used which has led to increase in production but it has destroyed and sacredness. This chemical dissolves in the rain water and pollutes the water of the rivers viz D.D.T, chemical dissolves in rainwater and pollute the water of the river. Due to urbanization groundwater has become polluted example sewage water mingles with the groundwater and make it clean. Thus the modern man by polluting the life forces, water is making the road of his devastation. Water is one in every of the for most vital of all natural resource known on earth it's vital to any or all living organism, ecological system, human health, food production and economic development. The security of drinkable is very important for the health. The security of drinkable laid low with numerous contaminate including chemical and biological, microbiological. Such contaminants because serious health issues because of this contaminants quality of drinkable water become poor. Water is the one of the most essential natural resources for sustaining life. It development and management play important role in agriculture production. The rapid increase in population, industrialization and urbanization the demand for water meeting various requirements is continuously increasing the quality of surface water and groundwater is also deteriorating because of increasing pollutants load from various sources. Climate change my also adversely affected are availability and disturbance of water resources. In urban India 40 billion liter of wastewater is produce every day. It is very important to a adopt technology to reduce the content of this water and to deploy it for irrigation and other purposes.

**Research Methodology :-** Data sources for the present study include bibliographic research, field observation and analysis

**Study Area :-** Sehore district is a district of Madhya Pradesh in Central India. The district is a part of Bhopal division first it is in Bhopal commissioner division and his well connected by road and railways. Sehore districts with an area of 6579 KM square lying between the north latitude 22 degree 33 minute 30 second and 23 degree 40 minute 25 second and East longitude 78 degree 02 minutes 00 Sehore district form the part of Malwa plateau with are undulating topography. Sehore district is primary and agricultural district occupying the Chambal and Narmada basin Valley having predominantly and agricultural economy. Agriculture is the main occupation of the people in the district. Wheat, rice, maize and soybean are the major crops sown in the district. Groundwater has an important role to play for irrigation. There are five railway station in Sehore districts namely aashta, ichhawar, budni, nasrullaganj, and Sehore. The normal rainfall of Sehore district is 12177 millimetre. The highest rainfall 1412.3 millimeter received at sehore and minimum at aashta 105 4.9 millimeter. About 92.4 percent of the annual rainfall take place during the Southwest monsoon period that is between June to September. July is the wettest month of the year and about 36% of the annual rainfall take place during this month only.

**Water For Agriculture :-** Groundwater has an important role to play for irrigation. Agricultural is the main occupation of the people in the districts. 1128.48 hectares was irrigated from groundwater resources. Groundwater is the main source for drinking and irrigation in Sehore district. About 74% of the irrigation in the district from ground water, through the level of irrigation in the district is very low. Water conservation and cutting down of trees hold the key to bringing irrigation facilities to every country. Methods to treat and reuse Municipal resources are also required to augment irrigation water supply.

**Groundwater Depletion :-** It is analyzed that in Sehore district the stage of groundwater development is 95% High. The study on the long-term analysis of water level, conducted by CEGB indicate that water level in Sehore district have shown a steady decline of 0 to 2.49 during past one decade due to fast industrialization and urbanization in Sehore district aur, there is reduction in green areas. Construction of various suitable artificial groundwater recharge structure will result in augmentation of the groundwater aquifers and raised further in groundwater level. It is evident to solve the problem of depletion in groundwater level, it is necessary that the groundwater withdrawal should be reduced substantially.

**Drought And Flood Management :-** The drought has many definition. But mostly its originates from a deficiency of precipitation over an extended period of time. This deficiency results in a water shortage for some activity, group or environmental sector. It is also related to the timing in the start of the rainy season. Other climatic factors such as high temperature, high wind and low relative humidity are often associated with it in many regions of the world. Because of the large variability of rainfall both in space and time semi arid region are subjected to the problem of drought. The problem of arid Areas where one good crop is not possible in normally expected but it is frequently lost due to scanty rainfall or due to the variability of rainfall.

**Management Of Groundwater Resources :-** Groundwater in India provide for about 60% of the country's irrigation need. 85% of rural drinking water requirement and 50% of Urban Water needs. Exploitation of groundwater on large scale has led to sharp decline in groundwater level and determinations of water quality in major part of the country. Due to Limited groundwater resources and increase demand of water there is a need for recycling of water for its conservation. The treated sewage water can judicially be utilised to reduce stress on exploitation of groundwater for various purposes including domestic, Industrial and irrigation.

**Groundwater Pollution :-** Due to increasing industrialization and fast population growth in Sehore district anthropogenic activities have lead to pollution of groundwater in certain areas. The main sources of groundwater pollution are domestic, waste, industrial activities and agricultural practices. Most of the villages in Sehore district do not have sewage treatment system underground water get polluted with variety of nutritional constituents and pathogenic microbes. Use of various chemical fertilizers and pesticides has led to increase of nitrates, phosphates and other organic component in groundwater. Some organic compound and toxic metals have also lead to destroyed quality of groundwater.

**Change In Cropping Pattern And Irrigation Policy :-** In past few decades the cropping pattern in Sehore district has changed substantially. In some part of Sehore district, the farmers have started multi crop cultivation due to profitability which will caused extensive development of groundwater resources. There is a need to change the cropping pattern in the area and adopt cultivation of those crops which require less irrigation. It is observed that in many part of Sehore district the complete irrigation is being done through flooding. As the district is covered with hard rock and terrain is water scare the flooding practice of irrigation required change.

Drip and Sprinkle irrigation should be adopted in the area where ever feasible. In most part of of district, the irrigation is is being done through dug well and tube wells using power pump. Rates of power for tube well irrigation and irrational and require modification. There should be no free Power for irrigation so the consumer should take due care for its economic and judicious use.

**Conclusion :-** Sehore district is presenting a sensible picture from groundwater point of view. Though presently groundwater is meeting the most water needs of the districts but it may not go very long future. The population and progress coupled with poor aquifer are responsible for this alarming situation. The groundwater development in Sehore district both for irrigation and domestic purposes is being done on need basis without proper backup of scientific investigation. Sometimes failure of monsoons led to crisis of even drinking water in district. Sehore district is mainly hard rock area and the division for the type of groundwater structure for groundwater development is is dictated by local hydro geological situations. Unscientific use of fertilizers and pesticides for agriculture and disposal of untreated industrial effluents through unlined drain in most of the industrial areas of district will be very dangerous for groundwater quality in near future. There is a urgent need to control such type of activities to check the groundwater pollution. The deforestation of forest land to accommodate the population growth causes heavy run off and insufficient subsurface recharge to groundwater storage in foothill zone. Afforestation programmed in such areas need to be taken up. Change in cropping pattern is another measure which will relieve the situation. There is a need to change the cropping pattern in the area and adopt cultivation of of those crops which require less irrigation.

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# A Study of Green Banking in Sustainable Growth in India

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**Abstract :-** The banking industry can play a vital role in promoting an environmentally sustainable and socially responsible organization. This type of banking can be called "Green Banking". Green banking means that banking business in selected areas and techniques helps reduce the impact of external carbon emissions and internal carbon. To help reduce external carbon emissions, the bank should support green technology and pollution mitigation projects. The idea of green banking is becoming a buzzword in the financial and banking sector and in the common people of the world over the last few decades. Green finance as a part or Green Banking makes great contribution to the transition to resource efficient and low carbon industries i.e. green industry and green economy in general. Green banking is part of a global initiative by a group of stakeholders to protect the environment. This research paper attempts to highlight the current situation of Indian banks, the progress made and the various initiatives taken by Indian banks to maintain environmental sustainability so as to create awareness among the target groups, both internal and external sub systems educated to achieve growth through Green Banking. Further, efforts have been made to understand effective methods for green banking.

**Keywords :-** Green Banking, Sustainable Environment, Green Initiatives, Sustainable Growth

**Introduction :-** Green banking is a new phenomenon in the financial world. As a financing agent for economic and development activities, banks have an important role to play in promoting sustainable development. Green banking by banks is a term that makes them more responsible for the environment. The term green banking means developing a comprehensive banking strategy that will ensure sustainable economic growth. Green Banking urges banks to encourage eco-friendly investment and give priority to lending to industries that are already green or are trying to green and thus to restore the natural environment help. Green banking means connecting client's habits to operational improvement, technology and banking business. This means promoting environmental friendly practices. It comes in many forms such as using online banking instead of branch banking. Paying online instead of sending bills; opening CDs and money market accounts at online banks instead of major multi-branch banks; or finding a local bank in the area that is taking the biggest step in supporting local green initiatives. Foreign banks are practicing green banking on a very serious note. Indian banks are still taking baby steps in this form of banking. Nevertheless, many of them actively seek to implement this strategy.

Therefore, encouraging environmentally sound investors and lending wisely should be a responsibility of the banking sector. Pravakar Sahoo and Bibhu Prasad Nayak (Indian Economic Journal) – "Green Banking" - say banks should try to green the industries and restore the natural environment in the process. This concept of "Green Banking" will be mutually beneficial for banks, industries and the economy. Green banking will ensure the green of the industry but will also help to improve the quality of assets of banks in the future. Development of broader environmental management laws, such as the Conservation of Water, the Clean Water Act, the Toxic Substances Control Act, are also seen as potential contributors to the recent rise in environmental responsibility for banking institutions.

**Review Of Literature :**

**Goyal KA and Vijay Joshi (2011)** One side bankers are expecting more business through customer satisfaction but on the other side, the technology effect makes the customers not coming to the bank but bank is going to the doorstep of the customers.

**Sudip Kar Purkayastha (2010)** Such measures also yield the banks in offering top class service to attain Customer Satisfaction, particularly at a time there is stiff competition amongst the different types of banks, i.e., Public, Private, Foreign and others.

**Mohmed Aminul Islam (2010)** Green Banking is also gaining importance in recent times. While the banking industry is undergoing computerization, networking and offering of on-line banking is naturally gaining momentum.

**Ela Sen (2010)** Besides several benefits of computerization like speed, accuracy, ambience, efficient handling of sizeable business, etc., there is a factor like paper-less business resulting in waste management, eco-friendliness and pollution control.

**McKinsey & Co. (2007)** On the top of all these, there is certainly the aspect of profitability and productivity for all these banks to achieve.

**Hopwood (2005)** highlighted the need for change it would be agreed that transformation in the usual model for the sustainable development is essential in order to understand the evolution of the banking sector towards sustainability.

**Chowdari Prasad (2002)** has studied the Impact of Economic Reforms on Indian Banking and suggested how banking sector will face the changes and challenges.

**Jeucken (2001)** highlighted important differences between regions, countries and banks with regard to sustainable banking. Jeucken identified four stages: defensive, preventive, offensive and sustainable banking.

**Research Objectives :-**

- To study the Green Banking strategies.
- To study the challenges of Green Banking in India.

**Research Methodology :-** It is a research exploration, thus based on the methodology Literature Review and Secondary data. This research was done in two stages: the first step was a review of the latest literature on sustainable development in the green banking and especially green banking, which identified the results, and suggested future steps. The second phase involved collecting data about Indian banks through secondary published sources. Secondary sources were reports of green banking and other relevant information posted on banks and other internet sites.

**Green Banking :-**"Green banking" emphasizes promoting self-friendly banking practices and reducing carbon footprint from banking activities. To add simplicity to this term, it is a form of banking that ensures low use of natural resources and maximum reduction of paper /carbon footprint. Green banking is being implemented by all banks, which take into account all social and environmental / environmental factors, with the goal of environmental protection and protection of natural resources. Green banking practices are also labelled as "ethical banking" or sustainable banking. The key idea behind this banking concept is to enhance the protection of the earth's environment / habitats / resources. How can it be?

- Promoting the use of online banking instead of branch banking.
- Online bill payment
- Open CDs and Money Market accounts through online banking instead of large multi-branch banks.

**Importance Of Green Banking :-** Until recently, green banking seemed like just a move and environmental concerns were not really related to any bank's actions. Initially, a bank was considered to be involved in a private business examining its client's environmental competence. Now, however, the impression is on how it puts their business at risk. Although environmental degradation does not directly affect banking and financial institutions, there are indirect costs for banks. Credit, legal and credit risks have been harassing these banks permanently unless such measures are taken.

**Table: 1.1**
**Green Banking Adopted In Indian Banks**

| Names of the banks operating in India | Green Banking implementation year |
|---|---|
| Union Bank Of India | 1996 |
| Citi Group INC, HSBC, ING Vyasa, RBS, Royal Bank Of Canada, Syndicate Bank, Standard Charted | 2003 |
| Yes bank, Corporation Bank | 2005 |
| Bank Of America, JP Morgan | 2006 |
| ICICI, OBC, SBI | 2007 |
| Bank Of Baroda, Karnataka Bank, Industrial Bank, Dena Bank | 2008 |
| HDFC, Indian Overseas, Induslnd Bank, PNB, ABN Amro , Karur Vyasa , Andhra bank | 2009 |
| Axis bank, Kotak Mahindra, South Indian Bank | 2010 |
| Canara Bank, IDBI, EXIM | 2011 |
| IDFC | 2013 |

Source: Bank Sites

**Challenges of Green Banking Strategies :-**

- Dealing with green challenges: Green banks support amazing causes. As a not-for-profit organization, they face many challenges. Just like socially-conscious and environmental mutual funds, they are expected to face more obstacles than a bank that operates normally.
- Diversity Issues: Green banks will examine their customers and, naturally, they will restrict and restrict their business to entities that are eligible. With a small pool of consumers, they will automatically have a less profitable base to help them. If they focus their loans on certain industries, they open themselves up to being much more vulnerable to economic shifts.
- These banks are still start-ups: Apparently, it takes 3-4 years for a typical bank to make money. Many green banks are very new to business today and are still in start-up mode. It does not help that these banks are trying to establish their footing during the recession.
- Banks are “mastered”: Once again, when the main goal of the green bank is to do good by helping environmental carers, but the question here is, how much money do these businesses and the environment-friendly industry have? Environmental protection does not necessarily mean “making a profit.” Hopefully, though, the premise has been proven wrong in this case, and Green Bank proves that they can survive, even as they face a ban on doing business.
- Operating costs and costs are high: Green banks also need specific skills, and expertise, because of what kind of customers they are serving. Employees, such as loan officers, need to gain additional background and experience in dealing with green businesses and consumers. Also, giving such customers a break through discounted loan rates allows them to eat at their profit margin.
- Reputation Risk: In all likelihood, due to growing awareness about environment safety, banking institutions are more prone to lose their reputations if they are involved in big projects, which are viewed as socially and environmentally damaging. There are also few cases where environmental management system has resulted in cost savings, increase in bond value etc. In few cases the environmental management system resulted in lower risk, greater environmental stewardship and increase in operating profit. Reputation risks involved in the financing of ecologically and ethically questionable projects.
- Appropriate legislation is not yet framed: In all likelihood, due to increasing awareness of environmental protection, if they are involved in large projects, banking institutions are at greater risk of losing their credibility, which are socially

and environmentally is considered to be harmful. There are many cases where environmental management has resulted in cost savings, increased bond prices, and so on. In some cases, the environmental management system is the result of lower risk, greater environmental management and increased operating profit. Risks of reputation involved in financing environmentally and morally objectionable projects.

- Lack of Environmental Audit: The lack of environmental audit to determine the environmental status of a facility, property, and operation, and to identify disciplinary compliance status, past concerns and environmental risks and responsibilities associated with the project. This should be done by an independent organization or by any environmental investigation team.
- Less focus on environmental risk management: Less attention is paid to environmental risk management following post-management.
- Lack of clear policies: Clear policies are required to altering the present management systems to incorporate sustainability issues.
- Unavailability of skilled employees: Skilled employees are required to implement the strategies properly.

**Conclusion :-** Green banking is evolving to improve the environment and promote economic growth. Until a few years ago, most traditional banks did not practice green banking or actively seek investment opportunities in business environment. Indian banks are far behind their counterparts in developed countries. If Indian banks want to enter global markets, it is important to recognize their environmental and social obligations. Only recently has this strategy become more popular not only among smaller alternatives and cooperative banks, but also among various financial services providers, asset management firms and insurance companies. In addition, industries that are already green and those who are making serious efforts for green development should give priority to lending by banks. This concept of "green banking" will be mutually beneficial for banks, industries and the economy. Not only "Green Banking" will ensure the greening of the industries but it will also facilitate in improving the asset quality of the banks in future. There are many opportunities and challenges for Indian banks to adopt "green banking" as a lucrative business. If green banking is implemented with a sincere intention, it will serve as an effective precursor to the pollution industry that passes other regulatory mechanisms. Therefore, for sustainable banking, Indian banks should adopt green banking as a business model without any delay.

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# Job Satisfaction of Women Employees in Education Sector

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**Abstract :-** Indian women professionals are definitely on the rise & are paving the way for future generations, as they are becoming increasingly visible & successful in the professional and public sphere. Today, Work-life balance (WLB) has become a subject of concern for business leaders in view of the contemporary demographic, technological, market, and organizational changes associated with it. WLB for women employees is highly desirable, if there is no job satisfaction & consistency in life, it can create a dilemma to them. WLB requires attaining equilibrium between professional work and personal work, so that it reduces friction between official & domestic life. The ultimate performance of any organization depends on the performance of its employees, which in turn depends on numerous factors such as job satisfaction, family or both. A study is conducted among the working women of some colleges of Meerut, the objective of which is to study the working environment and the level of satisfaction as perceived by the women-respondent employees on the varied determinants of WLB. Research also identifies the major factors influencing it among various categories of women employees in education sector irrespective of cadres. Apart from it, another significant objective is to analyze the impact of family support being provided to working females. It also explores the effect of Technology on Work-Life Balance of female. The aim is to highlight the attitudes & beliefs of women regarding job anxiety in their formal work organizations & particularly balancing their work & personal life.

**Keywords :-** Work-Life Balance (WLB), Family, Organization, Technology.

Change is occurring all over the world with the advent of Technology in every field. Every sector contributes to a cultural transformation and social revolution. The Indian women, who were mostly found in four walls of the house in the last decade, are diverted now and actively participate in the technology revolution. It has become a common phenomenon that majority of the female professionals, especially the knowledge workers, are working harder and longer ever before. As a consequence, they find it difficult to achieve work life balance.

In India the concern over work-life balance is gradually becoming a common talk especially for women employees.WLB is key driver of employee's satisfaction. All female professionals have different set of demands and when such role demands overlap, multiple problems are faced. Times have changed. From the time the husband earned, and the wife stayed at home. To the time now when the husband earns and the wife earns too. But the wife still cooks and washes and runs the house. So, how does she balance her work with life at home? Although, over the years women in India have struggled to establish an identity create a mark in the social as well as in the organizational platforms, but with educational institutions training more and more women to enter professional careers, have drastically changed the scenario. There's evidence to show women are making a valiant attempt to balance work and life, a tougher proposition than for men. For, while making giant strides in their careers, they continue to take primary responsibility for managing the family.

WLB is the proper prioritizing between "work" (career and ambition) on one hand and "life" (pleasure, leisure, family) on the other. It is a state of equilibrium in which the demand of both professional and personal life is equal. WLB has important consequences for employee attitudes towards their organizations as well as for the lives of employees.

**Work Life Balance In Education Industry Present Scenario :-** Education sector is the ultimate cognitive work where the development and exchange of ideas are constantly brewing in people's mind; the job offers an enormous amount of flexibility, other than giving lecturers and attending the occasional meeting. Academic whether male or female have to render their services for specific period of time as in traditional 9 to 5 jobs. On this surface this appears to be ideal job for achieving work/life balance.

But the nature of academic work is never ending. One always has to be thinking about working on next course, applying for next grant, and developing the next research project. The flexibility of education sector dangles the possibilities of a desirable WLB in front of female

**Aeran And Kumar : Impact On Life Of Women Employees In Education :-** Faculty, but several barriers persist preventing a desirable work/life balance from becoming reality. In that case organization support & family support helps the women in achieving desirable balance. Poor WLB balance has negative implications for organization in the global economy, as well as for individual women and their families. Balancing family and academia, especially for women, is a chronic challenge. Women have been struggling with this issue since they were first "admitted" into academia. One entered academia between 1890 and 1940 shouldered all the responsibility of family life while still working to meet the demands of the workplace. Research reveals that little has changed over the past 100 yrs. as women have many barriers to overcome to meet the demands of work and home, but they have crafted strategies for being successful.

**Benefits of Work Life Balance**

**To Employers :-**

- Reduced absenteeism & stress with more improved productivity.
- Improved employee morale and commitment.
- Increased ability to attract and recruit staff.
- Potential for improved occupational health and safety.

**To Employees :-**

- Ability to manage work and individual commitments with family.
- Flexible working arrangements resulting in reduced work overload and stress.
- Increased focus, motivation and job satisfaction knowing that family and work commitments are being met with job security from the knowledge that an organization understands and supports workers with family responsibilities.

**Review of Literature :-** Few studies are conducted in the area of the present study. A review of these studies provides the direction to the present study. The expression was first used in the late 1970s to describe the balance between an individual's work and personal life.

Supriti Dubey, Ruchi Saxena & Neetu Bajpai "Work Life Balance: Can Women be Both Bearer and Manager" Dubey etal./Journal of Engineering, Science and Management Educational/ Vol. 3, 2010/pp 15-21 She stated that Organizations need to create congenial conditions in which employees can balance work with their personal needs and desires. Successfully achieving work-life balance depends not only on organizations but similar efforts from family are also desirable.

Alam Sageer, Dr. Sameena Rafat, Ms. Puja Agarwal (2012) studied various variables that are responsible for employee satisfaction. The Study concluded that an organization should develop strategies that strengthen the work environment and increase the employee morale and employee satisfaction to enhance employee performance and productivity, which ultimately results in high profits.

The purpose of Jaime X. Castillo and Jamie Cano's (2004) study was to describe the amount of variance in faculty member's overall level of job satisfaction explained by Herzberg. This study concluded that the female faculty members were less satisfied than male faculty members. The least motivating aspect was "working conditions." The factors "recognition," "supervision," and "relationships" explained the variability among faculty members & overall level of job satisfaction.

The study of Khalid Latif, Muhammad Naeem Shahid, Dr. Naeem Sohail, Muhammad Shahbaz (2011), revealed influential factors contributing to job satisfaction and dissatisfaction of college teachers of district Faisalabad, Pakistan. And they examine that there were significant differences in job satisfaction between public and private college teachers. Public college teachers are more satisfied than private college. This study suggested that to increase the satisfaction level of teachers of private colleges a proper attention should be paid so that the employers of private sector colleges will be able to retain teachers.

Hanita sarah saad &Anion jauhariah" Employees perception on quality work life and job satisfaction in a private higher learning institute" international review of business research papers, Vol. 4, no 3., June 2008 pp 23-34 The study reveal that QWL variables are insufficient to measure employees 'job satisfaction .job satisfaction in education sector should include intrinsic rewards and performance evaluation criteria in evaluating their employees.

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**Materials And Methods :-** Sample unit collect from working women of some private institutes of Meerut. (Engineering. & Mangment.) with 100 women employes. In order to achieve and test the hypothesis stated above the different methods adopted include review of literature , selection of sample , designing of questionnaire, interview and discussion with women faculty at various levels. Their exercise helped a lot in collecting relevant data for study. In-depth, in-person interviews composed of open& questionnaire with closed - ended questions were conducted with each participant to provide a detailed look into the challenges these women face balancing work and life outside work.

**Results :-** The results of the survey were intended to provide quantitative information.

**Data Presentation :-**

a - There are appox.35 technical and management colleges/ institute in Meerut, out of total 80 women have primary care responsibilities and 20 having no responsibility.

| Total Women | Primary Care Responsibilitie | Without Responsibilities |
|---|---|---|
| 100 | 80 | 20 |

b - The women having different responsibility that generate work life conflicts e.g. having children, elderly parents, spouse, and adult with disability. Primary Care Responsibilities 80:

| Opinion | Having Children | Elderly Parent | Disabled work | Other Work |
|---|---|---|---|---|
| Respondent no | 65 | 10 | 3 | 2 |
| Respondent % | 81.25 | 12.5 | 2.5 | 3.75 |

c - 65 women in the sample have children. Women due to their job responsibilities can spend only few hours with children after doing domestic work. She can help the children in their studies and other activities:

| Hours spent | 3-5 hours | 5-7 hours | 7-9 hours | More than 9 hrs. |
|---|---|---|---|---|
| Respondent no | 20 | 35 | 8 | 2 |
| Respondent % | 31 | 54 | 12 | 3 |

d - For women family support has great meaning. It gives them energy to do job. She can focus on her work well, and job satisfaction, commitment enhanced, all due to family support:

| Opinion | Never | Rarely | Sometime | Often | Always |
|---|---|---|---|---|---|
| No. of respondent % | 15 | 22 | 28 | 18 | 17 |

e - Amenities provided & working condition of organization helps to work efficiently and effectively. Different respondents have different view about amenities provided to them:

| Opinion | Highly Satisfied | Satisfied | Neutral | Dissatisfied | Highly dissatisfied |
|---|---|---|---|---|---|
| No. of respondent % | 10 | 35 | 20 | 18 | 17 |

**Aeran And Kumar : Impact On Life Of Women Employees In Education :-**

f - Women due to role conflict have to manage both personal & professional life. Organization helps her in managing responsibilities. Different respondents have different views:

| Opinion | Highly Satisfied | Satisfied | Neutral | Dissatisfie | Highly dissatisfied |
|---|---|---|---|---|---|
| No. of respondent % | 12 | 23 | 15 | 30 | 20 |

g - Organization should give enough opportunities to use technology along with knowledge. This enhances faculty skill and quality of teaching. Respondents views on opportunity given to them:

| Opinion | Highly Satisfied | Satisfied | Neutral | Dissatisfied | Highly dissatisfied |
|---|---|---|---|---|---|
| No. of responder | 25 | 32 | 10 | 13 | 10 |

h - Good work life balance make organization more effective. Respondents views :

| Agreed | Disagreed % |
|---|---|
| 93 | 7 |

i - There are no. of factors which raise hinders in work/life commitments. Respondent's views:

| Hinders | Long Working Hours | Work pressure | Higher responsibility | work after working hour | -ve attitude of Management |
|---|---|---|---|---|---|
| No. of respondent % | 25 | 32 | 32 | 25 | 10 |

j - Due to innovation in education, technology may help in reducing work load to a great extent. Technology is better tool to manage work/life demand. Respondent's views:

| Opinion | Great extend | Some extend | Little extend | Not at all |
|---|---|---|---|---|
| No. of Respondent % | 60 | 25 | 5 | 5 |

k - Technology in helps in domestic work. Automatic washing machine, microwave oven & other electronics goods helps women in managing routine activities. Respondent's views:

| Opinion | Highly Satisfied | Satisfied | Neutral | Dissatisfied | Highly dissatisfied |
|---|---|---|---|---|---|
| No. of responder | 12 | 28 | 17 | 20 | 23 |

l - Do you think that if employees have good WLB then they will be satisfied by the job? Views:

| Opinion | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| No. of Respondent % | 31 | 49 | 15 | 5 |

**Discussion**

**Organization Support & Work Life Balance :-** Organization support have positive impact on working role performing by the women at work place by creating balance; thereby eliminating work life conflict. It is important resource for working women to manage their work and family domains. A teacher's satisfaction with his or her career may influence the quality and stability of instruction given to students. Teachers who do not feel supported in their work may be less motivated to do their best work in the classroom. Highly satisfied teachers are less likely to change institute or to leave the teaching profession altogether than those who are dissatisfied with many areas of their work life. As faculties are both the largest cost and the largest human capital resource of a school/college system, understanding factors that contribute to teacher satisfaction (or dissatisfaction) is essential to improving the information base needed to support a successful educational system. Therefore the present study was based on the Comparative job satisfaction among colleges. Educators and various factors responsible for the dissatisfaction inside and outside the organization. So it is been suggested that the organizations should be more flexible in their proceedings so that the females can maintain a balance between both life.



**Family Support and Work Life Balance :-** In developing countries the family incomes are, by and large, low and that can best be supplemented by women's work. The main reason why most women work was the low income of their men folk. When the husband's income was not adequate for the support of the family, the wife also was compelled to work. They are forced to combine her two major occupations and roles-marriage and work-faces additional socio-psychological problems and difficulties. Problems are then faced particularly in those cases where the wife has to devote more time and energy to her too absorbing job because of its immediate compulsions and she feels guilty that she has not been able to do justice to her husband, home and children. She still feels that her home and children are her prime responsibilities and she continues to be predominantly governed by this role since that was also the social norm. In that case the support of family side can help her to contribute to her fullest both in personal & professional field.

**Role of Technology on WLB (How work load of faculty is reduced by using it) :-** Technology affects our lives in education sector too. E- Learning has created revolutionary effect on faculty performance and reducing their work load which manages their WLB. Enhanced teaching is possible only when these changes are accepted & adopted. In today's education environment information and knowledge need to be effectively managed. Itis one of the most significant drivers for improved WLB. Technology aligned family life with civic duty by increasing the accuracy of information and improvement in utilization efficiency of teachers, time & materials. It support to the faculties as it is used to integrate teaching and learning both inside and outside the classroom. Classroom Response System (e.g., clicker) can engage students by making lectures more interactive, while simultaneously allowing instructors to keep track of whether students understand the material. It can be used to create more meaningful assignments & to integrate the lecture with the associated discussions or labs. Support provided by the latest technology somewhere motivates the faculties in some way or the other to perform better.

**Conclusion :-** Education sector has emerged as one of the largest employers in the country which has not only created plentiful job opportunities but has also resulted in new types of challenging careers. As this sector gives more emphasis to knowledge alone it is non-discriminating in nature. It provides opportunities for the educated, middle class women to build their own dreams and excel in their fields. A changing economy and an aging workforce can join together to create an employment environment where competent females who are unhappy in their current situations are motivated to find a new place to "hang their hats. Women in competitive environment also expected to combine home responsibility with working life where the question arise how to manage both the lives. Work life and personal life are two sides of same coin .Organization efforts with family support and technological can help the women balance personal front with professional work. Balancing work life linkage is not an easy thing to do for women. As demand from both sides can be extreme and women may need to make tradeoff. Education sector have higher responsibilities work pressure, never ending academic work, always think about working on next course, applying for next grant. Professionals have to make tough choices even when their work and personal life are close to equilibrium. A balance between work and life has to exist if want to make proper functioning at work and also at home.

**Acknowledgements :-** Authors are thankful to the Directors & Heads of different Engineering &Management institutes for permitting to carry out the present work. Special gratitude to all those female faculties for their cooperation who spared their valuable time for replying to both open & close ended questions.

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# Maggi, it's Ban & Revival: Implication on Tourism

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**Abstract :-** Nestlé India Limited is the subsidiary for India of Nestlé that introduced Maggi in 1982. It was launched as Maggi 2 Minute Noodles, an instant noodles commodity. Maggi noodles from Nestle successfully created an entirely new and untouched food category - instant noodles - in packaged food market. After running successful for years, a ban imposed on Maggi in June, 2015 was one of the most discussed matters at that time. Excessive amounts of lead and MSG were found during the initial tests which lead to a pan India ban of Maggi.While some are concerned about the lead they might have consumed, many are upset that their midnight snack had been removed from the market. Considering its impact for tourism, for many tourists Maggi is one of the safest and familiar options for eat if they are away from their regular home food. If nothing is as per their taste, a trustworthy Maggi will always be there.Also, for mountaineers and trekkers; Maggi is a viable food option which can be easily cooked with minimum supplies. However, the company handled the ban wonderfully and bounced back after the ban in the market in such a way that it was the market leader again within 6-8 months of its re launch. The marketing techniques used by the company were very good and could be used as a case study for marketing students.

**Keywords :-** Maggi Ban, Revival, Marketing, Tourism.

**Introduction :-** As far as the history of Maggi goes, the company was originally started by Mr. Julius Maggi in the year 1875 in Switzerland. He did it to consume the excess of the legume or pulses that he produced during that time. He wanted to create a product that could be made cheaply and made easily available in the market for the lobourers working in the fields. These needed to be nutritious and easily digestible. The products were loved by everyone instantly and soon Maggi began to spread its business all over Europe starting from neighboring countries like France, Germany, Italy, United Kingdom and soon to United States of America. In the year 1947, Nestle acquired the company Maggi. Maggi was launched in India in the year 1982 as an instant noodles brand with the tagline "Fast to cook & good to eat" i.e. they focused on Convenience and Health.

The Indian Consumer was unaware of a product like that, i.e. instant noodles, before which was so easy and convenient to cook and was also pointing out to be of a nutritious quality. Maggi recognized this need of the market and released their product as "a fast relief from hunger". It was noticed that the product was more loved by the children who enjoyed it's peculiar taste so the company started to focus their marketing towards children and their mothers.

With the launch of Maggi noodles, Nestle created a whole new and untouched segment in India market i.e. the instant noodles. Nestle India limited used this to their advantage and being the first product of its type in the market helped them to be the market leader for a very long time which they are still continuing. It was not an easy task at that time because this food was not acceptable as much as it is being today. However, Maggi was rebranded in the year 1999 with the tagline "taste bhi, health bhi" i.e. tasty and healthy. It helped the product to gain the trust of the customers especially the mothers in the family who held the final decision as far as food products were considered.

However, on the June 5 2015, the Food Safety and Standards Authority of India (FSSAI) had ordered an all India ban on Maggi stating that it was unsafe and hazardous for people's consumption due to presence of lead in a limit which was way beyond the permissible limits. The initial tests done under the orders of Mr. Sanjay Singh, from UP Food Safety and Drug Administration based in Barabanki (Uttar Pradesh) found that Maggi exceeded the permissible level of lead i.e. 17.2 parts per million and also an extremely high level of monosodium glutamate (MSG) as well as tertiary-butyl hydroquinone (TBHQ) - a chemical preservative derived from the petroleum industry. It might be present in instant noodles for their taste enhancing and preserving properties. Though dietary intake of these elements is allowed within a limit, regular intake of these can cause severe health issues for the consumers.

When their biggest selling product of the company was being called unfit for consumption, it was a big blow for Nestle. It was also an issue in the market as everyone was on point to see how the company would handle the claims. As expected, Nestlé defended its product and rejected all claims that its noodles were unsafe, and they did this on all digital channels so that they can reach a wider public.

**Literature Review :-**

- As per a research paper done by Karpagavalli. G & Dr. A Ravi,(Bharathiar University, Coimbatore) titled NESTLÉ'S MAGGI IS ON THE SHELVES -A CASE STUDY ON DELIVERING BUSINESS STRATEGY, it is stated that there was a steep decline in the sale of maggi after the report of the excess amount of lead and MSG in it. This caused a lot of problem for the company at that time. But after the relaunch of the product after a five month ban, it has rapidly regained its market share.
- Nestle India termed the five-month ban as "one of the biggest crises" it has faced in the 32-year history of the brand in the country. "The crisis we went through is a big one for Nestle India. But we were always confident about the quality and safety of Maggi noodles. It is an important brand for the company," Nestle India chairman and managing director Suresh Narayanan told a round-table with journalists to announce the re-launch.
- Women who ate instant noodles twice a week or more had a higher risk of metabolic syndrome than those who ate less, or not at all, regardless of whether their diet style fell into the traditional or fast-food category, "as published in **The Washington Post.** The study concluded that excessive instant noodle consumption can not only trigger obesity but also metabolic ailments like diabetes, high blood pressure, hypertension, heart problems and so on.
- As per a survey conducted by the team of **Trek the Himalayas,** Maagi is one of the most preferred foods by the trekkers after fruit juices. It is easier to prepare on high altitudes and is a good source to fill the stomach as trekkers are mostly asked to do the trekking half stomach. Having hot and slurpy maggi after reaching the summit is a felt as an achievement by the trekkers.

**Research Methodology :-** This is a secondary research based on the pre available facts and figures in already published journals and books. This also required a deep online research on the internet to obtain and get the recent and latest fact as well as information. So, for this research we chose to do a secondary research by gathering data and information from various books and internet websites. I took information from some peers as well as referred papers done by some other scholars in the field. Various government and non-government websites were also very helpful and informative to get the data for the use in this research.

**Findings & Observations :-**

- NESTLÉ's relationship with India dates back to 1912, when it began trading as The NESTLÉ Anglo-Swiss Condensed Milk Company (Export) Limited, importing and selling finished products in the Indian market. In 1947, the economic policies of the Indian Government emphasized the need for local production. NESTLÉ was one of the first international companies to respond by forming a company in India and set up its first production factory in 1961 at Moga (Punjab), where the Government wanted NESTLÉ to develop the milk economy. The company had to focus on increasing the milk yield of the cows through improved dairy farming methods, provide better irrigation facilities to the farm lands, scientific crop management practices and helping with the procurement of bank loans for the farmers.
- It's been around a century since Nestle set up its establishment in India and has built a strong

bond of relationship with trust and commitment with the people of India. The company has provided direct and indirect employment and livelihood to more than one million people that include farmers, factory workers, suppliers, transporters etc.

- NESTLÉ India manufactures products of truly international quality under internationally famous brand names such as NESCAFÉ, MAGGI, MILKYBAR, KIT KAT, BAR-ONE, MILKMAID and NESTEA and in recent years the Company has also introduced products of daily consumption and use such as NESTLÉ Milk, NESTLÉ SLIM Milk, NESTLÉ Dahi and NESTLÉ JeeraRaita.
- The Brand Maggi- has presence in 130 countries with more than 5.2 billion Maggi noodles packs sold across the world every year, has gross Domestic sales of Nestle (Rs. 14129 Crore in 2019 as per the Economic Times) in India alone.

**The Infamous Ban on Maggi :-** Nestle Maggi faced problems in India in June, 2015 when it got banned in several parts of the country. An officer of the UP Food Safety and Drug Administration based in Barabanki (UP) ordered tests on a dozen samples of Nestlé's Maggi instant noodles at the state laboratory in Gorakhpur, and repeat tests at the Central Food Laboratory in Kolkata, a referral lab. The Gorakhpur lab tested for monosodium glutamate (MSG) to check Nestlé's claim that Maggi had none. Both tests found MSG; in addition, the Kolkata lab found "very high quantities" of lead i.e. 17.2 parts per million. 25. Based on the findings, UP FDA filed a complaint in a Barabanki court.

On June 8, 2015, Union Food Minister directed the statutory regulator, Food Safety and Standards Authority of India (FSSAI), to conduct nationwide tests on Maggi. Food safety regulators from Uttar Pradesh tested few samples of Maggi and found excessive amount of lead and MSG (Monosodium Glutamate) beyond the permissible limit. FSSAI (Food Safety and Standards Authority of India) immediately acted upon the complaint filed by food safety regulators of U.P and ordered testing of Maggi samples all over India. On testing, maximum states found excessive amounts of lead in Maggi samples except states like Goa, Kerala & Punjab where no faulty samples were found. Permissible amount of lead in food is .01 ppm but Maggi samples contained 17 parts per million lead which is a very huge quantity. Hence, due to health and safety reasons, Maggi was banned in India as lead and MSG are harmful chemicals which causes inflammation of lever, damage of brain not immediately but with lapse of time and other serious health issues especially in children. As a consequence, Nestle Maggi suffered a quarterly loss of Rs.64.40 crore for the first time in the history of Nestle India for the quarter ended June 2015. Contribution of Nestle Maggi in the revenue of Nestle India accounts to 20% approximately due to which company suffered badly because of the ban.

Film stars like Amitabh Bachchan, Madhuri Dixit and PreityZinta were sent summons because at some point of time they endorsed Maggi as a brand. Thus, FIR was lodged against them for false marketing. Some consumers were heartbroken to know about the harmful content found in their favourite noodles. Nestle Maggi and swore not to consume it ever. Then there were others who mocked this ban and compared it with pesticides in soft drink and believed that this lead in Maggi will be soon forgotten like the pesticides in soft drinks were forgotten. Reactions of students and the like were astonishing as they stockpiled the Maggi packets from their nearest stores when they heard of the ban irrespective of its harmful implications. Many switched to other brands available in market as they have developed taste and habit of eating noodles.

Maggi has always been a savior of hostellers and people away from home due to ease of cooking and negligent cooking time. Thus, Maggi ban experienced mixed reactions from all classes of people in the country.

**Crisis Management by Maggi :** After the ban was imposed on Maggi, it was a major job for the company to handle the matter in such a way that it resumes its business after the matter gets over. With the extensive use of social media during the crisis, the brand limited further damage by informing customers with confidence and encouraging them to continue purchasing noodles in the future. Nestlé reassured customers that their products were safe using social media, Facebook, and multiple Twitter accounts (the main Nestlé account, Nestlé India, and Maggi India).Nestlé responded on to all comments on social media directly without fail. In addition to this, Nestlé also created a section on the main website to keep customers up to date about the major steps taken for improvement.

**Steps Implemented :-** The company used various social media channels to take care of its image while the media was putting questions on its image.

- Initially, the company rejected the accusation that the noodles were unsafe and said on their website and social media accounts that there had been no order to recall any products. A statement on their website said "The quality and safety of our products are the top priorities for our Company. We have in place strict food safety and quality controls at out Maggi factories… We do not add MSG to Maggi Noodles, and glutamate, if present, may come from naturally occurring sources. We are surprised with the content supposedly found in the sample as we monitor the lead content regularly as a part of the regulatory requirements." This statement was made to revoke the Maggi Noodles ban.
- Nestle kept updating its customers regarding the investigation about the safe quality of Maggi noodles in the country. Nestle declared on the official Maggi Noodles Facebook page, Twitter and web site, that high level testing at various locations disclosed no excess lead in Maggi Noodles
- Nestle used its Twitter and Facebook accounts to answer customer's questions on the amount of monosodium glutamate and lead found in their noodles. The company continued to re-affirm customers that the noodles are non-threatening and they're a responsible company operating closely with authorities to resolve the problem.
- Nestle created a FAQ page on the official website.
  - Are Maggi Noodles Safe?
  - Can I return Maggi Noodles?
  - What are the latest lab results?
  - Why is there Lead in the Maggi Noodles?
  - What about Maggi noodles exported from India?
  - When will Maggi Noodles be back?
  - What is the science behind the savory taste?
- Even after re-assuring customers that Maggi is safe to consume, the company still did a U-turn and decided to recall all the Maggi noodles from the market to gain the goodwill of the customer. CEO Paul Bulcke said, "We are working with authorities to clarify the situation and in the meantime Nestle will be withdrawing Maggi noodles from shelves."
- Nestle took a decision to destroy more than $50million worth of Maggi Noodles in India after it was declared unsafe by regulators to retain the goodwill of the customers.
- In a process to defend its reputation in the international market, Nestle got its products tested and verified in various laboratories and agencies all around the world and got the results published publicly published to prove its standard of quality all around.

| Country | Authority/ Agency | Explanation |
|---|---|---|
| USA | US Food and Drug Administration (FDA) | The US Food and Drug Administration (FDA) confirmed that tests on several shipments of MAGGI noodles from India did not find any health risks to consumers. The FDA has released the noodles for sale in the United States. 11 August 2015 – We have learnt from our official importer in the United States, House of Spices, that the US Food and Drug Administration has tested several shipments of MAGGI Noodles from India for lead content. Finding no unsafe lead levels, FDA released the noodles for sale in the United States. |
| Canada | Canadian Food Inspection Agency (CFIA) | On June 5, 2015, the Canadian Food Inspection Agency (CFIA) issued a Consumer Advisory regarding the actions taken in response to the incident in India involving MAGGI brand noodles, including Nestlé's removal of products from the Indian marketplace. The CFIA's food safety investigation did not find any health risk associated with the consumption of MAGGI brand noodles products sold in Canada. |
| UK | UK Food Standards Agency (FSA) | 1 July 2015 – The FSA can confirm that results from testing samples of MAGGI Noodles in the UK have within EU permissible levels and would not be a concern to consumers. |
| Australia & New Zealand | National Measurement Institute | 19 June 2015 – Testing by the National Measurement Institute in Australia has confirmed that MAGGI Noodles imported from India are completely safe to eat. Testing showed that levels of lead were well within the acceptable limits set by the regulator, Food Standards Australia and New Zealand. |
| Singapore | Agri-Food and Veterinary Authority (AVA) | 11 June, 2015-Results from the Agri-Food and Veterinary Authority's (AVA) recent food safety tests on MAGGI Noodles available in Singapore, including those produced in India, showed that the noodles met Singapore's food safety standards and do not pose food safety risks to consumers. On 8 June, AVA confirmed that MAGGI Noodles available in Singapore are safe for consumption. |

**Effects on the company after the Ban Debacle :** Nestle India's nine variants of Maggi noodles accounted for almost 70% of the instant noodles market, which took a massive hit when an all India ban was imposed on the product. After the ban was imposed on June 5, the company's share price fell drastically. On June 8, three days after the pan-India ban was imposed, Nestle India's share price was all the way down to Rs 5,539.8, an all-time low level it had seen all year. Since then, the company's scrip has seen major volatility, regaining the very best level since the ban at Rs 6,831.95 per share on August 5.


In the quarter ending June 2015, Nestle India posted its first net loss in nearly 30 years. For the quarter, the company posted a standalone loss of 64.40 crore, down significantly from the Rs 287.86 crore profit posted in the same period last year. The company's sales were down 20%. Maggi accounts for nearly 30% of the company's revenue.

For the July-September 2015 period, the company's net profit was down 60% to Rs 124.20 crore from the Rs 311.20 crore net profits posted in the same duration last year. The company's net sale was down 32.12% to Rs 1,736.20 crore as against Rs 2,557.80 crore in the same time the previous year.

**Effect on Employment during the Ban :** Nestle India employs nearly 9,200 people in India, across its eight plants. However, in line with this NDTV report, Nestle India had assured that it'll not be cutting any jobs despite the assembly halt of one of its biggest brands. The report said that employees as well as the workers in the factory were deployed to other job roles during the ban period.

However, according to this Indian Express report, the company's Moga plant that employed 1,500 contract workers apart from the regular staff, had only about 400 people working during the ban. The job losses weren't limited to Nestle India. The ripple effect was felt throughout the business chain including retailers, a large number of suppliers of raw materials, farmers and transporters.

**The Relaunch or 'Reincarnation' of Maggi :** After five months of ban, it was announced that Maggi was going to make its comeback into the market and everyone was ready to get the first few packets. As of today Maggi has almost got back its pre-ban customer percentage and continues to be right at the top of the packaged food chain. Here are some of the tactics it used to come back after the ban and bad press reputation, and which can teach us a lot about marketing.

1. **Using the Nostalgia Factor :** Maggi has always made advertisements that had family in the centre stage. This attracted the customer the most showing its concern for the consumers.Most of the ads included mothers delightedly rewarding their children or friends having a good time together. The advertisements that they made during the relaunch hit on the right spot of the clients which was their prior love for maggi.Quite naturally, the first ad after the Maggi relaunch was of a mother speaking nostalgically about her child's tryst with his favourite noodles, thus further adding to the emotional value of the customer's right there.

**2. Keeping in touch through increased advertisement space :** After the major issue of Maggi Ban, Nestle decided that the product would need extensive marketing to gain back its goodwill as well as market share. So they decided to increase their expense on the marketing advertisements. This lead to a growth of its ad volume to about 96 percent by September 2015 in all sectors i.e. television, radio and print media — two months prior to the relaunch of the famous noodles, according to various data estimates. The first advertisement in the newspaper which was also the announcement of the relaunch read — "Your Maggi is safe, has always been."

**3. Choosing a perfect medium of re launch i.e. online marketing :** Along with increased expense on television ad space, Maggi was relentless in its promotions of the upcoming relaunch on all other platforms such as social media. Using the full force of its high followers on platforms like Facebook, which has millions of likes on it and thousands of followers on Twitter,they announced the relaunch.

**4. Making it purely exclusive :** Like with everything else, Maggi wanted the consumers to have an exclusive feeling. Maggi played smartly decided to take advantage of online shopping boom at that time and made a deal with Snapdeal, which became the only platform where Maggi packets were sold before its official comeback into the shelves of all stores. This raised its demand by a roof and customers were getting ordering it by bulks before it went out of stock. The company thus set the stage for Maggi's official comeback into the markets.

Today, we are back enjoying our favourite two-minute noodles without a single thought about the fact that it was banned for health reasons. Not only did Maggi manage to save its reputation and get back its customer base, it taught us a lot about smart marketing.

Post the Maggi crisis,Nestle India decided that it will increase product portfolio diversification with focus on dairy, coffee and beverages as well as chocolates and confectionery in order to avoid over-dependence on a single product.

**Maggi & Its Importance in Tourism :** Many tourist destinations, especially in hill regions, have popular Maggi points where locals and tourists collectively join in to relish a plate of Maggi. As a matter of fact, for many Maggi used to be the easiest and most familiar option to eat for everyone who did not like the local cuisine when they are away from their regular home food. The consistency in the taste of Maggi all over the country made it a staple food for everyone from all parts of the country.

Interestingly, there are many places around the country that has Maggi points, after the ban will they change their name or stop selling our 'special' treat i.e. Maggi. Maggi is a major diet for the adventure seekers all around who tend to have something hot and slurpy after a long trek or any adventure activity like water rafting, skiing, biking etc. It is also preferred by mountain climber as it can easily be carried and cooked under extreme conditions. It also works for foreign nationals since Maggi is available all around the world as a ready to eat food with the same familiar taste.

Some of the major adventure destinations of India serve as Maggi spots for the adventure seekers as well as tourists. Some of the Major spots are as follows:

- **Hassan Valley, Kufri, Shimla** : This is a place with the beauty beyond imagination, the epitome of natural vegetation. Many tourists visit this place to have a look at its beauty while some especially travel a long way to taste a hot bowl of mouthwatering Maggi. Cooking it in the hills bring a different flavor to this simple pack of Maggi.
- **Maggi Point, Rafting Miles, Rishikesh** : Rishikesh is known for the most stunning rafting spot in the country. Hundreds of people indulge in the rafting over there all seasons. And while in there making the most of this water sports, there is one ritual that everyone follows is the Maggi breaks. People actually sail their boats a long way to satiate their craving for a delicious bowl of Maggi.
- **Mussoorie road, Doom Gaon, Uttrakhand** : Mussoorie is one among the most visited hill-stations of India. Be it summer vacations or a weekends off, one can never miss a chance to visit this place. The Mall Road has the most visited

Maggi point in Mussoorie and also people come from far off just to taste it.

- **Rohtaang Pass, Manali** : In Rohtaang Pass, most of the stalls serve Maggi and you may not find many other options except for Maggi in this dream travel destination. The scenic beauty of the surrounding and the delightful bowl of piping hot Maggi will tempt you even if you don't feel like eating or are not at all hungry.
- **Yumthang Valley, Sikkim** : In the chilling weather that can freeze you, Maggi is the only way to get relief from the fast blowing cold wind. Maggi is most eaten foods at Zero point after a long trek or climbing a mountain because it can be cooked easily and quickly.
- **Ladakh, Jammu Kashmir :** Amidst the snow-capped mountains, Maggi tastes absolutely heavenly. This has been agreed by most bikers, trekkers and travelers who have been to Ladakh. Ladakh has one of the most number of Maggi points that attract various bikers and travels to enjoy the slurpy food item.

**Conclusion :-** During this research & report, it was found that Maggi has become an integral part of Indian market. It has a special place in the hearts of us Indians.Everyone has a liking for it, be it trekkers, hostlers, bachelors etc. Everyone loves maggi because of the taste and the fact that it is an easy to cook product that can be made by anyone.

During the ban, there was a lot of disappointment among the people regarding the product. People were disappointed more for not able to have Maggi rather being concerned about their health. That is why, when maggi was relaunch after a ban of 5 months, the people welcomed it with open arms.

The company had made changes according to the requirements of FSSAI (Food Safety & Standards Authority of India) and launched it after five months. The company had its doubts if it would be able to get back in the market as before. To accomplish this, they made great strategy for its promotion and marketing. They appealed to the loyalty of the customers rather than taking any brand ambassador. They also focused on exclusive online sales with Snapdeal. Maggi was advertised all over in an extensive way on all Medias like newspaper, radios, television commercials and also a lot on social media. This was a great strategy and within a year of the ban it got back to having a market share of around 50% which was a huge accomplishment.

The present market share is more than 80% which is the result of a great marketing technique utilized by the company and thus could be a good example for education purpose too.

As far as, its importance with Tourism is considered, maggi is enjoyed not only by the adventure tourists all over but also by general tourists. There are many Maggi spots all around the country that cater Maggi made in various tastes and varieties that are loved by people. The fact that India is a very large country with variety of cuisines, each being different from one another, Maggi being a food that tastes the same all over & loved by all, comes in handy for the company. People who travel to various places and are not interested in the local cuisine or want a change, go for Maggi. This leads to a high sale of Maggi in almost all the tourist places be it hill stations, beaches, religious centres etc. Thus making it one of the most loved tourist food in India.

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# Phytopharmacological Potentials and Micropropagation of Aegle marmelos - A Review

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**Keywords :** Aegle marmelos, Phytochemical, Pharmacological, Micropropagation

**Abstract :** Aegle marmelos, a popular medicinal plant and is used in traditional medicine to treat numerous ailments. Aegle marmelos are reported to have a wide spectrum of pharmacological properties. Its medicinal usage is well-documented in in different traditional medicine such as the Ayurveda, Unani, Siddha, and other conventional medical systems.

Whole parts of the plant are rich in secondary metabolites, which impart miraculous medicinal uses to the plant. The bioactive constituents isolated from lupeol, sitosterol, amyrin, flavanoids (mainly rutin), coumarins, including aegeline, marmesin, umbelliferone etc. The extracts of different parts of plant used as antimicrobial, hepatoprotective, antidiabetes, analgesic, antipyretic, diuretic, immunomodulators, nephroprotective, antioxidant and cytotoxicity activities. Employment of techniques such as cell and tissue culture would provide means of rapid propagation and conservation of the plant species and, from the point of view of phytochemistry, give scope for enhancement of the quality and quantity of the bioactive secondary metabolites occurring in the plant. However, more advanced research is warranted to determine the activities of bioactive compounds in vitro and in vivo, establish their underlying mechanisms of action and commence the process of clinical research. This review consists all the updated information about secondary metabolites, medicinal properties and tissue culture studies on Aegle marmelos.

**Introduction :** Aegle marmelos (L.) is an important medicinal plant of India and are reported to have various medicinal properties in traditional medicinal systems. The medicinal properties of Aegle marmelos plant have been described in the Ayurveda which translates as "knowledge of life," 5000 years back to the ancient Sanskrit text, the Vedas. It is as fresh and useful to humans today as it was in the ancient times yet more relevant and applicable in these modern times.

**Botanical descriptions :**

**2.1 Vernacular names :** Commonly known as Bael, Bilva, Bel, Kuvalam, Koovalam (in Malayalam), Madtoum, or Beli fruit, Bengal quince, stone apple, Maredu (in Telugu), and golden apple[1]

**2.2 Taxonomy classification :**

Kingdom: Plantae

Division : Magnoliophyta

Class : Magnoliopsida Family : Rutaceae
Tribe : Clauseneae
Genus : Aegle Correa
Species : A. mamelos

**2.3 Distribution :** The tree of A. marmelos grows in the dry forest of hills and plains of central India and Bangladesh. In India it is throughout cultivated including moist and deciduous forestsof eastern and Western Ghats. It is foundin the states of Himachal Pradesh, Uttar Pradesh,West Bengal, Tripura, Maharashtra, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu, in India, in Ceylon and northern Malaya, the drier areas of Java and also on northern Luzon in the Philippine Islands where it was fruited first in 1914.

**A.** marmelos tree grows throughout the dry hilly areas, reaches up to 1,300 m tall[2].

**2.4 Morphological properties**

**A.** marmelos is a medium sized, slender aromatic tree species, 6.0 to 8.0 m in height, with a fluted bole of 3.0 to 4.5 meter having spines on branches. The bark is corky soft, light grey and exfoliating in irregular flakes. Leaves are alternate, digitated have five foliates. It bears large greenish white, scented flowers in short axillary panicles.

Fruits are globas, grey or yellowish, rind, woody, seeds numerous, oblong, compressed, and embedded in sacs covered with thick orange, coloured sweet pulp. It flowers during April-May and fruits ripen during March-April[3].

**3 Chemical constituents :** In India, A. marmelos is also grown as a temple garden plant and the leaves are used to pray Lord Shiva. It is an important medicinal plant with several ethnomedicinal applications in traditional and folk medicinal systems. Recently, the plant is screened for its medicinal properties by scientific techniques and reported for various medicinal properties.

It was first described as a steroid essential oils from leaves of A. marmelos were analysed by GC-MS. Among the sixteen compounds in A. marmelos oil the major were alpha-Phellandrene (35.7%) d-limonene (29%), subinene (16.7%) and alphapinene (6.9%). Among the twenty six compounds of feronia limonia oil major compounds are methyl chavicol (74.6%) and anethole (20%)[4]. By earlier works, but a neutral alkaloid, with one methyl or diethyl groups with degradative studies the structure of Aegelin has been established[5]. The non saponifiable fraction of the ether extract of the leaves on chromatography yielded a sterol having melting point 144-145$^{o}$C and identified as aegelin from the leaves of Aegle marmelos has also been described[5].

The different methanolic extracts of Aegle marmelos plant parts like leaves, fruit, bark, pulp, flora parts were prepared and screened phytochemically by standard tests. All parts showed the presence of carbohydrates, aminoacids, proteins, anthocyanins, steroids, glucosides, etc. These extract were evaluated for antioxidant activity.

The major constituents of the leaf extract were identified to be tannins, skimmianine, essential oil (mainly caryophyllene, cineole, citral, eugenol), sterols and or triterpenoids, including lupeol, and sitosterol, and amyrin, flavanoids (mainly rutin) and coumarins, including aegeline, marmesin and umbelliferone[6].

**4 Pharmacological activities**

**A.** marmelos is one of the most important medicinal tree species used in various indigenous systems of ayurvedic medicine in India. Every part of bael plant contains specificmedicinal value. Studies have indicated the presence of phenols, alkaloids, ployphenol and flavanoids compound in the different solvent extracts of the leaves of A. marmelos, which correlate the therapeutic activity with the chemical marker of the plant as well as the mode of action of that compound. Various parts of the tree are used for its curative, pesticidal and nutritive properties. Fresh half ripe Bael fruit is mildly astringent and used to cure dysentery, diarrhoea, hepatitis, tuberculosis, dyspepsia and good for heart and brain. Roots have antidiarrhoetic, antidote to snake venom, anti-inflammatory and wound healing properties. The leaves and seed oil have pesticidal properties.

Generally dried fruit pulp and its powder are used for the treatment of many diseases like diarrhoea. The dried powder is also used as an important remedy for chronic dysentery conditions characterized by alternate diarrhea and constipation. It has been found that extract significantly reduces blood urea and cholesterol level[7].

**5 Antimicrobial activity**

**A.** marmelos has been traditionally used for the treatment of various infectious diseases and been extensible reported to inhibit the broad range of pathogenic microorganisms. Many in vitro studies proved the antimicrobial potential of A. marmelos extracts towards the pathogenic microorganisms including bacteria and fungi. The aqueous, petroleum ether and ethanol extract of the leaves of Aegle marmelos exhibited efficient antimicrobial activity against Escherichia coli, Streptococcus pneumoniae, Salmonella typhi, Klebsiella pneumoniae and Proteus vulgaris. The ethanolic extract shows activity against Penicillium chrysogenum and the petroleum ether and aqueous extract shows activity against Fusarium oxysporum[8]. The extract of leaves was checked against multi resistant strains of Staphylococcus aureus, Bacillus subtilis, Escherichia coli, Salmonella typhi, Proteus vulgaris, Pseudomonas aeruginosa and Klebsiella pneumoniae. The antimicrobial activity against gram-negative strains was higher than that of gram positive strains[9].

**6. Antifungal activity :-** The antifungal activity of essential oil isolated from leaves evaluated, the oil exhibited variable efficacy against different fungal isolates and 100% inhibition of spore germination of all the fungi tested was observed at 500ppm. It is proposed that essential oil from leaves may interfere with the $Ca^{2+}$-dipicolonic acid metabolism pathway and possibly inhibit the spore formation[10,11].. By taking into consideration present study, was designed to evaluate the phytochemical and antimicrobial traits of Aegle marmelos fruits from M.P. species.

**7. Tissue culture studies :-** Most of the plants raised through seeds are highly heterozygous and show great variations in growth habit and yield and may have to be discarded because of poor quality of products for their commercial release. Moreover, many plants propagated by vegetative means contain systemic bacteria, fungi and viruses which may affect the quality and appearance of selected items. In recent years, tissue culture has emerged as a promising technique to obtain genetically pure elite populations under in vitro conditions rather than have indifferent populations. Tissue culture has now become a well established technique for culturing and studying the physiological behavior of isolated plant organs, tissues, cells, protoplasts and even cell organelles under precisely controlled physical and chemical conditions. In vitro propagation also called micro propagation is in fact the miniature version of conventional propagation which is carried out under aseptic conditions. Research efforts in plant cell and tissue culture have increased dramatically worldwide in recent years including efforts in developing nations. Plant cell and tissue culture is defined as the capability to regenerate and propagate plants from single cells, tissues and organs under sterile and controlled environmental conditions[12].

Recently, emphasis has been on genetic transformation, especially for increased production of secondary metabolites, production of alkaloids, pharmaceutics, nematocidal compounds, and also some novel compounds not found in the whole plant, regeneration of plant resistant to herbicides, diseases, and pests, scale up of cultures in bioreactors, plants with different morphological traits, and transgenic plants for the production of vaccines etc. These developments have far reaching implications in the improvement of medicinal plants as well.

Recently, emphasis has been on genetic transformation, especially for increased production of secondary metabolites, production of alkaloids, pharmaceutics, nematocidal compounds, and also some novel compounds not found in the whole plant, regeneration of plant resistant to herbicides, diseases, and pests, scale up of cultures in bioreactors, plants with different morphological traits, and transgenic plants for the production of vaccines etc. These developments have far reaching implications in the improvement of medicinal plants as well[13]. Micropropagation has been useful for the rapid initial release of new varieties prior to multiplication by conventional methods, e.g. pineapple and strawberry[14]. Micropropagation is also used to promote germplasm storage for maintenance of disease free stock in controlled environmental conditions[15] and in long term via cryopreservation.

The commercial production of these crops is restricted due to the shortage of desirable planting material. Tissue culture can play an important role in rapidly increasing new cultivars of these fruit crops.

Micropropagation of mature trees has been a difficult task due to various factors like exogenous and endogenous infection, presence of Phenolic compounds, hard tissues long complex life cycles, great genetic variation, etc. as reported by Zimmerman (1985)[16].

It is well known that tissue culture propagation of plants is influenced by various factors, like genotype, age and source of initial plant tissues[17].

Aegle marmelos is conventially propagated through seeds. seeds have short viability and are prone to insect attack. Vegetatively it is propagated through root suckers whichis slow, difficult and cumbersome. Indiscriminate collection resulted in the disappearance of this plant from the wild source and the species is reported to be vulnerable. Due to the use of root for medicinal purposes destructive harvesting poses a serious threat to the sustenance of the tree. Propagation through tissue culture ia a viable alternative method for this species. Several workers have reported in vitro propagation by using axillary bud multiplication[18, 19], nuclear calli[20] and from leaf explants[21]

**kumar and Seeni (1998)[22]** has been reported rapid clonal multiplication by enhanced axillary bud proliferation by using single node segment of 25 years old tree on MS medium on 1.0 mg/l indole -3-acetic acid (IAA). The 12.1 number of shoots was initiated upto 5.2 cm length in 7 weeks culture. All sterile plant parts like node, leaves and internodes were subcultured on the medium having BAP (0.05mg/l- 2.5mg/l) were equally shows regeneration potential. Most respondive plant part for shoot multiplication is nodal region which produces uniform (3.8-5.3 cm) shoots were harvested for rooting. Shoots were best rooted in the medium containg 0.5 mg/l IAA (70%) or 10.0 mg/l IBA (90%) Hossain et al., (1994b)[20] has reported regeneration of plantlets from in vitro cultured cotyledons from from seedlings of various ages of Aegle marmelos were cultured on Murashige and Skoog medium supplemented with different combinations of growth regulators. The ten days old seedlings was shows best shoot induction response on BA (benzyladenine) in the concentration of 2.0 mg/l. The additional of indole-3- acitic acid (IAA) in the concentratio of 0.2 mg/l improved shoot induction and multiplication efficiency. The studies shows that the proximal part of cotyledon had the highest regeneration potential. Multiple shoots were elongated on MS medium containing 0.5mg/l kinetin and 0.1 mg/l gibberllic acid. About 25% of regenerated shoots were rooted on half strength MS with 0.5 mg/l indole-3-butyric acid.

Types of explants, explants collection season is also one of the most important factors for the establishment and growth of in vitro cultures.

An improved micropropagation protocol for Bael tree has been reported by Raghu et al., (2007)[23] by enhanced axillary shoot proliferation method from mature node explants. This report shows the seasonal variation response of explants under in vitro conditions. The explants collected and used for shoot induction in the month of October and November shows maximum bud break response (72.8% -78.66%). For the multiplication protocol Murashige and Skoog medium with 0.5 mg/l BA (6-benzyl adenine) was used which produces an average of 6.2 shoots per explants, increases an avrage of 16.3 shoots after third subculturing. invitro rooting was achieved in the medium with different auxins at varing concentration and combinations. In the experiment in vitro raised shoots wre rooted ex vitro by giving pulse treatment with naphthoxy acetic acid (NOA) and IBA and then in chlorogenic acid followed by planting in moist sand. By this method 83.9% of plantlets get survived and the standardised mehtod was used for large scale production and conservation of this endangered medicinal plant. Chandra and Padaria (1999)[24] has also initiated shoots buds from axillary meristem of Lichi cv. seedless on MS medium supplimented with 0.2 mg/l BAP with 0.1 IAA mg/l and 0.5 mg/l GA3 to achieved adventitious shoot development.

Micropropagation of A. marmelos by in vitro techniques has been reported from different explants, i.e. cotyledonary node, root segments, nucellus, and single-node segments[25].

First report of tissue culture studies through somatic embryogenesis in A. marmelos is by using zygotic embryos showed the somatic embryo (18 percent) and the number of somatic embryo per explants (12) was observed in the presence of 2,4-D and BA as per the observation after 42 days.. High frequency regeneration from zygotic embryos, maximum number of shoots per explants was obtained from 10-150 days old cotyledons of the seeds has reported by Islam et al., (1995)[26].

Gupta et al., (2008)[27] had reported a protocol for micro propagation of Bael (Aegle marmelos (L.) Corr.) by using the nodal explants of 30 year old tree to initiate cultures. Two cytokinins, viz., 6-benzylaminopurine (BAP) and kinetin (KN) were used in varied concentration (0.1-2 mg/l) for shoot multiplication. BAP (2 mg/l) was found better than KN, where a 3- fold increase in the number of shoots was recorded in 4 weeks. A synergistic influence of cytokinin and auxin was also observed in the present study. A combination of 0.5 mg/l BAP and 0.1 mg/l IAA induced the formation of maximum number (4.5) of shoots (2.5 cm). For rooting of in vitro raised shoots, different auxins like NAA, IAA and IBA (0.1-2.0 mg/l) were tested. IAA (0.01 mg/l) was found better than NAA and IBA. It was concluded that elite cultivars of Bael can be micro propagated, without undergoing callus phase, using BAP (0.5 mg/l) with IAA (0.1 mg/l) for shoot multiplication and IAA (0.1 mg/l) for rooting, to produce true-to-type in vitro plants. The in vitro raised plantlets were acclimatized with 30% success.

**Pati et al., (2008)**[28] studied that the season of explants collection is one of the most important factor in establishment and growth of in vitro cultures to evaluated in vitro clonal propagation of Aegle marmelos CV. CISH-B1 through enhanced axillary multiplication. It was reported that the position of node on explants also plays role in determining the growth and differentiation of cultures. Three centimeter long shoots having one axillary bud excised from 10-15th nodal region of shoots during September gave quick in vitro bud burst (5.33 days) and maximum number of proliferated shoots (9.0 per explant) when cultured on Murashige & Skoog medium supplemented with BAP ( 8.84 µM) and IAA (5.7 µM). The micro shoots were rooted (100%) on ½ strength Murashige & Skoog (MS) medium supplemented with (IBA) indole butric acid (49.0) and (IAA) indole acitic acid (5.7 µM). in vitro rooted plants were acclimatized on autoclaved coconut husk containing ½ strength MS plant salt mixture and under shade net house (50 % shade 70-80 % RH). The micropropagated plants were tested for its genetic fidelity using 13 RAPD, 3 ISSR and 2 DAMD primers. Profile obtained by all the three single primer amplification reaction (SPAR) technique from mother tree and micropropagated plants revealed genetic integrity of micropropagated plants with that of mother tree.

Callus induction and plantlet regeneration of A. marmelos by using cotyledon explants has achieved by Hazeena and Sulekha (2008)[29] on Murashige Skoog medium supplemented with BAP (2.2 µM) and 2, 4-D (2,4-dichlorophenoxy acetic acid) in the concentration of 2.26 µM. This medium was recorded the best combination for highest growth of callus formation and proliferation. Callus regenerated from shoots was best recorded on MS medium having 8.8 µM BA with 2.8µM IAA. Callus derived shoots shows best rooting in the medium contains 12.3µM IBA (indole-3- butric acid) and the plantlets were acclimatized in highest percentage in sand before transfer to soil.

**Warrier et al., (2010)**[30] has studied invitro propagation of A. marmelos by using mature nodal explants. Rapid clonal multiplication protocol was developed by using different media combinations. For initiation the mediumtreated with benzyl amino purine (BAP) in the concentration of 0.10 to 1.0 ppm for five weeks, followed by transfer the culture to the higher BAP (2.5mg/l) in woody plants medium. This medium combination proved the most beneficial for the induction and

**Yadav and singh (2011)**[31] have reported in vitro propagation and biochemical analysis of field established wood apple (Aegle marmelos) and describes an improved protocol for rapid multiplication and shoot regeneration from nodal segments on Murashige and Skoog (1962) medium with various concentration of auxins and cytokinins alone and in combinations.

BAP was found to be more effective than kinetin for shoot multiplication. Nodal explants responded most favorably at BAP (2.0 mg/l) producing maximum number of shoots (8.0) and uniform shoots facilitating their simultaneous harvest for rooting. The medium supplemented with 2.0 mg/l BAP with 1.0 mg/l IAA was found to be most prolific combination of the treatments with regard to number and length of shoots. Creamish friable compact callus accompanying multiple shoots (8.0) was achieved from nodal segment on MS medium fortified with 2.0 mg/l BAP with 0.5 mg/l 2, 4-D (2, 4-Dichloroacetic acid) within 8 days of culture. Besides that the biochemical parameters, like chlorophyll, total sugars, reducing sugars and proteins were estimated in leaf tissue from both in vivo and in vitro raised plants in order to establish the sustainability of plants.

Micropropagation of Guava (Psidium guajava L.) has been done by Mishra et al., (2007)[32] by using shoot bud culture, proliferation. The explants were pretreated in solution containing 0.1% Carbendazime and 100 mg/L PVP for 1 hour and then washed with Tween-20 wetting agent. The pretreated explants were further treated with HgCl2 0.1% for 5 minutes aseptically followed by six washing in autoclaved distilled water. The sterilized explants were cultured on MS medium supplemented with BAP (3.0 mg/L) for shoot bud induction and proliferation. The proliferated shoots were then subcultured on MS medium containing 10 mg/L IBA for rhizogenesis. The multiplication of shoots (6.0 per explants). Roots were induced from the micro shoots in the medium treated with 3000ppm Indole butric acid (IBA).

rooted plants were finally shifted to autoclaved coconut husk fortified with ½ MS salt mixture for acclimatization.

**Puhan and Rath (2012)**[33] has established an efficient protocol for rapid in vitro propagation by using meristem explants of A. marmelos through axillary bud multiplication. High frequency bud break were induced on Murashige and Skoog's medium supplemented with 0.5 mg/l benzyladenine (BA). After ten days the nodal initiated cultures started multiplying with the formation of callusing. The culture shows good growth when transferred to the medium having BA (0.5 mg/l) with either Kinetin or gibberellic acid (GA3). Excised multiple shoots of 2 to 3 cm long were transferred on MS half concentration having 2.5 mg/l IBA (Indole butric acid) and 0.5% AC (Activated charcoal) for root formation.

**Baher et al., (2013)**[34] has reported adventitious plantlet regeneration from different explants of Aegle marmelos such as epicotyls, cotyledon, hypocotyls and root explants obtained from four week old axenic seedlings. For shoot induction and multiplication the cytokinin BAP shows more effective cytokinin.

MS medium supplemented with 2.2 µM BAP with 1.425 µM indole-3-acetic acid (IAA) produced maximum number of shoots. Addition of an auxin along with cytokinin improved shoot multiplication capacity of all explants tested, it was observed that epicotyls shows highest average number of shoots. The regenerated and elongated shoots were transferred for root induction on the medium containing different concentration of auxins and was best in the medium augmented with 2.85 µM IAA (Indole acetic acid) and about 90% of the rooted plants survived hardened and transfer to the field.

While in vitro micropropagation through nodal explants was reported by Bindu (2013)[35] on two cytokinins, viz., 6- benzyl amino purine (BAP) and Kinetin (KN) in varied concentration (0.1 to 2 mg/l) for shoot induction and multiplication. In that investigation 2.0 mg/l BAP was found better than other treatment where a threefold increase in shoot numbers within four weeks. A synergistic effect of cytokinins with auxins was also observed in that study where a combination of BAP (0.5 mg/l) and IAA (0.1 mg/l) initiate the maximum number of shoots. Here IAA (0.1mg/l) was found better than NAA and IBA for root formation to produce true to type in vitro plantlets.

Plant regeneration of Aegle marmelos from cotyledonary explants has been reported by Pradeepa et al., (2014)[36] by the formation of organogenic callus on Murashige and Skoog (1962) medium supplemented with BAP and Zeatin-6-furfurylamine (0.5 to 2.5mg/l) with 0.5 mg/l NAA (α-Napthalene acitic acid) under dark condition. Callus was transferred to hormone free medium to produce shoots under light condition which was rooted on the medium contains different concentrations of IBA (0.5 to 3.0mg.l) and BAP (1.0mg/l).

**Shahina et al., (2015)[37]** has studied the effect of explants origin on clonal propagation of Aegle marmelos from nodal explants of aerial and root suckers on with variousconcentrations of growth regulators. Results proved that the nodal segments of root suckers have more potential to regenerate large number of shoots rapidly compare to aerial shoots on similar medium containing BAP and NAA. Cultures were maintained up to the fifth subculture stage on the regeneration medium and by the end of passage ex vitro rooting in micro shoots was employed to shorten the propagation span, with an added effect on acclimatization success.

In vitro seed germination and clonal propagation through epicotyls explants of A. marmelos has been studied by Parihar and Kumar (2015)[38] to develop an efficient and rapid clonal production of this important medicinal. The explants which were used were obtained by in vitro seed germination in the presence of different growth regulators on MS medium. The presence of Kinetin shows best seed germination and seedling growth. in vitro raised seedlings were used for shoot multiplication on cytokinins containing medium by which maximum (19.35±0.32) multiple shoots were obtained on the combination of BAP (1.5mg/l) with the same concentration of Kinetin. The regenerated shoots were best rooted on the medium containing 1.0 mg/l IBA (Indole butric acid). This standardized method is proved the best used for large production of A. marmelos.

The technology of plant tissue culture played important role in the conservation of medicinal plants in the rapid multiplication and reintroduction to nature of endangered species in the assessment and monitoring of biodiversity, as a source of new tools for large production and conservation and in the search for new gene product of therapeutic use. Species of medicinal and aromatic plants at risk need to be multiplied with minimum loss of time and reintroduced for establishment in their natural habits. In vitro protocol for multiplication of endangered species could be very useful for those species whose propagation through conventional means was difficult.

Researchers aim to obtain increased production of secondary metabolites, increased plant production, higher nutritional value and greater plant resistance to adverse weather, pathogenic agent and pests.

**8. Microbiological studies :-** Medicinal components from plants play an important role in conventional medicine. People on all continents have long applied poultices and imbibed infusions of hundreds, if not thousands, of indigenous plants, dating back to prehistory. Since their discovery, antimicrobial drugs have proved remarkably effective for the control of bacterial infections.

However, it was soon evident that bacterial pathogens were unlikely to surrender unconditionally, because some pathogens rapidly become resistant to many of the first discovered effective drugs. New compounds inhibiting microorganisms such as benzoin and emetine have been isolated from plants. The antimicrobial compounds from plants may inhibit bacterial growth by different mechanisms than those presently used antimicrobials and may have a significant clinical value in treatment of resistant microbial strains.

Examples of some microorganisms that gained resistance to antimicrobials are Escherichia coli, Proteus sp., Pseudomonas aeruginosa, Shigella dysenteriae, Salmonella enteritidis, Salmonella typhi, Staphylococcus aureus, Streptococcus faecalis, and Candida albicans. Different parts of plants like leaf, fruit (both unripe and ripe) and their extracts have been reported to have anti-bacterial, anti-fungal, anti- viral activities.

Fruits and leaves of Aegle marmelos were subjected to antibacterial screening but were found to be inactive[39].The essential oil obtained from the leaves has shown a broad spectrum of anti-bacterial and anti-fungal activities[40]. The aqueous decoction of the leaves has been reported to have a significant hypoglycemic effect[41]. Extract obtained from leaves and fruits of Aegle marmelos showed antibacterial activity, against Staphylococcus aureus, Escheritia coli at 0.5% concentration.

**Valasaraj et al., (1997)[39]** has studied antifungal activity of leaves and fruits of A. marmelos by using 80% ethanol extract by agar well diffusion method, against two fungi, Candida albicans and Aspergillus niger.

The antifungal activity of essential oil of leaves of A. marmelos has been evaluated[11] by using spore germination assay of the most resistant fungus Fusarium udum which inhibited 8% at 400ppm. And the aqueous extract of Aegle marmelos were screened against two rice fungal pathogens, Magnaporthea grisea and Rhizoctonia solani.

**Sivaraj et al., (2011)[42]** The antimicrobial activity of the leaves of **A.** marmelos was performed by agar well diffusion method. The aqueous, petroleum ether and ethanol extract of the leaves of Aegle marmelos exhibited efficient antimicrobial activity against Escherichia coli, Streptococcus pneumoniae, Salmonella typhi, Klebsiella pneumoniae and Proteus vulgaris. The ethanolic extract shows activity against Penicillium chrysogenum and the petroleum ether and aqueous extract shows activity against Fusarium oxysporum.

Antibacterial activity of leaves extracts of Aegle marmelos has been investigate by Yadav et al., (2014)[43] by using crude methanolic and chloroform extracts through agar disc diffusion method. Two gram positive (Bacillus subtilis, Staphylococcus aureus and three gram negative bacteria Pseudomonas aeruginosa, Klebsiella pneumonia, Escherichia coli) were used for the study. The zone of iinhibition obtained from the method showed that methanolic and chloroform leaf extracts exhibited maximum (15mm) activity against P. aeruginosa and 18mm against S. aureus respectively.

The antibacterial activity was maximum at higher concentration (100 mg/ml) and decreases gradually with the decrease in the concentration of extracts against all pathogens. The studies may be attributed to different phytocontituents.

**Mujeeb et al., (2014)[44]** has evaluated phytochemicals, antimicrobial activity, and determination of bioactive components from leaves of Aegle marmelos through aqueous and methanolic extracts of 18 varieties/ accessions. The crude extracts of A. marmelos revealed the presence of several biologically active phytochemicals with the highest quantity of alkaloids, flavonoids, and phenols in Pant Aparna variety.

The antibacterial efficacy was investigated against pathogenic bacterial strains and the highest inhibitory activity of aqueous extract was obtained against S. epidermidis, whereas methanolic extract was found to be most potent against S. aureus at 40 mg/ml concentration.

However, in aqueous: ethanol, the best results were observed against E. aerogenes followed by K. pneumonia and S. epidermidis.The MIC of aqueous and methanol extract of Aegle marmelos ranged from 10 mg/ml to 40 mg/ml whereas in aqueous and ethanol it ranged between 40 mg/ml and 160 mg/ml. The GC-MS analysis revealed the presence of many bioactive compounds such as flavonoids, alcohols, aldehydes, aromatic compounds, fatty acid methyl esters, terpenoids, phenolics, and steroids that can be postulated for antibacterial activity.

Phytochemical and antimicrobial activity of fruit pulp of Aegle marmelos has studied by Behera et al., (.2014)[45]. The investigation was carried out to evaluate the phytochemical constituents and antibacterial activities of fruit pulps of Aegle marmelos (Linn.) Correa. The crude extract revealed the presence of Reducing Sugars, Saponins, Tannis, Flavonoids and Phenols.

Further the total phenolic and flavonoid content was also estimated. Besides, the crude extract was tested for antimicrobial activity against two gram positive strains of Staphylococcus aureus (ATCC 29213, ATCC 700699) at different concentrations of 10, 50, 100, 250 and 500ug/ml at different time span of 3hrs. It was found that a concentration range 50-100ug/ml of the ethanolic extracts was effective in inhibiting the growth of bacterial strain Staphylococcus aureus ATCC 29213. 250 ug/ml was effective for aqueous extract and 500ug/ml concentration was effective for petroleum ether extracts in inhibiting the growth of the above strain.

When the similar study was carried out using other strain, Staphylococcus aureus ATCC 700699, it was found that 100ug/ml of ethanolic extract, 250ug/ml and 500ug/ml of petroleum ether was effective in inhibiting the growth of bacteria, whereas the concentration of aqueous extracts taken were ineffective against the growth of the bacteria.

**9. Conclusion :-** The review given here can be used for multiplication of the above said medicinal and economical plants commercially. Aegle marmelos offers many promising prospects for both traditional and modern medicine. Aegle marmelos is apparently a potential herbal therapy for many ailments. This review summarized the existing ethnobotanical uses, phytochemistry, pharmacological activities, safety evaluation, and conservation status on Aegle marmelos.

**10. Conflict of interests :-** None

**11. Authors contributions :-** AG and TT carried out literature review of work and SK drafted the manuscript.

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# A Study of Agriculture Development of Madhya Pradesh

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**Abstract** :- Madhya Pradesh is well known as agriculture developed state of India. The growth rate of agriculture in Madhya Pradesh has registered 20.02% in the year 2016-17. Agriculture is a foundation of the state's economy and in M.P about 74.73 % people of rural area depends on agriculture for their livelihood. Madhya Pradesh is steadily depends on agriculture sector for its economy growth and 80% of the people depends on this sector for their livelihood. This sector contributes around 46% to the total state's economy. Madhya Pradesh received Krishi Karman award for last five times constantly from the year 2011-12 to 2015-16 for their exemplary growth in this sector. In the year the 2015-16 state receive the award for high production of wheat which is registered 184.10 lakhs tons and having the growth of 7.64% in the production of wheat in comparison of last year and all this is become possible because of favourable conditions of agriculture sector in terms of land, water and other recourse is in MP.

This research study the structure and growth of agriculture of Madhya Pradesh in comparison of other state and also study the different favourable conditions available for agriculture growth.

**Key Words** :- Agriculture growth, water recourse, cropping pattern , horticulture.

**Introduction :-** Madhya Pradesh is primarily an agricultural state with 55 percent of the population engaged in agriculture, eight percentage points more than the all-India average of 47 percent. Agricultural GDP, over eight years to 2015, increased, on average, 10.9 percent per annum, the highest in India and higher than the national average of 4.3 percent. MP is the largest producer of soya bean — 51 percent of national cultivation, and the third largest producer of wheat with 16 percentage of national production.

MP is mainly a food grain producing state, there are indications of diversification into horticulture. From last ten years, the proportion of area under horticultural crops has jumped from 2 per cent to 6 per cent. Around 43 per cent of the total area under horticulture is devoted to vegetables. There has been a significant increase in vegetable production in MP in last five years from 3.6 MMT in TE to 14.2 MMT in TE. The GDP growth of MP is at top among the other state.

**MP Tops With Highest Average Agriculture GDP Growth, 2007-15**

| State | GDP Growth in % |
|---|---|
| Madhya Pradesh | 10.9% |
| Mizoram | 6.9% |
| Gujarat | 6.8% |
| Chhattisgarh | 6.1% |
| Rajasthan | 6.1% |
| Uttar Pradesh | 3.8% |
| Maharashtra | 3.4% |
| Tamil Nadu | 3.3% |
| Punjab | 2.3% |
| Kerala- | 1.3% |

Agricultural GDP

This remarkable increase has improved MP's position in vegetable production from thirteenth in TE 2010-11 amongst states to becoming the fourth largest vegetable producer in the country in TE 2013-14; MP's contribution in total vegetable production has increased from 2.8 per cent to 7.4 per cent. In fact, production of horticultural crops as a whole has increased from 7.8 MMT to 23.9 MMT in n, a stupendous increase of 206.4 per cent. The horticulture segment has become the sunrise sector for MP. Given the huge potential in the state for horticulture, the government of Madhya Pradesh announced the 'Horticulture Hub (H2) Establishment Policy, 2012'. The purpose of this policy was to establish protected cultivation of horticultural crops in a commercial and organised manner. The analysis on the sources of agricultural growth shows that primary sources of growth in MP were food-grains, followed by fruits and vegetables, oilseeds and livestock in that order. Of the 8.2 per cent average growth rate in the gross value of output of agriculture and allied activities for the last ten years , 28 per cent was contributed by food grains, 17.9 per cent by fruits and vegetables, 15.4 per cent by oilseeds and 13.2 per cent by livestock.

**Objective of the study :-**

1. To know the Agriculture growth of Madhya Pradesh.
2. To know the status of Agriculture growth of MP with other state.
3. To know the geography, demography and structural composition for agriculture of MP.
4. To know the water resources and climatic risk for agriculture of MP
5. To know the cropping pattern MP.

**Research Methodology :-** This is conceptual framework research, entire sources of collection of data is secondary which is collected from various government websites, journals and articles, publications and conference paper also.

**Limitations of the study :-**

1. Based on secondary data published on various sites.
2. For the limited time period i.e. for five years only.

In 2015, Madhya Pradesh contributed over 8 million metric tonnes (MMT) of wheat to the central procurement pool. This was the second highest procurement of wheat by any state that year and even higher than that of Haryana, traditionally the second highest contributor after Punjab. The event capped a remarkable period of eight years, which saw Madhya Pradesh emerge as the state with the highest growth rate in agriculture. Long clubbed with the so called BIMARU group of poor northern, central and eastern states, MP successfully broke ranks to set a scorching pace of growth, which has been unparalleled in the past quarter century. Understanding the factors that helped to drive this growth and drawing lessons for other states at similar levels of development.

Madhya Pradesh spans over 30.8 million hectares of land and comprises around 6.0 per cent of India's population. The state is primarily an agricultural state, with almost 70 per cent of its workforce engaged in agriculture, much above the all-India average of 55 per cent. MP has undergone a reverse structural change after 2010-11. Between 2003-04 and 2010-11, the share of agriculture in GDP declined from 29.8 per cent to 22.5 percent (2004-05 prices), which reflected the national trend. However, after 2010-11, the share of agriculture in GDP has increased from 22.5 to 30.0 per cent (2004-05 prices) in 2014-15. Not only has the importance of the sector in the overall economy of MP increased but the sector has also performed significantly better than other states in the country. The agricultural GDP of Madhya Pradesh increased at 9.7 per cent per annum during 2005-06 to 2014-15, surpassing even record holder Gujarat's 7.7 per cent. The last five years have been even more spectacular: agricultural GDP increased at 14.2 per cent per annum.

MP has recorded a significant decline in poverty rates from 53.6 per cent in 2004- 05 to 35.7 per cent in 2011-12, there is still much to be done to improve the livelihood of the rural population. Moreover, MP's per capita income is low, standing at Rs 51,798 (FY14 at current prices) as compared to the national average of Rs 74380. Although it is much better than that of Bihar (Rs 31,199) and Uttar Pradesh (Rs 36,250), it remains way below top performing states like Sikkim (Rs 1, 76,491), Maharashtra (Rs 1,14,392), Haryana (Rs 1,33,427) and Gujarat (Rs 1,06,831).

**Geography, Demography and Structural Composition Madhya Pradesh (MP)**, located at the centre of India, is often called as the "Heart of India". It is a land locked state, surrounded by Uttar Pradesh, Chhattisgarh, Maharashtra, Rajasthan and Gujarat. Until 2000, it was the largest state of the country in terms of geographical area; however, in

November 2000, Chhattisgarh was carved out of the south-eastern part of erstwhile Madhya Pradesh. Currently, MP is the second largest state in India after Rajasthan and it spreads over a geographical area of about 308 lakh hectares, which is about 9 per cent of the total area of the country. MP is the sixth most populous state in the country, with a population of 72.6 million in 2011, which has been projected to increase to 79.0 million in 2016, accounting for about 6.0 per cent of India's population. Around 71.3 per cent of the population lives in rural areas as compared to the national average of 68.8 per cent, making MP a largely rural economy. Unlike other states where the share of agriculture in GDP has been falling, MP has undergone a reverse structural change after 2010-11. The share of agriculture in GDP declined from 29.8 per cent to 22.5 per cent, reflecting the national trend. However, after 2010-11, the share of agriculture in GDP has increased from 22.5 to 30.3 per cent. This trend clearly shows the growing importance of the agriculture sector in the state. Moreover, the sector provides employment to around 54.6 per cent of its workforce, much above the all-India average of 47 per cent.

**Water Resources and Climatic Risk :-** The average rainfall received by MP is around 95.2 cm during the monsoon season. This accounts for around 91 per cent of the total rainfall in the state. In MP, the eastern parts receive relatively higher amount of monsoon rainfall (105.1 cm) as compared to the western parts (87.6 cm). Natural calamities like drought, floods and hails storms are common features in Madhya Pradesh. Almost every alternate year, one part or the other of the state is hit by natural calamities of varying intensity. In the last 26 years, 32 districts have been affected by floods and seven districts were prone to drought.

**Cropping Pattern Madhya Pradesh :-** is primarily a food grain growing state with around 62 per cent of its gross cropped area (GCA) devoted to food grains and 32 per cent to oilseeds . Within food grains, a larger area is devoted to cereals 39.4 per cent as compared to pulses 23 per cent. Wheat is the most important cereal grown in the state, with around 24 percent devoted to the crop. Within pulses, gram is the chief pulse crop grown with around 13 per cent dedicated to the crop 63 per cent of pulse area, followed by arhar 2 per cent and 10 per cent of pulse area. Wheat is the major crop grown during the rabi season and it is intercropped with gram while in the Kharif season, MP mostly grows oilseeds, specifically soybean. Around 25.4 per cent is devoted to soybean.

An important characteristic of Madhya Pradesh is that different crops can be grown in different parts of the state during different seasons, allowing for uninterrupted agricultural activities throughout the year. Broadly, the state can be divided into following five distinctive crop zones:

(i) Cotton/Jowar – Cotton/jowar crops can be grown in the western, north-western and south western parts of MP, where medium and deep soils are prevalent

(ii) Wheat/Jowar – Wheat/jowar crop zones are predominant in the northern strip of the state. Some southern areas of the state also have the potential to grow these crops.

(iii) Rice Zone – This zone is confined to the eastern part of the state where black soil type is present.

(iv) Wheat Zone – This crop zone is the central part of the state.

(v) Wheat/Rice Zone – This crop zone is present in the eastern part of MP where the soil type is black.

**Conclusion :-** Madhya Pradesh is well known as agriculture developed state of India. The growth rate of agriculture in Madhya Pradesh has registered 20.02% in the year 2016-17. Agriculture is a foundation of the state's economy and in M.P about 74.73 % people of rural area depends on agriculture for their livelihood . Madhya Pradesh is steadily depends on agriculture sector for its economy growth and 80% of the people depends on this sector for their livelihood. This sector contributes around 46% to the total state's economy. Madhya Pradesh received Krishi Karman award for last five times constantly from the year 2011-12 to 2015-16 for their exemplary growth in this sector . In the year the 2015-16 state receive the award for high production of wheat which is registered 184.10 lakhs tons and having the growth of 7.64% in the production of wheat in comparison of last year and all this is become possible because of determination of farmers and different facilities , schemes which are provided by state for the development of farmers.

From the study it is observed that Madhya Pradesh continuously increasing its agriculture output and also make a remarkable increase in the field of horticulture too. With the increasing importance of the horticultural sector in agriculture MP becomes the first state in the same. Today's, MP is a net exporting state for fruits and vegetables also not this, MP also emerged as the second largest producer of onions after Maharashtra in recent years . Mp also emerged as highest producer of pulses. The geography, demography and structural composition, water resources and climatic risk, cropping pattern of state if favourable for the growth of agriculture sector and according to the crop pattern.

So, we can conclude that MP agriculture sector is increasing as the time passes and becomes the top most state in respect of agriculture and horticulture sector and this tremendous change in agriculture sector also recognised by Govt. Of India by facilitating the state with Krishi Karman award for five times.

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# Strategic Difference of India and China with Reference to Human Capital Development

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**Abstract :-** This report analyzes human capital development and its future prospects in the People's Republic of China (PRC) and India. It highlights the related differences and achievement in the two countries and investigates the role of human capital development in their economic growth.

The world has witnessed the remarkable economic growth of the PRC and India, two demographic giants, in the past decades. The strong and sustained output growth of the PRC in the past 35 years has driven the unprecedented transformation of a rural command economy into a global economic superpower. Having made the transition from an upper-middle-income economy to one of high-income status, the PRC in now striving to develop more technologically sophisticated industries. Economic growth in India began to accelerate dramatically once economic reforms and open-trade policies were initiated in the early 1990s. The economic miracle witnessed in the PRC as well as India in attributed to the expansion and effective utilization of their abundant human resources, in addition to market reform and outward-oriented policies.

**Key Words :-** People's Republic of China, Unprecedented, Abundant, demographic giants, sophisticated industries.

**Introduction :** India and china are two of the oldest and still extant civilizations. For Europeans, they were legendary seats of immense wealth and wisdom right up to the eighteenth century. somewhere between the mid-eighteenth century and early nineteenth centuries, both these countries became, in the European eyes, bywords for stagnant, centuries, both these countries became, in the European eyes, bywords for stagnant, archaic, weak nations, For China, this happened between the adulation of Voltaire and the cooler judgment of Montesquieu; in India's case, it was the contrast between Sir William Jones's desire to learn things Indian and James Mill's dismissal of Indian history as nothing but darkness.

Twentieth century brought nothing but a deepening of the perception of the two countries as bywords for misery and the perception were not too far behind actual conditions of the two countries, For one thing they were and remain the two most populous countries. in 1820 they had a combined population in excess of half a billion and by 1900,700 million, Within the twentieth century, their population had trebled. But they were also two of the poorest countries, typically thought of as locations of famine, disease, backwardness and superstition, of women with bound feet and men with long pony tails, untouchables beyond the pale and myriads of gods with many heads and limbs.

In mid-twentieth century, particularly in the 1960's the fortunes of these two countries seemed to have reached their nadir. They were independent republics supposedly launched on their path of development, but both suffered devastating famines, China's famine was hidden, perhaps more from China's own ruling classes than from its people or the world, but it had followed swiftly upon the debacle of Great Leap Forward, a memorable piece of policy making by fantasy. India's double harvest failure in 1965 and 1966 brought India to its proverbial knees in terms of foreign policy and dependence on US food aid. These two countries were "basket cases" in the then fashionable terms of international diplomacy.

**Purpose of the Study :** The purpose of the study is to compare the economics of two large Asian countries India and china. Major factors of comparison in this study are Gross. Domestic Product (GDP), Gross National Product (GNP) per capita. Tax revenue, Infrastructure, Educational status, Health status and etc. And also, to identify the challenges faced by both countries.

**Sources of data and Mythology used :** The present research involved an extensive study of literature and is entirely based on secondary data to compare the economics of India and china. Relevant data have been collected from the Global Economy.com, World Bank, UNESCO, International communication Union, & World Economic Forum & Human Development Report (HDR) 2015.

**Review of Literature :** A comparison between the economies of India and China has been a subject of intense investigation in the past; both with scholars (Bosworth and Colluns 2007; Huang and Khanna 2003; Madhan et al 2010. Srinivasan 2006) and in popular media ("Chasing the dragon; How the Asian superpowers compare on various measures of development" 2011; Wright 2012).

The Indian economy started to integrate with the global economy about 13 years after that of China and her current GDP growth terms is at $1.9 trillion versus that of China at $88.2 trillion in 2012 (IMF Statistics 2012). The Indian GDP growth has been typically below 8 percent, while that of China exceeds about 10% over the last decade. What is the china model that made the country so successful economically? Did china grow because of infrastructures and FDI? The true success factor for Chinese growth is the huge investments made in human capital development and much of that was made in the 1950s, 1960s and 1970s. Indian policy makers, business elites and intellectuals chose not to look at this aspect of china model. Instead, they turn their gaze at the glittering skylines and the fancy airports in Beijing and Shanghai (Huang, Y 2009). There is another reason why Indians have excused not to realize that this is the true advantage of china. Indian economist Amartya Sen has written some of the best treatments on this topic in his book, co-authored with Jean Dreze, India: Economic Development and Social opportunity, he highlights a critical reason why India lagged behind china in the initial phase of economic development India's highly inadequate and inequitable provisions of health care and educational facilities.

"Comparing ourselves with China in these really important matters would be a very good perspective, and they can both inspire and give us illumination about what to do- and what not to do, "the lives that people are able to lead- what ultimately interests people most-are only indirectly and partially influenced by the rates of overall economic growth", "Almost half of our children are undernourished compared with a very tiny proportion in China, "Sen added." Despite the interest in this subject (of comparing India's eight-percent growth to China's 10 percent) This is surely a silly focus," (Amartya Sen, 2011).

Reforms in China are older than they are in India. Therefore a comparison of econometric parameters shows that during 1980-2012 the compound annual growth rates of exports, imports, and GDP per capita have been better in prices 2005 USA) in 1980, but China grew much faster and overtook India by the early 1990s. Since then growth in China has been so fast that its per capita GDP is double than that of India. The reason behind it is, China has encouraged Foreign Direct I by multinationals looking to set up export-oriented manufacturing operations. in contrast, India followed an import-substitution policy and relied on domestics resource mobilization and domestic establish manufacturing for export industries while India on services export sector. (Kumari Deepika & Neena Malhotra 2014).

Yanrui Wu (2008) in his study found that regional economic development in china and India is unbalanced. This study also shows that variations in urbanization and infrastructure development are found to be major contributors to regional disparity. While both countries have to build more infrastructure and speed up urbanization they should also aim for a more balanced strategy among the regions. In addition, it seems that human resource development also plays a role in affecting regional disparity in India in recent years while, in China, the export sector is found to be a positive contributor to regional disparity. These findings, though subjected to qualifications, may point out the direction for policy response by governments in China and India in the near future.

**Indian Economy vs. Chinese Economy :-** China*s semi capitalist economy has already surpassed the economies of France, Germany and Japan to become the second largest economy behind USA. India is about a third of china*s size. Today, china tops India in terms of population at 1371.22 It needs to be emphasized here that the Chinese economy experienced extremely surprising growth in the last few decades that propelled the country to become the word*s second largest economy. In 1978 when china started the program of economic reforms the country the country ranked ninth in nominal GDP

China's semi capitalist economy has already surpassed the economies of France, Germany and Japan to become the second largest economy behind USA. India is about a third of china's size. Today, china tops India in terms of population at 1371.22 million people compared to India at 1,3110.05 million but India's growing af faster rate and has a young population. It needs to be emphasized here that the Chinese economy experienced extremely surprising growth in the last few decades that propelled the country to become the world's second largest economy. In 1978 when china started the program of economic reforms the country ranked ninth in nominal GDP with USD 214 billion, 35 years later it jumped up to second place with a nominal GPD of USD 9.2 trillion, Since the introduction of the economic reforms in 1978, china has become the world's manufacturing hub, where the secondary sector (comprising industry & construction) represented the largest share of GDP. In 2015, the Chinese economy missed its 7.0% growth target for the year by 0.1 percentage points, marking the first time in two decades that growth has come in below target. Investment in manufacturing and infrastructure is slowing as the nation shifts from an investment driven growth model to one more focused on consumer demand. Growth in China will continue to show while growth in India picks up to one of the highest levels in the region, i.e. 7.56.

The slowdown in China's economy will continue will continue to effect the growth prospects of the rest of the region as export demand drops and investment flows decline, though countries vary in their level of exposure to these risks (OECD, 2016). Despite this China's stronger economy could be judged by the indicators such as greater tax revenues, almost triple GDP per capita, more than double Grass National Income per capita, current account balance, and low inflation rate (See table 1). Given the better quality infrastructure and better production techniques in china, it is not surprising that average Chinese worker produces 1.6 times more output than that of the average Indian workers. This shows that the productivity of china as a nation is 60 percent higher. Manufacturing sector is the main driver of china's growth. China lead over India in terms of manufacturing. Indian manufacturing sector has multiple structural problems like erratic electricity supply, slow transport systems as well as lack of skills.

**Infrastructure and Transports :-** At the beginning of 90's India's highway infrastructure was actually ahead of china in terms of total route Km as well as route km/head of population. Fifteen years later, while India's expressways languish in potholed chaos, china boasts of a world-class highway network of some 41,000 kilometers, second only to the United States in size (Pavithran, S., & Mukhtar, J, 2011). Now China is far ahead of India in respect of infrastructure development and transport (As shown in table 2). "China spends more on economic infrastructure annually than North America and Western Europe combined", according to the Mckinsey Global Institute (MGI) Report (2016). All the indicators shown in the table are well developed in china which has put a positive impact in its economy to make it one the best in the world. While infrastructure in India not so good compared to china because of corruption in the government (India ranks 94 in the corruption & china ranks 80), poor coordination between various government offices, rampant red-tapism exists in the Indian economy, and economic reforms in Chinese economy took place in 1978 whereas in India around 1991.

**Conclusion :-** It is evidently clear from the above discussion that china has proved that its success depend upon its investment in health and education gender and equal and equitable distribution of wealth even through non democratic influences. On the other hand India's low literacy rates and poor health outcomes as compared to China's may explain a big part of the disparity in development between the two countries, not only to people's lives but also on economic growth of the country. For India to match china it needs a better-educated and healthier labor force at all levels of society.

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# An Introspection of Challenges of Skill Development and Employment Generation in India

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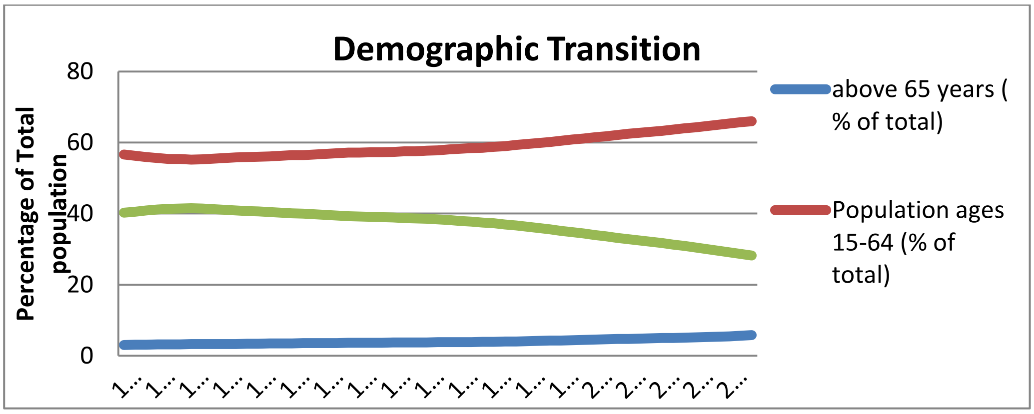
**Introduction :-** India has demographic dividend till 2040 (World Bank 2012) and this opportunity comes once in the lifetime of any country. According to the World Bank estimates 66 percentage of Indian belong to working age population between 15 years to 65 years. This is a great boon to the country but it can turn into bane if not utilized efficiently. On the contrary, Chinese are moving towards ageing population where number of old age people is more than 10 percent of the total population (Mehrotra et.al 2013). Thus, we have a chance to become a world leader with the help of our demographic dividend. However, economic growth did not bring equal distribution of income to Indians in the post liberalization period, thus; it would be unfair to say that equal opportunities are available to lowest strata of the society. Even after 70 years of independence 22 percent of Indians are living below the poverty line. Further, the lackadaisical approach towards educational infrastructure stands as a major obstacle for imparting quality education to children. Moreover, the quality of education does not ensure the skills required by the job market. For e.g. survey of the employer suggest that only 64 percent of engineering fresh graduates is somewhat satisfied and there is a skill gap what industry desires from these fresh hires. (Blom and Saeki 2011). Thus the first set of challenge India has is to provide employable skills to masses in order to harness the benefit of demographic dividend. The second set of challenge lies in creating employment opportunities for growing young population. To meet the first set of challenge, Honorable Prime Minister Narendra Modi started Pradhanmatri Kaushal Vikas Yojna on 2nd October, 2016 with rupees 1200 crore budget allocation. However still there is huge skill gap lies in different sector of economy according to annual report of Ministry of Skill Development and Entrepreneurship Government of India 2016. In addition to this, Government has not succeeded in creating enough employment opportunities for the youth as shown by dismal job creation rate of 1.52 million until October 2016 since July 2014 When BJP came into power. Thus the question arises how would we become economic super power with unskilled and jobless youth in the world? This paper attempt to analyze demographic dividends India has, nature of skill gap in different sector and the unemployment problem in India. The paper has been divided into three sections. The first section looks into India's demographic dividend. Second section throws light on skill gap and third section discusses about India's employment issues.

**Demographic Transition :-** Graph 1 explains demographic transition from which India is going through since 1960's. The old age people above 65 years of age were 3.05 percentage of the total population in the year 1960. There was a secular increase in this percentage over a period of time. In the year 2016 the percentage rose to 5.8 percentage of the total population. This trend is visible from blue line in the Graph 1.

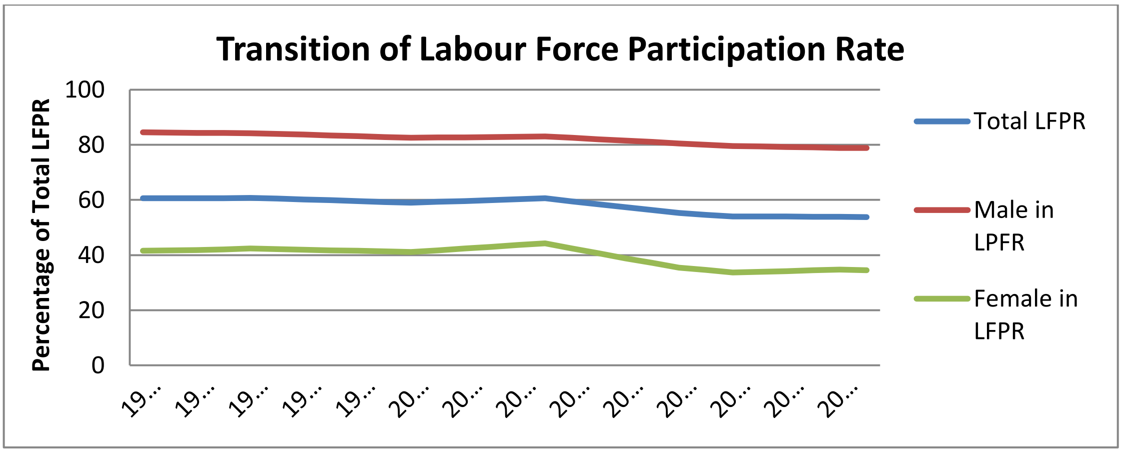
The working age population which is between 15 years of age to 65 years of age was 56.63 percentage of total population in the year 1960. Next 15 years saw a slight decline in the working age population and from 1977 onwards there is increasing trend in the working age population. In 2016, working age population was 66 percent of the total population. This is the demographic dividend India has and it will continue till 2040. There onwards India will also become ageing economy as the share of old age people of 65 years of age will increase above 10 percent of the total population.

**Graph 1: Demographic Transition in the Country**




This trend is visible through redline in the Graph 1. The last segment of population which less than 15 years of age was 40.30 percent of total population and there is continuous decline over a period of time as it is only 28.19 percent in 2016. This trend is visible from green line in Table 1. Demographic dividend is not sufficient enough for a economy to grow unless people are actually working. In order to understand this scenario we need to look at Labour Force Participation Rate (LFPR) with respect to India. In the year 1990, LFPR rate was 60.65 percent of the total working age population. There onwards there was a secular decline in the LFPR. In the year 2016 LFPR was 53.78 percent. Graph 2 gives the graphical representation of LFPR. Further, gender introspection of LFPR depicts a different picture. It is observed that LFPR of Male was 84.5 and for Female 41.5. Male and Female both of them withdrew from workforce after the period of economic reforms. It is because the post liberalization period, people become more aware about education. Therefore, school and college enrollment ratio grew which restricted the early entry in the labour market. As a result in the year 2016 LFPR for Male was 78.83 while for Female it was 34. 51. People witnessed rise in their annual income and pay commission era of post liberalization period saw withdrawal of female Casual labour from the market. Graph 2 explains these changes as all lines are showing little downward tilt in the post 2004 period.

**Graph 2: Labour Force Participation Rate**




**Enrollment in Higher Education :-** Withdrawal of young adults from labour force in the post liberalization period is one of the reasons of declining LFPR. In order to support the enrollment ratio, educational infrastructure also grew. Table 1 gives us a picture of growth of higher education from 2005 to 2015. In the span of 10 year higher education infrastructure expanded from 20 central universities to 43 central universities. Similarly, state public university rose by 100 numbers. These

10 years saw the growth of institute of national importance from 13 to 75. Number of the state private universities was not found in the annual report of 2005-06 but 2014-15 reported 122 private universities. Rise in the private universities denotes the demand and supply gap in the higher educational field. Rise in the private universities is not a healthy sign for Indian higher educational system as these are the profit driven universities. There was spurt of private unaided colleges all over Indian from 2005 to 2015. Educational sector witnessed the growth of many private engineering, management and regular degree colleges where educational degrees were distributed without inculcating the knowledge. This was the period where colleges increased from 20796 in 2005-06 to 38498 in 2015-16. Meager increase in the enrollment ration and number of institutes does not ensure quality education. The said is true as hardly any Indian University makes it in the top 200 world universities every year. Educational institute passes the students whose education does not match the job requirement of the industry. Thus, India is heading towards jobless growth.

**Table 1: Higher Education Infrastructure Growth**

| | | 2005-06 | 2014-15 |
|---|---|---|---|
| University | Central University | 20 | 43 |
| | State Public University | 216 | 316 |
| | Deemed University | 101 | 122 |
| | State Private University | NA | 181 |
| | Central Open University | NA | 1 |
| | State Open University | NA | 13 |
| | Institution of National Importance | 13 | 75 |
| | **College** | 20796 | 38498 |

**Source – Educational Statistics at Glance 2005-06 & 2016**

Scrutiny of enrollment percent from different discipline from Table 2 explains distribution of youth in higher education. At undergraduate level 40.24 students pursued their graduation from social science discipline from the total gross enrollment in the same year. It is followed by engineering & technology and science which comprised 15.89 and 15.38 percent respectively. Commerce stream was chosen by 13.98 percent student. The most desired medical education was pursued by 3.05 students. Medical education is the most coveted but limited available education career for the students. This is because limited government medical colleges and unaffordable fee structure of private educational mafias in medical education. The influx of students in the social science discipline is an alarming situation for the country. It is because of limited skills and knowledge is given to students at social science stream. There is a need for vocational course for the social science students after their graduation as limited job opportunity is available to them. Post graduation (PG) education was again topped by social science discipline as 17.35 percent student enrolled in PG. The trend and desire of becoming manager among Indian youths is quite visible from 15.70 percent enrollment in the Management. The science discipline ranked third in PG course as 12.51 percent student registered under this discipline. Maximum PhD aspirants came from Science and engineering & technology discipline out of total PhD enrollment as it has great employable opportunity in the job market. The enrollment in higher education at undergraduate level does not guarantee the skills and efficiency for the job market. Therefore teaching the soft skills and other job ready vocational training at undergraduate level is need of an hour. Post graduate level of education increases the knowledge command over the subject. PG does not ensure job ready youths in the market. On the other hand PhD. degree in the technical subject or stream opens the door for entry in the market for the talented youths.

**Table 2: Percentage Enrollment in Various Disciplines in 2014-15**

| Discipline | Ph.D. | Post Graduate | Under Graduate |
|---|---|---|---|
| Agriculture & Allied | 3.84 | 0.58 | 0.61 |
| Commerce | 3.09 | 9.61 | 13.98 |
| Engineering & Technology | 23.42 | 7.60 | 15.89 |
| Foreign Language | 2.58 | 4.86 | NA |
| Home Science | 0.51 | 0.25 | NA |
| Indian Language | 5.01 | 8.99 | NA |
| IT & Computer | 1.69 | 7.48 | 2.57 |
| Law | 0.99 | 0.67 | 1.13 |
| Management | 5.31 | 15.70 | 1.93 |
| Medical Science | 3.99 | 3.06 | 3.05 |
| Science | 25.88 | 12.51 | 15.38 |
| Social Science | 12.13 | 17.35 | 40.24 |
| Others | 11.56 | 11.34 | 5.22* |

**Note: * includes 3.25 percent enrollment of education stream**

**Source – Educational Statistics at Glance 2005-06 & 2016**

**Skill Gap in Different Sector of the Economy :** Indian economy is one of the fastest growing economies in the world and it is believed that it will surpass the China GDP one day. However, this dream is far enough as we have failed to provide skill based education. Thus, growing economic needs of skill based human resource may hamper the growth trajectory. Table 3 shows the different sector where human resource requirement is going to rise till 2022. These sector offer employment opportunities to youth if they acquire necessary skills. Agriculture sector is expected to shed labour in the near future. It is expected that 13.5 million people will leave agriculture. Building construction and real estate sector is estimated to require 30.6 million human resource at all level. The boom in construction sector is expected to continue and it will absorb the surplus labour from the agricultural sector. Retail industry requires 10.7 million human resources for its expansion followed by logistic & transportation sector. Textile & clothing is expected to give employment opportunity to near about 6.7 million people. It should be noted that these sectors are expected to provide maximum casual nature of the job. The quality of job is a great concern in the future. It is observed that organized sector jobs are decreasing since 1990. Beauty & wellness, furniture and furnishing, travel & tourism and handloom & handicraft is estimated to require sizeable number of human resource. Sectors which provides white collar organized sector jobs such as banking, pharmaceutical, IT and healthcare sector does not offer much growth in the employment opportunities till 2022. In a nutshell we can expect rise in the employment opportunities in the service sector of unorganized and casual nature. Organized sector jobs are going to be scarce and limited to certain individuals. This shows a dismal picture of Indian job market. Large number of people working in the unorganized sector may not have social security benefit may live with uncertain future.

**Table 3: Incremental Human Resource Requirement 2017-2022**

( Estimates in million)

| | |
|---|---|
| Agriculture | -13.5 |
| Building Construction & Real Estate | 30.6 |
| Retail | 10.7 |
| Logistics, Transportation & Warehousing | 8.2 |
| Textile & Clothing | 6.7 |
| Education & Skill Development | 3.3 |
| Handloom & Handicraft | 4.7 |
| Auto & Auto Components | 2.2 |
| Construction Material & Building Hardware | 2.7 |
| Private Security Services | 3.1 |
| Food Processing | 2.8 |

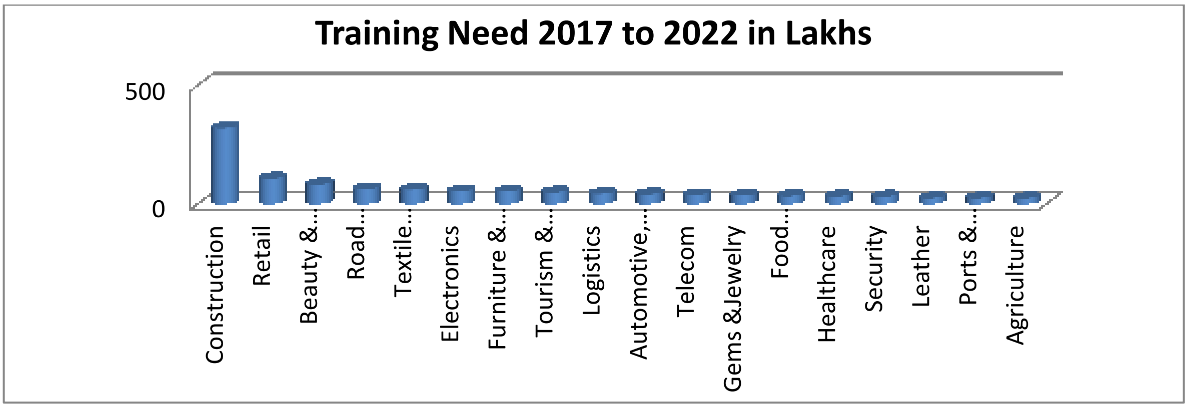
| | |
|---|---|
| Tourism, Hospitality & Travel | 4.9 |
| Domestic Help | 3.3 |
| Gems & Jewellery | 3.3 |
| Electronics & IT Hardware | 3.4 |
| Beauty and Wellness | 8.2 |
| Furniture & Furnishing | 5.7 |
| Healthcare | 2.8 |
| Leather & Leather Goods | 2.7 |
| IT &ITeS | 1.5 |
| Banking, Financial Services & Insurance | 1.2 |
| Telecommunication | 2.8 |
| Pharmaceuticals | 1.4 |
| Media and Entertainment | 0.6 |
| Total | 103.4 |

**Source: Ministry of Skill Development and Entrepreneurship Annual Report 2016**

Graph 3 explains the training need required in the different sector of the economy. As discussed earlier construction sector required maximum human resource in the coming year's sufficient amount of training is necessary for the 320 lakhs new labour & existing labour force in this sector. The organized retail sector requires 107 lakhs people to be trained. Beauty and wellness sector which is mainly dominated by females needs 82 lakhs people to be trained to understand the modern techniques in this sector. The transport, electronics, tourism. textile, furniture and furnishing sector requires training for more than 50 lakhs employees for optimum utilization of their services. Agriculture sector requires its 24 lakhs farmers to be trained for the advance agricultural methods. Agriculture is the last sector in the graph. All other sector after tourism in the graph require less than 50 lakhs employees and new entrants to be trained by 2022. According to the report India needs 1268.72 lakh trained human resource in all the sectors. However, the question is do we have efficient and sufficient infrastructure to provide training for all these sectors.

The Government of India started **National Skill Development Mission and Kaushal Vikas Yojna** for training the youths and makes them employable. Therefore, it is desirable to assess the impact of this scheme. Data from the National Skill Development Corporation reveals that of the 8,00,145 candidates trained through non-scheme skilling programmes in 2016-17, just 48.4 per cent or 3,87,762 candidates got jobs. Similarly in 2015-16, of the 13.55 lakh students skilled, just 46.9 per cent or 6.35 lakh got jobs. Out of 18.03 lakh persons trained under PMKVY in 2015-16, only 12.4% persons were placed. Such a pessimistic placement numbers showed the jolt to Prime Minister Narendra Modi's program of PMKVY. The public private training module of NSDC failed to employ trainees as they get very less incentive for the placement. Thus skilling itself is not sufficient if they are not employed. Moreover, the result of these programs emphasizes that such program has to be cohesive with secondary and higher education system for effective results. Time has come to pay more focus on quality vocational education which just does not give degree but also confirms the job the candidate.

**Graph 3: Training needs in different sectors till 2022**




**Source: Ministry of Skill Development and Entrepreneurship Annual Report 2016**

**Supply & Demand Side Economics of the Job Market :-** According to environmental scan report 2016 in India 103.4 million people will be required in different sector of the economy by 2022. The skill development programs are not adequate to bridge the gap between demand and supply of the job market. However, is there really this much demand? The improvement of technology years after years displaced the manual labour. It has been discussed that the fifth industrial revolution would be drives less car, robots in the manufacturing sector etc. The robotics technology will be going to change the humanity in drastic way. It would be interesting to see how the technological changes will displace the old job and create the new jobs in the future. If we examine the current unemployment situation in India, data from the World Bank ILO estimate unemployment for the year 2017 is 3.6 percent. It attempts to console that the problem is unemployment is not severe in India. On the contrary the problem of underemployment and casualization of labour force is a cause of concern. There is no official statistics available for the underemployment. However, unorganized sector of the job market and contract labour agreement promotes the underemployment.

**Conclusion :-** India has demographic dividend and it is important to optimally utilize this opportunity. It is possible under the sufficiently good government educational infrastructure which caters the need of poor and middle income groups. In addition to this, quality education would be the most important educational reform of the era. There is a need to frame the educational syllabus in such a way that it would land the students in good job. Need to start more vocational training along with regular education is inevitable. This can bridge the supply gaps in the labour market. In order to bridge the demand gap, entrepreneurial growth has to be materialized. Modi Government is not yet fully successful in easing the business environment for the start ups. Further, Demonetization and introduction of Goods & Service tax has affected the business for the few quarters and Gross Domestic Product figures. Skills will be of no use if there is no buyer for it. Therefore, business reforms must increase ease of doing business. World Bank has improved India's ranking on 100th position in 2018from 130th position last year. It is a result of positive reforms of the government. Still there is a long road ahead. Casualization of labour force is a cause of concern. Endeavour should be more on formalization of the workforce. We must make use of demographic dividend through education and employment otherwise lack of both leads to demographic disaster for the country.

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# The impact of tourism on the economic development of Kashmir in terms of Employment Generation, Revenue Generation and GSDP: An empirical study

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**Abstract :-** Tourism is the key sector of Jammu and Kashmir's economy and accounts for 6.98 per cent of the state's GDP. The Valley of Kashmir, also known as the "Paradise on Earth" is among the most important tourist destinations of the globe. The growth in the tourism industry in the region is due to the rise in tourist arrivals and diversification of tourism product. The present paper highlights the role of tourism industry on economic development in J&K by examining the different parameters such as development of infrastructure and State Gross Domestic Product (SGDP). It found that despite being a leading industry of J&K, tourism industry has not developed optimally to harness its economic benefits. Emphasis needs to be put on the rich heritage and culture, great hospitality and beautiful landscape, which provide a unique tourism product in the State.

**Keywords :-** Tourism, Economy, Revenue, Employment

**Introduction :-** Tourism industry offers a more reliable source of income as it is a smoke less activity. Some of the favorable conditions, which have prompted the development of this industry, in short working days, increase in general awareness among them asses, requirement for alleviating the nervousness of current life and developing populace. The tourism industry has enrolled an enormous development during couple of years in India as well as everywhere throughout the world. In Indian economy the tourism industry, industry has made work on a huge scale and has likewise emphatically added to the remote trade profit, and has risen as one of the prevailing segment of Indian economy.

The northern most territory of India is the loveliest state J&K, and furthermore known as heaven on earth, because of its alluring scenes, lakes and unmatchable picturesque excellence. Jammu and Kashmir, additionally recorded among the top traveler goals of the nation and the world. The province of Jammu and Kashmir has three districts, which have their very own various characters, and these locales are Jammu, Kashmir and Ladakh. Every one of these locales can possibly be the great traveler territories and understood all around the globe. The Jammu division of Jammu and Kashmir is famous for forts temples and popularly known as "City of temples". Therefore, it can say that it is an important place or destination for pilgrimage tourism. With respect to as Kashmir division is concerned, Raj Taringini the sequence of the Kashmiri Kings composed by Kalhana praises the magnificence of Kashmir as pursues: "Kasmira Parvati Paroksh, Tat Swami-ch-Maheswara". Which means Kashmir is as excellent as Goddess Parvati show and its proprietor is Lord Shiva Himself". In addition, the Mughal Emperor shouted "Gar Firdous Bar-lament Zamin Ast; Hamin Asto, Hamin Ast". "Which means if there is heaven on earth; this is it, this is it and this is it"? Ladakh is prevalently eluded by numerous names, for example, "Little Tibet", "The Land of Numerous Passes", "The Broken moon" and so forth.

The tourism industry holds a vital spot in the economy of Jammu and Kashmir. The tourism industry in the state helps in giving advantages like making of business, foreign trade, Infrastructure improvement and advancement of neighborhood ventures like Handicrafts and Handlooms, which has put Jammu and Kashmir consistently in the spotlight at the national and global skyline. According to the World Tourism Council, a speculation of 10 lakhs in the tourism industry will produce around 90 occupations, which are higher than its contending divisions like Agriculture and

Manufacturing, which will create 45 &13 employments for each 10 lakhs separately. The travel industry frames an indispensable piece of the Kashmir economy.

**Review of Literature :-**

**(Shivashanmugam, 2015)** studies that Tourism is the life line of Jammu and Kashmir and all possible efforts need to be undertaking for retaining, maintaining and sustaining it. Tourism can play an effective role in integrating the entire universe. The analysis of this research reveals that the Tourism sector in Jammu and Kashmir suffered a sudden downfall.

**(Islam, 2018)** revealed that the Kashmir region has distinctive natural and cultural tourism resources which are responsible to attract a number of tourists across the globe. There are various ups and downs in the tourist arrivals over the years due to many reasons. To maintain the tourist flow to the Kashmir, government has undertaken several initiatives, such as, expansion of tourism infrastructure, development of new tourism spots, and identification of new tourist circuits. In this regard, state tourism department has formulated a draft tourism policy. The state has also developed an eco-tourism policy for exclusive development, promotion and preservation of eco-tourism potentials of the Valley. The state governments should develop strong network for the development and promotion of Kashmir tourism. In this view skilled human resource should be recruited and local people should be encouraging to work in tourism business. Besides government need to do continuous review of tourism process for its smooth conduct in the region.

**Objectives :-**

1. To study the impact of tourism on the economic development of Kashmir in terms of Employment Generation, Revenue Generation and GSDP of J&K.
2. To suggest some suggestions for improve the level of tourism facilities in Kashmir.

**Hypothesis of the Study :-**

Ho: There is no relationship between the level of tourism activity and economic development.

**Research Methodology :-** This study based on secondary data provided by tourism development of Jammu and Kashmir. The time series data of Gross State Domestic Product have collected from the period of 2008-2019. Information has collected from various sources like Ministry of Tourism Government of India, Tourist Reception Centres, Directorate of Tourism Government of J&K, State Directorate of Economics, JKTDC and Tourism Department, Civil Secretariat J&K, census report, Existing literatures and other scholarly works.

**Statistical Methods :-** The statistical analyze based on the computation of descriptive statistical measures are largely applied in action research and endows with precious information with reference to the nature of the particular group only. Following descriptive statistical techniques have employed in the present study. Growth rates have calculated representing the state of tourism industry in the Kashmir. Further, to understand the direction of relationship among the indicators of tourism industry and in between the indicators of tourism industry and GSDP (Gross State Domestic Product) including (services & transport) Karl person's co-efficient of correlation have calculated. The co-efficient of correlation also been tested by Chi-square test. Simple linear regressions have calculated further to find out the impact of the independent variable on dependent variables. The method used expressed as: $Y = a_{+} bx$.

**Table 1: Shows GSDP, Revenue and Employment Generation by Tourism of Valley during 2008-april 2019 Comparative study**

| Years | GSDP from Tourism (In crore) | Revenue from tourism (In Crore) | Employment Generation(In Crore) |
|---|---|---|---|
| 2007-08 | 37099 | 30.84 | 0.144 |
| 2008-09 | 42315 | 30.54 | 0.154 |
| 2009-10 | 48385 | 32.36 | 0.166 |

| | | | |
|---|---|---|---|
| 2010-11 | 58073 | 35.30 | 0.178 |
| 2011-12 | 68185 | 34.23 | 0.191 |
| 2012-13 | 865337 | 33.19 | 0.205 |
| 2013-14 | 97400 | 31.79 | 0.221 |
| 2014-15 | 102681 | 32.16 | 0.237 |
| 2015-16 | 116102 | 28.49 | 0.255 |
| 2016-17 | 126230 | 40.30 | 0.274 |
| 2017-18 | 140887 | 36.16 | 0.294 |
| 2018-19 | 1573484 | 27.33 | 0.316 |
| **Total** | **3,227,793** | **392.69** | **2.635** |

Source: Deportment of Tourism Kashmir

Table 1 shown that, the GSDP from Tourism State from 2008-19 (in crore) is 3227793, Revenue Generate from Tourism of Kashmir (in crore) from 2008-April 2019 392.69 and Employment Generation from 2008-April 2019 (In crore) is 2.635, shown that the Tourism provides both direct employment and direct employment in the state.

**Table 2: Impact of Revenue Generation from Tourism on Economic Development in Kashmir.**

Dependent Variable: State GSDP (In Rs. crore) Independent Variable: Revenue Generation from Tourism (In Rs. Crore).

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 132.000[a] | 121 | .023 |
| Likelihood Ratio | 59.638 | 121 | 1.000 |
| Linear-by-Linear Association | 2.954 | 1 | .086 |
| N of Valid Cases | 12 | | |

Table 2 shown the Impact of Revenue Generation from tourism of Kashmir Results of estimations assert that value of Linear-by-Linear (0.86) is less than the two (2) and Likelihood Ratio (1.00) The Chi-square-value is founding to be of 0.023 that is significant at 0.05% level. Therefore, it has concluded that tourism development has significant Impact on economic development in Kashmir during the study period.

**Table 3: Impact of Tourism on Economic development in Kashmir. Symmetric Measures**

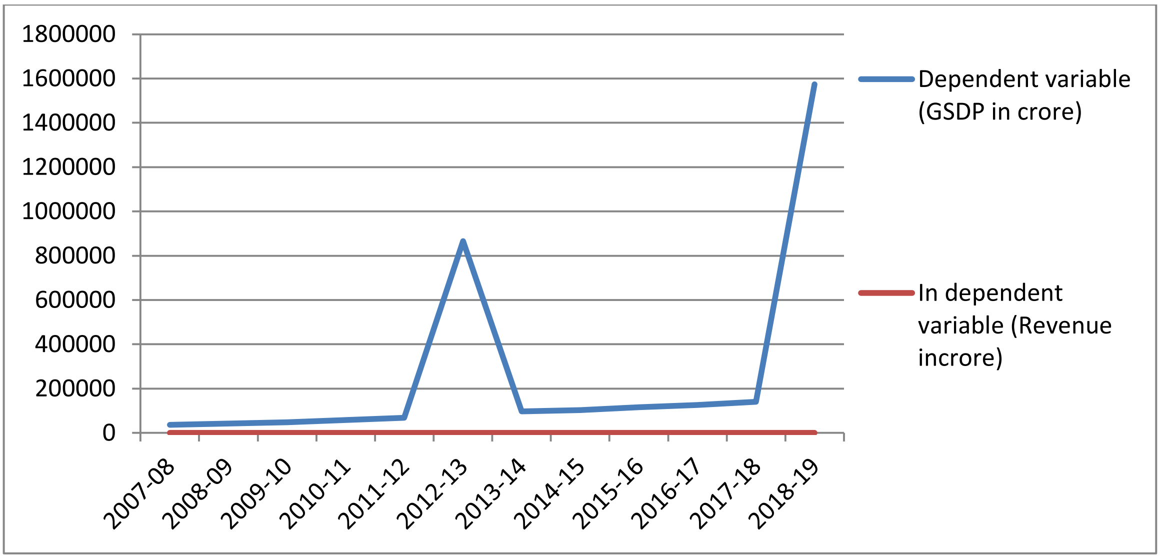
Dependent variable: GSDP and Independent Variable: Revenue Generation (in Rs. Crore).

| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
|---|---|---|---|---|---|
| Interval by Interval | Pearson's R | .518 | .220 | 1.916 | .084[c] |
| Ordinal by Ordinal | Spearman Correlation | .895 | .119 | 6.349 | .000[c] |
| N of Valid Cases | | 12 | | | |

Table 3 shown that the Impact of Tourism on Economic Development of Kashmir, result relating to model fit shown that there is no auto-correlation in data as correlation value (0.895) which is less than two. The value of R-square (0.516%) signifies ideal model fit and indicates that 40% variation in revenue generated from tourism is explained by economic the single variable namely economic growth in this analysis. Correlation has found to be 0.00, which is statistically significant at 0% level. This confirms positive elasticity of Revenue from tourism with economic development in Kashmir and positive correlation between tourism expansion and Revenue growth. Therefore, it has concluded that economic growth has significant Impact on tourism development in Kashmir during the study period.

Further, in order to analyze the cause and effect relationship between GSDP and Revenue Generation. While taking GSDP as dependent and Revenue Generation as an independent variable the model summary indicates the Person's R (.518) and Spearman Correlation (.895) that is 51% and 89% of GSDP has being explained by Revenue Generation by Tourism Services in Kashmir. The statistic test by Person's Chi-square is .023, which is significant at 5% level of significance. Thus, all these results led to the fact that Tourism in Kashmir has produced a significant positive impact on economic Growth.

**Figure 4: Simple linear regressions have calculated further to find out the impact of the independent variable on dependent variables. The method used express**




Source: constructed on the basis of table 4

The above highlighted graph shows that there is a relationship between the GSDP and Revenue generated from tourism ok Kashmir. Thus, the result shows the positive impact of tourism on economic growth of Kashmir Valley.

**Suggestions :-**

• There are solely few peak tourist months within the Kashmir natural depression that too in summer season. This has crystal rectifier to the wastage of resources. Thus in order to beat this drawback, government ought to take applicable steps for organizing winter sports within the Kashmir, which is able to attract the sports lovers. Additional and more tourist places ought to be opened for winter sports.

• Advertisement by the govt. at the national and international level through national and international newspapers, business enterprise journals, via web and TV.

• Promotion of alternative kinds of Tourism like pilgrim's journey, water business enterprise, sports business enterprise, cultural business enterprise

• Tourists visiting the natural depression ought to have a feel of the place. This objective will be achieved by exposing him to the native music shows, ancient dance, theatre etc. this may result in accrued revenue generation.

• To develop and promote new innovative tourism products, lesser-identified destinations, art, form, cuisines, monuments and handicrafts.

Therefore, it will be all over that Tourism incorporates a major impact on the event within the valley of Kashmir. However, there's would like of managing it in property manner while not effecting its natural atmosphere. According

Hawkins, "Tourism is Goose that not solely lays golden egg, however conjointly fouls its own nest". Thus, save the Kashmir valley from the negative impacts of tourism.

**Conclusion :-** The Impact of Tourism on Economic Development of Kashmir results of estimations asserts that it has concluded that tourism development has significant Impact on economic development in Kashmir during the study period. The Revenue Generated from tourism of Kashmir, result relating to model fit show that there is no auto-correlation in data as correlation. The Economic growth has significant Impact on tourism development in Kashmir during the study period. Tourism in Kashmir plays a significant role for overall development of people and economy and provides lot of scopes for further growth and development. Tourism could affect most sectors of the economy with having great potential for their progressive improvements.

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# The identity of Nigerian people is disturbed by the power of Christianity in Chinua Achebe's Arrow of God

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**Abstract** :- The present paper examines the identity of Igbos, Nigerian people. An attempt is also made to show how missionaries disturb the identity of Igbo people in Achebe's Arrow of God. The identity of Nigerian people is disturbed by the power of Christianity in the pre- colonial and colonial period. In Arrow of God Igbo people struggle for getting their identity. Ezeulu, the protagonist of the novel, fails to continue the tradition and customs of the Igbo to celebrate the 'New Yam Festival.' At the church, the missionaries made the Igbo people to believe in Christianity by convincing them to protect their yams. The present article also examines that the identity of the Igbo people was based on the seasons which are regulated by the festivals and rituals. The object of this research paper is to make readers aware of Igbo people's disturbed identity and the power of Christianity.

**Keywords** :- Identity, Christianity, Igbo people, missionaries' power.

**Introduction :-** Chinua Achebe is a well- known Nigerian novelist. His full name was 'Albert Chinualumogu Achebe' (Ezenwa 6) His novel Arrow of God revolves around Igbo traditions, disruption of Nigerian identity and conflict between Igbo people and Christianity. The identity of Nigerian people is disturbed by the power of Christianity in the pre- colonial and colonial period. In Arrow of God Igbo people struggle for getting their identity. Ezeulu, the protagonist of the novel, fails to continue the tradition and customs of the Igbo to celebrate the 'New Yam Festival.' At the church, the missionaries made the Igbo people to believe in Christianity by convincing them to protect their yams.

Moreover, in Arrow of God Igbo people's identity was generally based on the seasons which are re regulated by the festivals and rituals. Ezeulu, as a Chief Priest of Ulu, holds the strict capacity and religious power to screen every one of the perspectives of their culture. The decontamination rituals and farming tasks are used to perform by the message of the God Ulu. Ezeulu, as a Chief Priest of Ulu, holds the strict capacity to screen every one of the perspectives of their way of life. The agrarian assignments and decontamination rituals are utilized to perform by the message of the God Ulu. Ezeulu, the priest of God Ulu, thought that he had huge control throughout the year, over the yields and in this way over the individuals.

**Discussion :-** In Achebe's Arrow of God the land issue of Umuaro and Okperi gives rise to problem of the disruption of the Igbo identity. The missionaries partitioned them by declaring the decision in favour of Okperi. Another example of the division in the Igbo tribe is the power relations between Nwaka and Ezeulu. Ezeulu, protagonist of the novel, attempts to save the identity of the Igbo individuals, but he is not able to do so because his limited power didn't assist him to resist the colonial impact. He allows one of his children to join the missionaries to gain proficiency with the intensity of their religion; however it proclaims the interruption of his identity consequently the disturbance of the tribe. He turns into an 'arrow' in the bow of his God with no force in his grasp. Ezeulu is imprisoned for thirty- two days in Okperi because he refuses the offer of the missionaries of becoming the priest of them. In the present novel both the images- negative and positive of Ezeulu have been depicted by Achebe. Ezeulu considers himself to be the god of his villagers. He wants everyone- his kinsmen, his wives, his children, his enemies and his friends to follow him and act like himself. His arrogance of his capacity didn't support him a long. As a result, the individuals accepted that no any man is more prominent than the community.

The missionaries were very powerful. They disturbed the societal peace and identity of Igobo people of Umuaro by giving a decision in favour of Okperi. Umuaro made no effort to resist the decision of missionaries but laid down their arms.

The Umoiuro people were not in favour of war. They never spoke about it. Missionaries' fear among Igbo people is revealed by Achebe in this novel. The narrator says:

"Everywhere elders and men of title heard the signal and got ready for the meeting. Perhaps it was the threat of war. But no one spoke of war any more in these days of the white man." (AOG 141)

Somewhat, the disruption of Igbo individuals is opposed by Ezeulu testing the preachers. From the outset, he attempted to turn away the war with Okperi on the land possession so it could have certain effect to battle with the evangelists with special power. But, unfortunately, he didn't get success in it. Furthermore, he supported his child to join the preachers to keep an 'eye' there to know the privileged insights of them. Lastly, he refused the offer of missionaries of being their priest for the village under their rule. After receiving the offer of missionaries, Ezeulu says; "tell your white man that Ezeulu doesn't leave his hut. If he wants to see me he must come here." (AOG 139) His dream to keep the general public joined is seen from his goal when he alerts Akuebue, "We did many things wrong in the past, but we should not therefore go on doing the same today." (AOG 132) It is perceptible from the remark that the identity of the Igbo individuals was eradicated by the colonial power in the past. However, the Igbo religion kept them through and through for time being and it was again at the cusp of the interruption of the group (clan).

Ezeulu's arrogance as a Chief Priest and powerful religious man in Umuaro is an instance of the relational system of the Igbo society and community, which recognizes them integrated. However, the disruption of their identity due to conflict, diverse and disorderly elements of society creates anarchy and unrest among the Igbo tribe. The famous psychologists Laplanche and Pontalis put their views about the identification of the social system;

"Identifications viewed as a whole are in no way a coherent relational system. Demands coexist within an agency like the super-ego, for instance, which are diverse, conflicting and disorderly. Similarly, the ego-ideal is composed of identifications with cultural ideals that are not necessarily harmonious." (208)

**Conclusion :-** The present article reveals that the concept of identity does not hint the unchanging and stable social patterns. But it changes according to social changing needs. It changes the method for belongingness. The article also traces out that the conflicts in the European culture and Igbo tradition evoke the issues of identity. The missionaries disintegrated the Igbos and their society by provoking unfriendliness and aggression among them through education, lucrative trades, law and order and the taste of power. They imposed their administrative rules upon the Igbo people by the division of southern-eastern Nigeria into areas ruled by District Commissioners and appointed the Igbo people as clerks, messengers and the chiefs to support them.

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# Impact of E-Commerce in GST

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**Abstract :-** The monetary and social effect of online business. E-commerce is as of now developing at 30%. shopping site eBay Inc. is developing at 60%. The quantity of clients of the organization has expanded from one million clients to 2.5 million in India over the most recent four years. A portion of the famous imported things imported by Indians incorporate home style, marked and unbranded clothing, extras, and innovation items like workstations. Instalments through PayPal and cell (phones) are essentially adding to the development of E-commerce. Digitization of books, films, computer games are likewise driving the development of online business. Individuals who purchase on iPad purchase things that are about 30% higher in cost than individuals who purchase on the iPhone or PC. For a nation, for example, India, one of the most significant advantages of E-commerce is its capability to assist a creating rustic network with leaping frog into the information worldview. E-commerce is giving helpful asset to development of microfinance and MSME's. The constructive outcomes of web based business can be amplified past simply business development to profoundly affect all parts of country network.The Indian government has executed the new indirect tax regime - GST from 01-07-17, GST is one indirect tax for the whole country, which will make India one unified common market. The introduction of Goods & Service Tax in India is the most comprehensive indirect tax reform since independence, which seeks to integrate most of the indirect taxes under single banner. This paper aims to address the concept of GST, architecture of GST and GST impact on the insurance Sector. This paper will be your guide regarding the increase in GST and its impacts on your insurance premium. It has outlined the broad contours of GST policy in India, benefits that would accrue to the economy and the difficulties faced by the states. Finally, it attempts to find the middle ground between Centre and the states, and the proper implementation of GST code in India.

**Keywords :- E-Commerce, Indian Economy, Impact of GST.**

**Introduction** :- Goods and Services Tax (GST) has been distinguished as one of most significant duty changes of post-freedom India. It is an expense trigger, which will prompt business changes for every significant industry. Given the section of the Constitution Amendment Bill, 2016 for GST in the Parliament on eighth August 2016, endorsement of the said Bill by in excess of 15 states by early September followed by its institution, and entry of four GST Bills in the Lok Sabha on 29 March 2017 and Rajya Sabha on 6 April 2017, with the unmistakable guide being set somewhere near the Finance Ministry, the Government of India is by all accounts on course to executing GST with impact from 1 July 2017. The Bills introduced in the Lok Sabha, during the ongoing Budget session of the Parliament, include Central GST (CGST), Integrated GST (IGST), Union Territory GST (UTGST) and the Bill for Compensation to States. Discussion on the Bills commenced on 29 March 2017 and was passed on the same day after a long debate. According to media reports, the GST Bills, although introduced as Money Bills, shall be taken up for discussion in both houses of the Parliament before their passage in the current session. The Bills were earlier cleared by the GST Council, followed by a Union Cabinet approval. The revised draft of the Model GST law, which was released in the public domain in November 2016, has been split into CGST, SGST and UTGST Bills apart from IGST Bill. The draft of the Model GST Law underwent further changes before being introduced in the Parliament.

**Objectives :-**

1. To state the overview and concepts of GST
2. To present the GST rules applicable to services.
3. Impact of GST inE-Commerce &Indian Economy.

**Research Methodology :-** This study based on secondary data from various source like as journals, articles, newspapers and magazines. To make a more accurate analysis of the research, the study has been adopted keeping an exploratory research type and focus the objectives of the descriptive type of research design

**HISTORY OF THE GST :-** Goods and Service Tax (GST) was presented in France in 1950s and has been received by in excess of 160 nations, including all part conditions of the European Association (EU). Goods and Services Tax (GST) is a rate charge on esteem included (the distinction among deals and the expense of bought material contributions) at each phase of creation.There are three basic types of value added taxes (VAT) depending on how the investment is treated in the tax base, GDP type GST, consumption-type GST, and income-type GST. Under the GDP-type GST system, no deductions are allowed for capital investment and depreciation of capital when calculating the tax base. The tax is equivalent to a sales tax applicable to both consumer and capital goods.Under the consumption-type GST system, capital investment is subtracted from the value added in the year of purchase. The tax is equivalent to a sales tax applicable to consumer goods. Under income-type GST system, the tax base excludes the depreciation of capital. The tax is imposed on net domestic product, which is close to national income. Almost all countries that have established the Goods and Services Tax (GST) system adopt the consumption-type GST in which all purchases of capital goods from other firms are deductible from a firm's sale (Shoup, 1990). However, some countries such as Argentina, Peru and Turkey have adopted the incometype GST, and countries such as China, Finland, Morocco and Senegal have employed a GDP-type GST, GST rates vary significantly among countries. The standard GST rates range from 25% (Denmark, Hungary, Sweden, and Norway) to 5% (Singapore). Reduced rates and tax exemption are applied to certain goods and services. Revenues from GST account for a significant portion of government revenue in many countries. Of total central government revenue, general sales tax and GST accounted for 33.25% in Greece in 1998, 31% in U.K. in 1999, 28% in France in 1997, 42.58% in Argentina in 2000, 35.7% in Hungary in 2000, 30.20% in Russia, and 33.7% in Ukraine in 2000.

**TYPES OF GST :-** As of now, two sorts of GST are being used the world over. Each varies essentially in its strategy for handling the tax on venture (capital) consumptions. The most well-known strategy, the utilization type, grants organizations to deduct quickly the full estimation of the tax paid on capital buys. A subsequent methodology, the national pay type, permits just a steady reasoning of the GST paid on capital buys over various years, much like deterioration. On the off chance that no recompense is given for the tax paid on capital buys, the tax is known as the gross national item type, since its base is roughly equivalent to private GNP. In view of its equivalent tax on benefits from work and capital and the subsequent advancement of capital development, the utilization strategy is the sort frequently examined.


**CGST :-**

- Excise duty
- Customs duty including countervailing duty (SVD), special additional duty(SAD)
- Service tax
- Education cess
- Surcharge

**SGST :-**

- Value added tax/sales tax
- State excise duty
- Octroi entry tax in lieu of octroi
- Entertainment tax
- State cess and surcharge

**IGST :-**

- Interstate sales tax

**The proposed GST bill Salient feature :-**

- **Dual GST model:** Under the dual GST system, both central goods and services tax, and state good and services tax will be levied on all transactions except interstate sales, which shall be governed by the integrated good and services tax.
- **Subsumed categories:** GST recommends collapsing the above mentioned taxes and duties, and surcharges under three broad categories:
  1. Central good and services tax CGST.
  2. State good and services tax SGST.
  3. Integrated good and services tax IGST (this is proposed to be the sum of the applicable CGST and SGST).

Levy of these taxes will be driven by the kind of transaction that takes place but before coming to the procedural and application aspect, let us first rearrange the current taxes under these broad categories, “subsumed” as the intelligentsia refers.

**Taxable event will be place of sale and not place of origin :-** The GST model has taken a 180 degree turn on the “taxable event, Under the current system, indirect taxes are collected at the place of origin, whereas the GST bill proposes the taxable event to be the place of consumption instead of the place of origin. This is a major shift from the prevalent model and has been a source of anxiety, understandably so, among some states that are more manufacture-or production-centric. The condemn stems from the apprehension of loss to the exchequer on interstate transactions/sale.

However, it is believed that this model will increase the tax base and consequently, result in more collection for the state governments.

**No cross-utilization of input tax credit (ITC)**

**The GST bill prohibits cross-unitization of ITC between SGST and CGST.**

**Input tax credit :-** Input tax credit is simply the credit accrues while paying taxes on put. For instance, the tax paid by a wholesaler on purchase of goods from the manufacturer will entitle the wholesaler to claim credit of tax on sale of those goods to a dealer/retailer. So under the GST, the assesse will not be able to claim credit of input tax which was paid to the state to be offset against the tax liability to the centre and vice versa.

**Service tax :-** Under the proposed GST, not just the centre but also the states have been granted the right the same can be utilized for input credit against payment of tax on both goods and service. It is also proposed to have a uniform tax rate for both goods and service. This will potentially streamline the process to a great extent and help in bringing uniformity. The definition of service tax has also been changed to include everything other than goods.

**GST council :-** A GST council chaired by the union finance minister and ministers nominated by each state government as members will be constituted. The decisions of the GST council will be made by three-fourth majority votes of the council, one-third of the centre, and two-third of the state. The GST will inter-alia recommend on the GST rates, exemptions under the GST, and taxes, cesses and surcharges to be subsumed under the GST. The council may also function as a dispute resolution body.

**GST rate :-** Although the GST rate has not been specifically mentioned in the draft bill, it is being speculated to be anywhere is the range of 18% to 24% the critics of the draft bill are demanding an upper cap to be specified lest the executive have undue powers to make changes to the rates.

**Taxes not under the purview of GST :-** Certain taxes and duties have not been subsumed under any of the above three categories and are proposed to continue to be governed as per the prevalent laws and rules. These are stamp duty. Vehicle tax, road and passenger tax, property tax, electricity duty and basic customs and export duty.

**GST threshold :-** In the interest of the small-scale industries and small traders, a uniform state GST threshold across states is proposed. The threshold has been set at gross annual turnover of INR 10 lakh, both for goods and services. Under consideration is providing adequate compensation for the lower threshold states under the VAT regime such as North-Eastern states and special category states.

**Exemptions:** Alcohol for human consumption has been exempted, as of now, from the levy of GST in the draft bill. This may get included at a later date upon GST council's recommendation. There are other categories of goods that are being considered for exemption such as petroleum products and tobacco, however, under the original bill, they are included under GST.

**Impact of GST on Indian Economy :-** GST impact in India Impact of GST in Indian Economy Complete Analysis. Impact of GST in India. Amidst economic crisis across the globe, India has posed as a beacon of hope with ambitious growth targets, supported by slew of strategic missions like 'Make in India', 'Digital India', etc. Goods and Services Tax (GST) is expected to provide the much needed stimulant for economic growth in India by transforming the existing basis of indirect taxation towards free flow of goods and services within the economy and also eliminating the cascading effect of tax on tax. In view of the important role that India is expected to play in the world economy in the years to come, the expectation of GST being introduced is high not only within the country, but also in neighbouring countries and in developed economies of the world. Check more details about "Impact of GST in Indian Economy" from below Impact of GST in Indian Economy.


1. Reduce tax burden on producers and foster growth through more production. This double taxation prevents manufacturers from producing to their optimum capacity and retards growth. GST would take care of this problem by providing tax credit to the manufacturer

2. Various tax barriers such as check posts and toll plazas lead to a lot of wastage for perishable items being transported, a loss that translated into major costs through higher need of buffer stocks and warehousing costs as well. A single taxation system could eliminate this roadblock for them.

3. A single taxation on producers would also translate into a lower final selling price for the consumer.

4. GST would add to government revenues by widening the tax base.

5. GST provides credits for the taxes paid by producers earlier in the goods/services chain. This would encourage these producers to buy raw material from different registered dealers and would bring in more and more vendors and suppliers under the purview of taxation.

6. GST also removes the custom duties applicable on exports. Our competitiveness in foreign markets would increase on account of lower cost of transaction.

**Impact Of Gst Ine-Commerce :-** The e-commerce industry in India has been greatly impacted by the introduction of Goods and Services Tax – GST. The introduction is being touted as the biggest reform the country has seen until now. The government is promoting GST as a part of its endeavour to create one market for the entire nation. The industry and buyers all have dealt earlier with the disparate segmentation of the Indian economy, which is being dealt away within GST.

The idea of a single tax from manufacturing to supply has eliminated the need for sellers to register with multiple tax platforms and file separate returns. The e-commerce industry in India is made by both big players such as Amazon or Flipkart as well as small retailers and sellers. The GST has made a great impact on the industry, through this blog the impact on e-commerce platforms will be studied.


**1. Increased reach of e-commerce :-** The GST has opened up new avenues for small and medium-sized sellers to compete with larger enterprises. Earlier due to the over looming tax rates in different states, sellers were usually confined to their states only, limiting the free reach to far-flung areas. By the introduction of GST, e-sellers will be relieved of varying tax structures.

**2. Compulsory registration required :-** The government specifies a company to be registered if it has a beginning of more than 20 lac. This limit has been dropped for north-eastern states by about 10 lac rupees. For the e-commerce sector the situation is different as all sellers are to be registered even if their threshold doesn't cross 20 lacs. This is a limitation which if removed would allow more sellers to become a part of an online community.

**3. Tax collected at source** :- E-commerce marketplaces will deduct 2% of the TCS of net value sales an apart of seller liability and are to be paid to the government. Additionally, the sales reported by the marketplaces and those of the seller need to tally each month. If any incongruitiescontinue, the extra amount needs to be paid by the seller. This measure is aimed to weed out bogusactivities surrounding online marketplaces and amount of tax evasion will decrease, building trust between marketplaces and the sellers.

**4. Ineligible for composition :-** The e-commerce sellers are not eligible for compensation as part of GST actions. The composition scheme would have enabled sellers whose turnover is about 75 lacs to file tax returns quarterly rather than the monthly which is followed now. The tax amount would have been a meagre 2%, but the scheme has been kept out of reach for sellers.

**5. Increase in credit :-** The GST has introduced input tax credit for e-commerce marketplaces, establishing a direct contact between input product and final product. They will be able to utilize input tax credit to their benefit.

**6. Cash on delivery refund :-** In developing countries like India, cash-on-delivery is a more popular option exercised by users. The refunds on such orders are issued after a reconciliation of 7-10 days if the taxes have already been paid. This sticky issue has been taken care under GST.

**7. Filing of tax returns :-** The process of recording tax returns to the government have been made alike to the way physical stores pay. The structure GSTR-1 containing details of outward supplies need to be submitted by tenth of each month. The seller will receive the GSTR-2 structure by eleventh of each month, details of the taxes taken by the e-commerce marketplace. The seller after reviewing needs to return the structure by fifteenth of each month. Any discrepancies needed to be resolved by twentieth of each month. This specific entity has encouraged sellers to count their information from different sourced before recording returns.

The GST makes certain to have a positive outreach to the e-commerce sector of our nation. The structure will decrease operating expenses by about 20%, additionally reducing the expenses of coordination and warehousing. This move will encourage the sellers to keep up warehouses at strategic areas and be operated efficiently. Due to faster movements of goods, the expenses to end-of-mile delivery will get lower, the benefit can be passed on to the buyers. The e-commerce marketplaces will currently be free to import items from SMEs, therefore enriching the nature of items. The GST on the since quite a while ago run will create a level playing field for e-commerce marketplaces, streamlining their services and increased business development.

**Conclusion :-** E-commerce is emerging as a significant instrument to ensure inclusive development. The customary model of business is undergoing a sea change to reduce the prominence of physical infrastructure of large cities as an essential condition for the smooth working of business. Emergence of international transportation choices creates the chance to reach online consumers around the world. Emerging economies with a quickly developing internet penetration offers an attractive alternative for the retailers to expand. China with the world's largest online populace provides a great open door for the retailers. The concept of virtual companies is taking concrete shape and will usher into an era of limit less world. The miniaturized scale, little, and medium size companies will get the advantages of minimal effort operations, and chance to market the items all-inclusive on the snap of a mouse. Hitherto neglected remote villages and states will get a chance to develop economically, socially and additionally contribute to empowerment of women, and minority classes. E-commerce has the scope to lead India into an Economic superpower.

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# Tourism and Its Impact on Economic Growth and Environment of Rajasthan State

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**Abstract :-** This paper provides the network view of the socio-social effects of culture and legacy the travel industry specifically and inspects the degree to which they concur with the travel industry sway writing. This examination not just arrangements with socio-social effects seen by occupants as the effects of the travel industry improvement yet in addition distinguish the impacts of statistic factors on the inhabitants' frames of mind towards the travel industry. Thinking about the connection among occupants and visitors, the present examination additionally endeavours to break down this relationship with regards to what inhabitants consider as imperative: network or individual issues. The paper utilizes Rajasthan for instance to outline the diverse effects of the travel industry. Information acquired from the survey and meetings are the primary wellsprings of contributions for examination. Host people group of Jaipur saw the travel industry advancement from both constructive just as antagonistic points of view. Nonetheless, the prevailing perspectives reaffirm that they speak to a hopeful side of the travel industry.

**Keywords :-** Tourism, Rajasthan Tourism, Economy, Impacts etc.

**1. Introduction :-** The travel industry isn't constrained just to exercises in the convenience and cordiality part, transportation division and excitement segment with guest attractions, for example, amusement parks, event congregations, sports offices, exhibition halls, and so on., however the travel industry and its administration are firmly associated with every single significant capacity, procedures, and methods that are rehearsed in different zones identified with the travel industry as a framework. Additionally, the travel industry includes the elements of arranging, sorting out, planning, preparing and observing assessing at all dimensions (universal, national, territorial, nearby). Along these lines, the travel industry coordinated into the utilitarian unit of the economy (Simoni and Mihai, 2012).

**1.1 Tourism Industry :-** Characterizing the vacationer business is troublesome. The travel industry implies distinctive things to various individuals, since it is a deliberation of a wide scope of utilization exercises which requests items and administrations from a wide scope of businesses in the economy. For instance, OECD (1991) sees that "travel industry is an idea that can be translated distinctively relying upon the specific circumstance. The travel industry may cover the voyagers, or what the vacationers do, or the specialists which oblige them, etc."

To abridge in increasingly succinct terms, the travel industry can be characterized as a lot of financial exercises completed either by or for voyagers. Those completed by voyagers relate to what travellers do, while those did for sightseers compare to what other financial establishments do to help the necessities of visitors. The travel industry is the biggest administration industry in India, contributing 8.6% to the national GDP. There is a table provided which shows sector wise distribution of National GDP.

| SECTORS | % of NATIONAL GDP |
|---|---|
| Agriculture | 17 |
| Tourism | 8.6 |
| Industry | 28.2 |

**1.2 Foreign Tourist Arrivals & Foreign Ex-Change Earnings From Tourism :-** The travel industry is an essential part of Indian economy and contributes considerably in the nation's remote ex-change profit (FEE). In the year 2010, the travel industry area saw generous development when contrasted with 2009. The Foreign Tourist Arrivals (TA) in India amid 2010 was 5.58 million when contrasted with the FTAs of 5.17 million amid 2009, demonstrating a development of 8.1%. The development rate amid 2009 more than 2008 was (- ) 2.2% The FEE from the travel industry amid 2010 is assessed at US$ 14.19 billion when contrasted with FEE of US$ 11.39 billion amid 2009. In rupee terms, FEE from the travel industry amid 2010 is evaluated at '64889 crore when contrasted with FEE of ' 54960 crore amid 2009 enlisting a development rate of 18.1%. The development rate in FEE from the travel industry amid 2009 more than 2008 was 8.3%. Rajasthan with its remarkable history and culture holds an unmistakable position inside India's travel industry indus-attempt. In the area, the legacy pink city 'Jaipur' with its many prized social resources couple with bright fairs and celebrations and well disposed individuals developed a most loved vacationer goal for visitors everywhere throughout the world. Tex-tiles, workmanship and adornments are the significant shopping draws for worldwide visitors.

The fundamental vacationer composition demonstrates that dominant part of travelers are residential and just about 20% are remote nationals. In 2010, India's travel industry ricocheted once more from the worldwide monetary emergency with around 56 lakhs of outside voyagers visiting the nation. The quantity of visitors touching base in Rajasthan in 2010 alone was 26822400, out of which 1279523 were outsiders. An aggregate of 5983830 of sightseers have just visited Rajasthan by March 2011. The travel industry represents 8% of Rajasthan's absolute GDP. A portion of the travel industry results of Rajasthan have turned out to be globally celebrated and well known among the sightseers, for example, royal residence on wheels, legacy inns, camel safaris and national parks. Notwithstanding this India seeing a financial blast is drastically reshaping the travel industry scene, from the entry of global inn networks to the improvement of new transport framework, new difficulties and openings is facing the household the travel industry. The effects of the travel industry on society are mind boggling and changed subject.

**1.3 Importance of Tourism :-** The travel industry has generally made quick walks in the nation. The main role of advancing the travel industry in creating nations has been to acquire remote money. The roads of work by method for advancing the travel industry come straightaway. It additionally fills in as a powerful instrument for dispensing with destitution, for completion joblessness, for advancing exchange among civic establishments and for giving diverts in which surges of various culture could meet and blend and make another ethic-scope on which a reasonable, simply, altruistic and illuminated request could be worked for the whole human race." The travel industry assumes a critical job in the monetary and social advancement of most nations in the word. It is the biggest generator of work and its administrations run from movement, settlement, providing food, and support of culture and conventions particularly the handiwork business and to conservation of eco-framework.

**2. Literature Review :-** The survey of the travel industry writing uncovers a scope of effects identified with the travel industry improvement, the travel industry network association and coming about impacts. The physical nearness of vacationers and their experiences with nearby inhabitants, the advancement of the travel industry adds to changes in the personal satisfaction (Andereck and Vogt, 2000; Andriotis, 2005; Macbeth et al., 2004), social structure and social association of neighborhood occupants. (Wilshusen et al., 2002, Andriotis 2003, Kathleen L. Andereck, Karin M. Valentine, Christine A. Vogt and Ri-chard C. Knopf 2007, Joseph E. Mbaiwa and Amanda L. Stronza 2010).

Other critical effects of the travel industry advancement are changes in the size and statistic attributes of the host population(Bill Faulkner and

Carmen Tideswell 1997; Smith and Krannich, 1998; Petrzelka, Krannich, and Brehm, 2006; Robin Nunkoo, Dogan Gursoy and Thanika Devi Juwaheer 2010; Juan Gabriel Brida, Linda Osti and Andrea Barquet 2011), adjustment of network structure (Erb, 2000; Williams and Lawson's 2001; McKercher 2001; Macbeth et al., 2004), expanded portability of ladies and youthful adults(R.K. Blamey and V.A. Braithwaite 1997; Bill Faulkner and Carmen Tideswell 1997), infrastructural advancement in the goal (Swatuk, 2005; Blaikie, 2006; UNESCO, 2006), expanded supply of services(Mbaiwa 1999; Evans, 2001; Marianne Bickle and Rich Harrill Sujie Wang 2010) and therefore improved personal satisfaction for neighborhood residents.(Carson and Northcote 2004; Jones 2005; S. McCabe, T. Joldersma and C. Li 2010).

The fundamental effects influenced by the visitor have relationship are the showing impact (Linnekin, 1997; Erb, 2000; Harrill 2004; Jackson and Inbakaran, 2006; Ma-rianne C. Bickle and Rich Harrill 2010) when the host's conduct is adjusted so as to emulate vacationers, the adjustment in language utilization in the goal (Clifford, 1997; Erb, 2000), the development of alcoholism(Andrew Lepp 2008), crime(Marianne Bickle and Rich Harrill Sujie Wang 2010), prostitution and betting (Evans, 2001; Richards, 1996; UNESCO, 2006) and the change (revitalisation or commoditisation) of the material and non-material types of neighborhood culture (Erb, 2000; A.M. Ogaboh Agba, Moses U. Ikoh, Antigha O. Bassey and Ekwuore M. Ushie 2010). As it were, a culture dependent on superstructures embedded inside a town prompts a rejuvenation of the city regarding work and social cooperation (Bob McKercher 2001; Marichela Sepe and Giovanni Di Trapani 2010).

**3. Economic Impacts Of Tourism Sector :-** The real advantage of the travel industry for a district or nation is monetary as it gives a chance to work creation and age of income at universal, national, local and neighbourhood levels. The travel industry can likewise profit economies at provincial and nearby dimensions, as cash comes into urban and rustic zones which thus animates new business undertakings and advances a progressively positive picture in a region (Cooper et al., 1993).

3.1 The travel industry as a Source of Foreign Exchange Earning: The branch of the travel industry, the legislature of India works out brisk gauges each year by duplicating the quantity of vacationer entries by the assessed per capital use of an outside traveller. The vacationer needs to spend in India in the case of going via air, railroad, roadways, houseboats, and so forth while making his visit in any piece of traveller enthusiasm for India. The travel industry specialists have all around acknowledged that when a nation can acquire remote trade from the travel industry, which is at least 10 percent of the stock fares, that nation can be known as a "travel industry nation".

3.2 Framework Development and Tourism: The travel industry necessities help in the production of framework utilities and civilities, which are utilized by the guests as well as become profitable to the nearby populace too. The financial significance of the travel industry in the national economy can be acknowledged with reference to its commitment to framework improvement (Mathieson and Wall, 1982). Traveller landings in a nation increment compelling interest for the framework offices. The administration must urge the private division to set up traveller foundation. An endeavour must be made to create foundation in an arranged way in order to keep away from clog, congestion, and harm to the earth. That is the place the job of the legislature is critical.

3.3 The commitment of Tourism to National Income: The travel industry offers force to national salary. Universal the travel industry and local the travel industry both have a similar impact on national salary (Mill, 1990). The travel industry needs to pay for various kinds of administrations and products in the host nation. So the travel industry establishes an interest for administrations and that of purchaser products. The development of convenience, urbanization for visitor reason, foundation establishment, expanded vacationer transport, and gear, and so on are instances of how traveller transport energizes speculation openings inside the state. At the point when visitors pay for products and enterprises in another nation, these sums are reflected as national travel receipts for such nation.

**4. Environmental Impacts Of Tourism :-** An alluring situation bids to travellers, regardless of whether characteristic or constructed, and the advancement of the travel industry in a territory will identify with the encompassing region. The term 'condition' alludes to the physical setting in which the travel industry happens – this could be waterfront resorts, notable urban areas, mountain ranges, pictures towns, locales of social enthusiasm including galleries and national landmarks – and which gives the upgrade to travel. The travel industry itself will influence the earth in both positive and negative ways. The accompanying records abridge these impacts:

- Increased interest in the zone (may improve offices, get to and empower advancement);
- Conservation of highlights energized (structures, untamed life, wide open);
- Increased pay for upkeep and conservation of offices.

There are weight bunches that crusade to protect nature and attempt to anticipate over advancement, for example, Friends of the Earth and Tourism Concern. Government divisions in numerous nations intend to accomplish touchy the travel industry improvement that is conscious of nearby situations and traditions.

The more included a nearby network is with the improvement of the travel industry in a zone, the less harming the effect of the travel industry might be on that region. Be that as it may, the nearby network may see the advantages of the travel industry advancement without being completely mindful of the negative impacts or expenses to the network. Or on the other hand they may concentrate on the dangers to the earth without seeing the positive perspectives. This is the place neighbourhood the travel industry gatherings, (for example, provincial traveller sheets) can help centre around the issues and give a chance to discourse and investigation just as raising open mindfulness.

**5. Conclusion :-** These days the travel industry is one of the dynamic financial exercises in making financial changes over the world which has been progressively vital. Since, on the planet current conditions, expanding the economy, upgrading human improvement markers, lessen the issues of industrialization and contamination exorbitant urban communities, work, social trades, ecological insurance and at last supportable advancement including the difficulties confronting the nation are considered, the significance of the ideal point is totally clear. Then again, The travel industry division is presumably the main administration area that gives concrete and measured exchanging open doors for all countries, paying little mind to their dimension of advancement.

In any case, it is additionally a segment where there is unmistakably an uneven conveyance of advantages, which is compromising the social, financial and natural supportability of the travel industry in some creating nations. For some creating nations the travel industry is one of the essential mainstays of their advancement procedure since it is one of the prevailing exercises in the economy, while for other people, especially by islands and some little economies, it is the main wellspring of remote cash and work, and in this way comprises the stage for their financial improvement. Subsequently, Tourism organizers must understand that these three ideas, 'nature, the economy, and the general public are inseparably connected, like a bug catching network's touch, one piece of it and resonations will be felt all through.

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# Effect of E-Commerce Trend on Consumers' Buying Behaviour in Chitrakoot City

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**Abstract :-** The current research was undertaken to understand the Consumer intention to purchase through E-commerce Web sites. A survey of 100 Consumers of Chitrakoot city was conducted through Questionnaire method. The results indicate that the Consumer intention to purchase online is influenced by utilitarian value ( like time saving), attitude toward E-commerce, availability of information . In this study, results drawn out Consumer choose Designer clothes mostly and select safe method of transaction (Cash on Delivery.) The current research focuses on understanding the shopping trend of Consumer in Chitrakoot city.

**Key words**- Trend, E-commerce , Consumer.

**Introduction :-** commerce has experienced rapid growth in the last few decades. The internet has changed the why consumers buy goods and services throughout the world and it is based on Business to consumer (B2C) and business to business (B2B).

A Whole day of shopping is the dream of everyone especially young ones.....It is true fact, which can be unchanging. Particularly Consumer motivated for E-commerce by a variety of different reasons including socialising, enjoyment, trend and most important 'FASHION'. Now days, there is a boom in online purchasing, which are magic for consumers in their hand. Internet commerce involves the sales and purchase of products and services over the internet. This new style of shopping made has been called "E-commerce", e-shopping, Internet shopping, Electronic shopping and Web Based shopping.

This Paper is based on E-commerce of Consumer in Chitrakoot city .The reason of this research to know the craziness of E-commerce in Consumer and we should know their awareness about E-commerce, like website, transaction method , products and so on.

**Trend** - " A general tendency to change, as of opinion.....It simply reflects what seems to be going around at any given time."

**E-commerce** - "E-commerce or e-shopping is a form of electronic commerce which allows consumers to directly buy Goods and Services from a seller over the internet using a web browser. Alternative names are – e-web store, e-shop, e-store, Internet shop, web –shop, web store, online store, and online storefront etc."

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**Review of Literature-**

Jones and Kim (2010) stated that in their study examines the influences of retail brand trust on online purchasing. Data for the study were collected from 200 young female US consumers who completed online survey. Participants were asked to select one of three pre determined apparel retail online brands that they have either had experience with or were familiar with. Respondents were then asked to keep their selected retailer in mind when completing the questionnaire and were also asked briefly visit the website shopping for a shirt or blouse. Factor correlation analysis were conducted to test their hypothesis.

Peng (2010) has reported that with new wireless technology constantly being developed, E-commerce is increasingly common now days. People can search for and buy products online much more conveniently and efficiently then shopping in retail online stores. In fact, the number of people who choose E-commerce is continuously increasing. This study is concerned with factors that affect student "decision making" as to whether to buy products online .this research used mix methodology, which includes quantitative and qualitative methods, and the information had been selected by survey and interview. A total of 92 students responded to the survey & 9 students were interviewed. The information gathered in the research is analysed in comparison with relevant literature. These factors (price, convenience, efficiency, safety, product range and services.) provide a structure to this research.

Sen(2014) has reported that The internet has become a new platform for electronic transaction and consumers in India are increasingly using the internet for E-commerce purposes. Online marketing has thus emerged to be the key to success for many companies and the online presence of organizations has become inevitable in nature. This paper identifies the key factors that influence the online purchase of products in Kolkata. In this study take sample of 150 respondents was selected in Kolkata and a self-administered questionnaire was used to collect primary data. The data was recorded by using a number of open ended questions, close ended questions, from the Likert Scale and interpreting the data. The findings of the study showed that the cost factor, convenience factor, product factor and seller related factor are the four important factors influencing the online purchase of products in Kolkata.

**Scope of the Study :-** This study helps firms, organizations and websites improve their marketing strategies. Helpful for problem recognition and awareness of need through E-commerce of Consumer. For social marketing getting idea across to consumers rather than selling something.

**Objectives of the Study :-**

- To know the percentage of Consumer, which are used to E-commerce.
- To know which product is mostly buy from E-commerce.
- To study why Consumer moves towards E-commerce.
- To understand the preferential method use for transaction in E-commerce.
- To identify which website is mostly used by Consumer.

**Hypothesis of the Study :-**

- Consumer mostly buy Designer clothes from E-commerce.
- Consumer choose most safe method of transaction that is Cash on Delivary.

**Limitations of the Study :-** The study has following limitations-

1. The sample was selected from few Consumer of Chitrakoot city.
2. The sample was limited to 100 respondents.
3. The range limited only Consumer, age group- 15 to 75 years.
4. Randomly selected respondents had been used for filling the questionnaire.

**Plan, Methodology/ Research Design :-**

**i)** Selection of method of Inquiry- The universe being too large and time & other resources being limited, Convenience Sampling method were selected for the present study.

**ii**) Selection of Samples- The sample selected on purposive random basis

**iii)** Selection of method for collection of Data- Questionnaire method used for collection of data. A trival survey was done to get an idea of the various problems. In the trival survey the same procedure was followed as was to be adopted in actual survey. The no. of cases in it was five on the basis of this pilot study necessary amendments are done in the schedule.

**iv)** Sources of Information-

a) Primary Sources- Respondents (Consumer) from age group 15 to 75 years were selected as the primary sources. It was collected from 100 respondents in different girls colleges of Chitrakoot city through questionnaire.

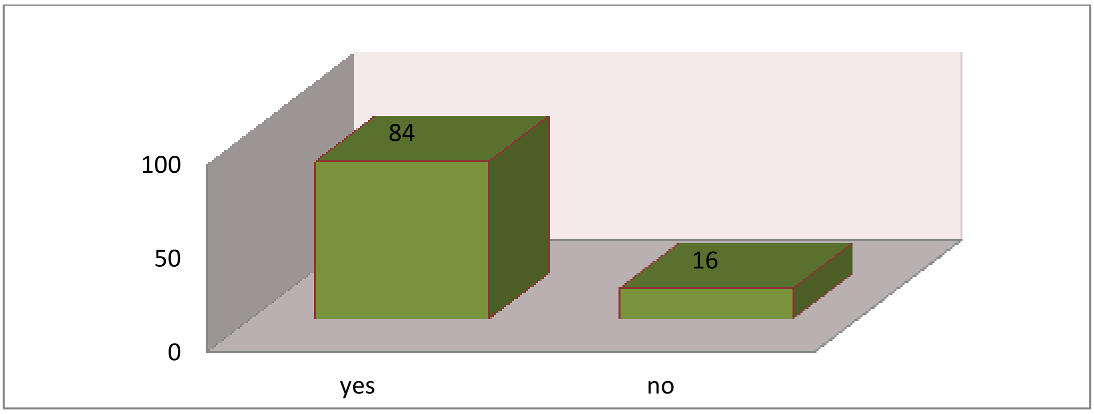
b) Secondary Sources - It may be termed as "Documentary Sources". The information was gathered from different books, magazines, journals, news scripts and websites etc.

**Analysis of Data :-** After the data was collected it was tabulated and analyzed statistically, wherever needed statistical tests were applied to get the final results .The information gathered was from the 100 respondents(Consumer) surveyed from Chitrakoot city. The age running 15 to 75 years.

**TABLE NO. 01**

**No. of Respondents according to adoption of E-commerce**

| Sr. no. | Adoption of E-commerce | Percentage % |
|---|---|---|
| **1.** | **Yes** | 84 % |
| **2.** | **No** | 16 % |

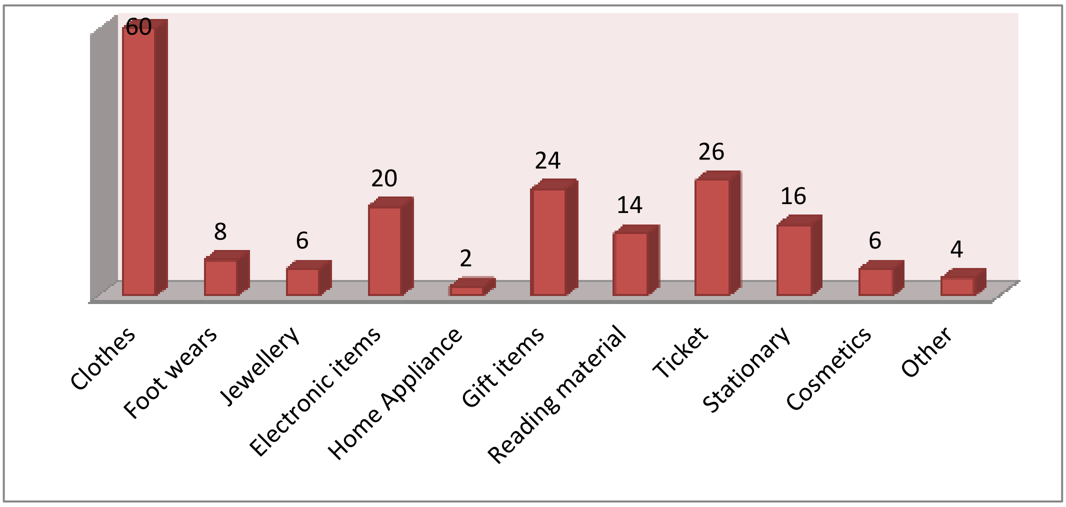



Here 84 % Consumer of Chitrakoot city accept the adoption of E-commerce. They use E-commerce like a trend or Fashion and 16% Consumer do not accept the adoption of E-commerce because of some reasons (like- not knowledge about internet, limited resources, don't want to take any Risk etc.) Bajaj (2008) also reported that females were good adopters of E-commerce compared to male.

**TABLE NO.02**

**No. of Respondents according to buying different products and services from E-commerce**

| Sr.no. | Buying Products /services from E-commerce | Percentage % |
|---|---|---|
| 1. | Clothes(Designer) | 60 % |
| 2. | Foot wears | 08 % |
| 3. | Jewellery | 06 % |
| 4. | Electronic Items | 20 % |
| 5. | Home appliance | 02 % |
| 6. | Gift Items | 24 % |
| 7. | Reading Materials | 14 % |
| 8. | Ticket | 26 % |
| 9. | stationary | 16 % |
| 10. | Cosmetics | 06 % |
| 11. | Other | 04 % |

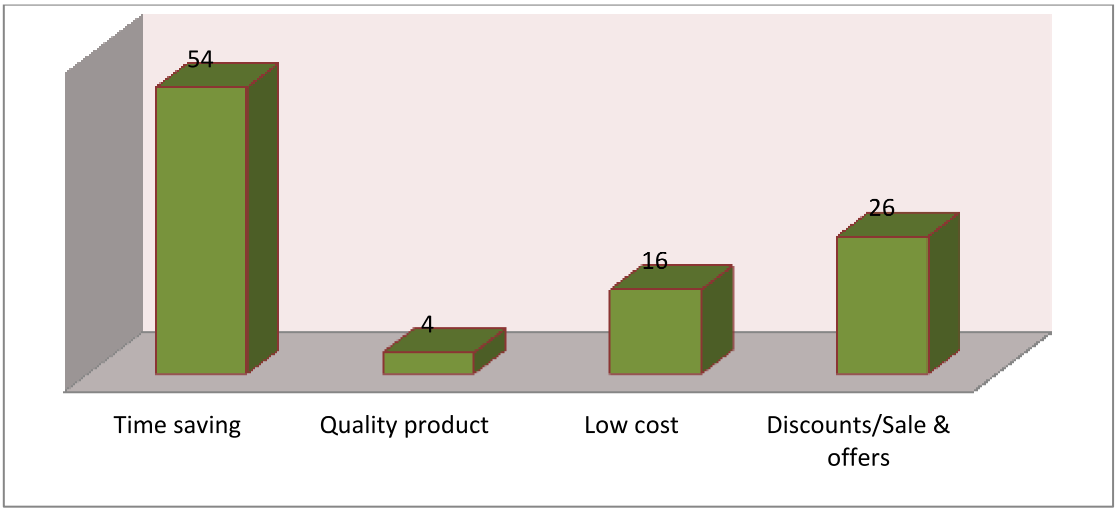



Here 60% Consumer mostly buy designer clothes and 26% book online ticket. They also buy Gift items (24%), electronic items (20%), Stationary (16%), Reading materials (14%), Foot wears (8%), Jewellery(6%), cosmetics(6%) and other(4%) respectively. AcNielson (2007) stated that the most popular items purchased on the internet airline tickets/reservations (21%) and clothing/accessories/shoes (20%).

**TABLE NO.03**

**No. of Respondents according to Causes moves towards E-commerce**

| Sr. no. | Causes moves towards E-commerce | Percentage % |
|---|---|---|
| 1. | Time Saving | 54 % |
| 2. | Quality Products | 04 % |
| 3. | Low Cost | 16 % |
| 4. | Discount /Sale & Offers | 26 % |

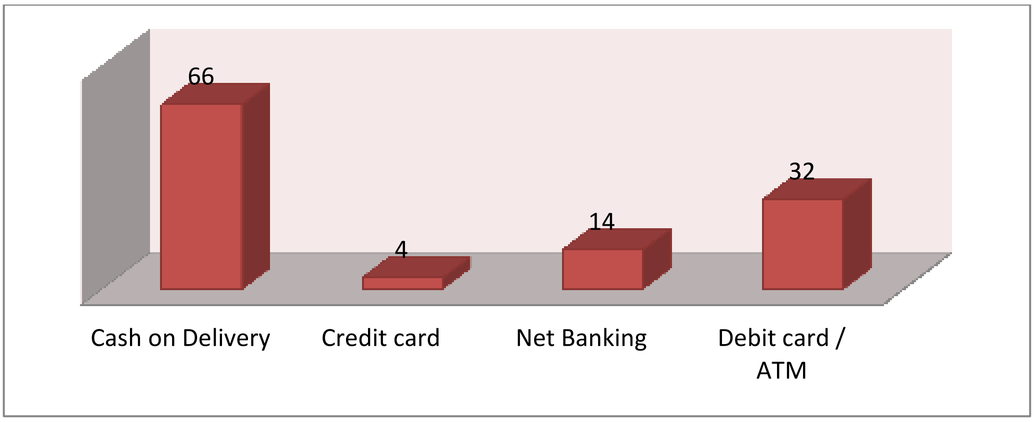



Here explain the reason & causes moves towards E-commerce by respondents for Time saving (54%), Discounts/Sale & offers(26%), low cost(16%), and Quality Product(4%) respectively. Gurleen (2012) reported that the consumer being Price Sensitive, Most of the consumers prefer to buy online because they will get heavy Discounts.

**TABLE NO.04**

**No. of Respondents according to method used for Transaction in E-commerce**

| Sr. No. | Method Used for Transaction | Percentage % |
|---|---|---|
| 1. | Cash on Delivery | 66 % |
| 2. | Credit card | 04 % |
| 3. | Net Banking | 14 % |
| 4. | Debit Card/ATM | 32 % |




In this table, Respondents choose mostly Cash on Delivery (66%) transaction method, some time Debit card/ATM (32%), Net Banking(14%), Credit card(04%) respectively take for transaction .

**TABLE NO.05**

**No. of Respondents according to preference of different E-commerce websites**

| Sr. no. | E-commerce websites | Percentage % |
|---|---|---|
| 1. | Flipkart | 32 % |
| 2. | Snapdeal | 28 % |
| 3. | HomeShop18 | 28 % |
| 4. | Amazon | 36 % |
| 5. | other | 10 % |

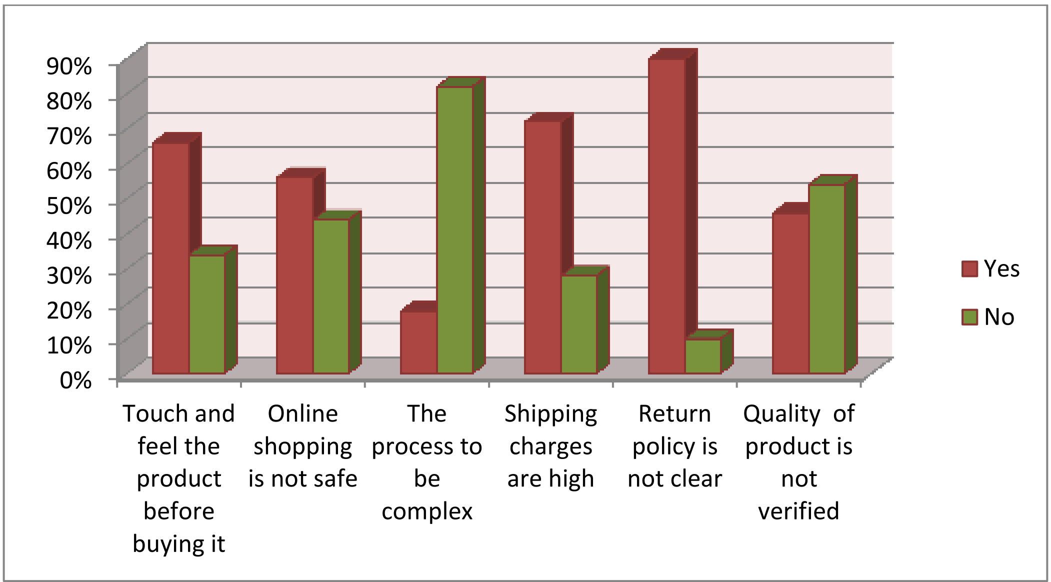

According this table, respondents prefer mostly Amazon.com (36%) to purchasing online but respondents not only choose the only website ,they are surfing different-different websites and choose their favourite deal in right websites. So they also prefer Flipkart(32%), Snapdeal(28%), Homeshop18 (28%), and other websites(10%).

**TABLE NO.05**

**No. of Respondents according to their purchase decision form E-commerce in future**

| Sr. No. | Purchase decision form E-commerce in future | Percentage % Yes | Percentage % No |
|---|---|---|---|
| **1.** | touch and feel the product before buying it | 66% | 34% |
| **2.** | E-commerce is not safe | 56% | 44% |
| **3.** | the process to be complex | 18% | 82% |
| **4.** | Shipping charges are high | 72% | 28% |
| **5.** | Return policy is not clear | 90% | 10% |
| **6.** | Quality of product is not verified | 46% | 54% |

Here explain, the purchasing decision of respondents for future E-commerce, respondents mostly change their purchase decision for return policy(90%), high shipping charges(72%), touch and feel product(66%), it's not safe (56%), and product quality is not verified at a time of delivery(46%). Sen (2014) also stated that Respondent's reason for not buying from E-commerce in future that was touch and feel the product (25%), complex process & don't have internet facility(23%) and this process is not safe (14%) in Kolkata.




**Conclusion :-** The growth is the number of online shoppers is greater than the growth in internet users and in online purchasing we have larger option to choose products & services. It was seen from the study that most of Consumer in Chitrakoot city , age group- 17 to 27 years were found to be adopters of E-commerce. They buy mostly designer clothes and booked online tickets easily by online medium. They also purchase Gift items, Electronic items, Reading materials and Stationary etc. They usually use very safe transaction method that is Cash on Delivery, some time they also choose ATM, Net Banking and Credit card.

Generally, they use E-commerce because it is a Time Saving method and every day a new Discounts and Offers comes on shopping websites. Amzon.com (E-commerce website) is most preferable shopping website for Consumer in Chitrakoot city, they use also flipkart, snapdeal, homeshop18, websites to buy products and services.

Overall, Consumer of Chitrakoot city are crazy about E-commerce because of saving time, convenience and Discounts. They use Cash on Delivery method for transaction because which are very safe. some consumers gave their suggestion about better RETURN POLICY and quality product. So, E-commerce trend is increasing because of internet medium found very easily and In our today's life, our android and window mobile phones helps to easier our busy life and day-by-day challenges.

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**Website Referred :-**


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- www.googlescholar.com
- www.slideshare.com
- www.wikipedia.com

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**Abstract :-** This study is based on Biochemical Assessment of pre -school children (3 to 5 years age) of Jabalpur City. The objective of the study was biochemical assessment of preschool boys and girls of children of slum areas of Jabalpur city. Data was collected from 400 Pre-school children of Jabalpur city slum areas with self -structured questionnaire tool. Data Analyses was done by mean with simple charting and tabulation. The results found that biochemical assessment of boys and girls was not according to World Health Organization (WHO) standard in most of the categories. They were below WHO standard.

**Key Words** :- Biochemical Assessment , Preschool children, slum Area

**Introduction :-** Malnutrition is widely recognized as a major public health problem in the developing countries of the world including India. Based on the United Nations International Children's Emergency Fund (UNICEF) report, malnutrition in early childhood has serious, long term consequences because it delays motor, sensory, cognitive, social and emotional development. (Agrawal et al. 2016).

Children are the future citizen of our nation . For good citizen, it is important that they should have a good health. Nutrition has been recognized necessary for social and economic development of a country. Adequate nutrition is essential especially in early childhood to ensure healthy growth, proper organ formation and function, development of a strong immune system and neurological and cognitive functions (Onis.et.al. 2012). It occurs particularly in children and leads to various degrees of growth retardation. It is not only an important cause of childhood morbidity and mortality, but also leads to permanent impairment of physical and mental growth of those who survive. (Park and Anwar 2015)

This study showed that the prevalence rate of anaemia was 84.6%, which was higher than the regional (57%) and Tanzania (58%) prevalence rates. They observed high prevalence rate of anaemia could be due to deficiency of iron nutritives among under five children associated with poor food availability and nutritional deficits. The current findings were similar to a previous study in Mwanza, which showed a 77.2% prevalence rate of anaemia. Robles et al. (2017) in reported that the prevelance of anaemia was 19.3% in Dominica New York. The development of anaemia is multifactorial nutritional deficiencies especially iron, but also folate vitamin $B_{12}$, Vitamin A and protein appear to the biggest factors. The study on 'Assessment of nutritional status of preschool children in the Bangang rural community, Cameroon ( Kejo et al. 2019). In this study, 475 children aged 2 weeks to 5 years were randomly selected. The eating habits of children were obtained through a questionnaire. The height and weight of children were measured and anthropometric indices of height/age, weight/age and weight/height were used to estimate children's nutritional status. Blood samples were collected on the children's venous. These children consumed low meat, fresh fish, vegetables and fruits. The prevalence of stunting, underweight and wasting of children was 41.26, 10.52 and 3.58% respectively. The mean serum levels of albumin, calcium, magnesium, phosphorus and zinc were respectivley. 36.22 ± 16.87 g/dl, 7.73 ± 4.48 mg/dl, 1.95 ± 0.8 mg/dl, 4.09 ± 2.29 mg/dl, and 62.16 ± 25.72 ug/dl. The prevalence of deficiencies in albumin, calcium, magnesium, zinc, phosphorus were 49.2, 73.56, 45.96, 62.98 and 62.23% respectively. The prevalence of malnutrition essentially stunting with altered biological markers was a problem of children in this community. The researchers identified some risk factors including type of feeding, low fruits and vegetables intake and low education of family( Nolla et al. (2014)

The Review of the above researches shows that there is need for study of Biochemical Assessment of Pre- School children of slum areas of Jabalpur city so that they may be advised for better Haemoglobin level in their Blood which is free of anaemic condition.

**OBJECTIVES :-**

- To study the biochemical analysis of preschool boys and girls of slum areas of Jabalpur city (m.p.).

**HYPOTHESES :-**

- The haemoglobin of preschool boys of slum areas will be according to Haemoglobin Colour Scale by WHO standard.
- The haemoglobin of preschool girls of slum areas will be according to Haemoglobin Colour Scale by WHO standard.

**Methodology :-**

**Sample :-** The following sample was selected for study-

The sample has been selected within corporation limits from slum areas of Jabalpur city.

| Age Range (inYears) | Boys | Girls | Total |
|---|---|---|---|
| 3.0-3.5 | 50 | 50 | 100 |
| 3.5-4.0 | 50 | 50 | 100 |
| 4.0-4.5 | 50 | 50 | 100 |
| 4.5-5.0 | 50 | 50 | 100 |
| Total | 200 | 200 | 400 |

**Tools :-** A questionnaire was prepared by the researcher using standardized method of preparation of questionnaire. A biochemical assessment with reference to haemoglobin level of preschool children was undertaken and apart from that questionnaire, haemoglobin colour scale were used for measurement of haemoglobin levels of children. (Haemoglobin colour Scale WHO)

**Method Of Data Collection :-** Biochemical Assessment was done by measuring haemoglobin levels of preschool boys and girls. The measurement was done with the help of World Health Organization (WHO) colour scale. It is an inexpensive method for estimating haemoglobin from a drop of blood by means of a colour scale. The data thus collected were recorded, tabulated and summarised in the form of a master sheet. The data was calculated for comparison of mean with WHO norms

**Results And Discussion :-** The Analysis of Data has been presented in the following Tables:-

**Table No. 01**

**Comparative results of haemoglobin of Pre-school Children (Boys) with WHO Standard**

| Age Range (in years) | N | Calculated Average Haemoglobin Level (g/dl) | Standard Haemoglobin Level (g/dl) |
|---|---|---|---|
| $3\text{-}3^{1/2}$ yrs | 50 | 9.70 | <10g/dl (marked anaemia) |
| $3^{1/2}$ – 4 yrs | 50 | 9.79 | <10g/dl (marked anaemia) |
| 4- $4^{1/2}$ yrs | 50 | 10.45 | 10-12 g/dl (mild to moderate anaemia) |
| $4^{1/2}$ - 5yrs | 50 | 11.2 | 10-12 g/dl (mild to moderate anaemia) |

Source: Haemoglobin Colour Scale by WHO

Range : > 12g/dl – not anaemic
10-12 g/dl – mild to moderate anaemia
<10g/dl – marked anaemia

The results of the sample for the haemoglobin (Hb) for four age groups of boys i.e. 3-3$^{1/2}$ years, 3$^{1/2}$ - 4 years, 4- 4$^{1/2}$ years, 4$^{1/2}$ – 5 years showed that the mean value of Haemoglobin for the samples are 9.70g/dl, 9.79g/dl, 10.45g/dl and11.2g/dl respectively. The corresponding norms of WHO are >12g/dl (not anaemic), 10-12 g/dl (mild to moderate anaemia) and <10g/dl (marked anaemia). The results for the two categories 3-3$^{1/2}$ and 3$^{1/2}$ - 4 years with mean value 9.70 g/dl and 9.79 g/dl are marked anaemic condition while two categories for 4-4$^{1/2}$ years and 4$^{1/2}$ - 5 years with mean value 10.45 g/dl and 11.2 g/dl respectively are mild to moderate anaemic condition as per WHO Standard.

Thus, from the above results it may be inferred that the haemoglobin (Hb) level of boys of the slum areas for the age groups 3-3$^{1/2}$ and 3$^{1/2}$ - 4 years were marked anaemic.

As such the hypothesis that – 'The haemoglobin of boys and girls will be within normal range' is not accepted for boys since the haemoglobin of boys is not according to WHO norms

**Graph No. 01**

**Graphical presentation of haemoglobin of Pre-school Children (Boys) with WHO Standard**

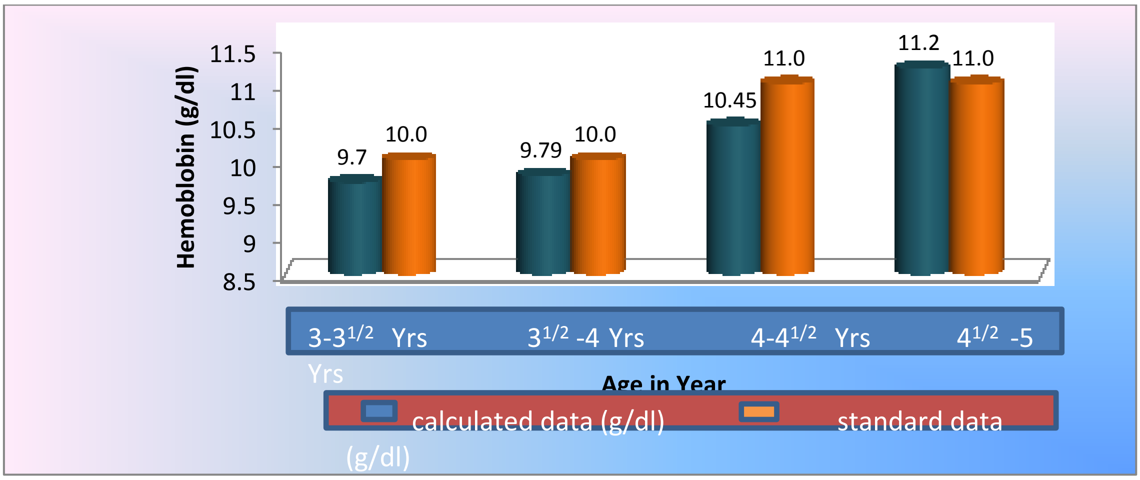



**Table No. 02**

**Comparative results of haemoglobin of Pre-school Children (Girls) with WHO Standard**

| Age Range (in years) | N | Calculated Average Haemoglobin Level (g/dl) | Standard Haemoglobin Level (g/dl) |
|---|---|---|---|
| 3-3$^{1/2}$ yrs | 50 | 10.1 | 10-12g/dl (mild to moderate anaemia) |
| 3$^{1/2}$ – 4 yrs | 50 | 9.8 | <10g/dl (marked anaemia) |
| 4- 4$^{1/2}$ yrs | 50 | 9.76 | <10 g/dl (marked anaemia) |
| 4$^{1/2}$ – 5yrs | 50 | 9.93 | <10 g/dl (marked anaemia) |

Source: Haemoglobin Colour Scale by WHO

Range : > 12g/dl – not anaemic
10-12 g/dl – mild to moderate anaemia
<10g/dl – marked anaemia

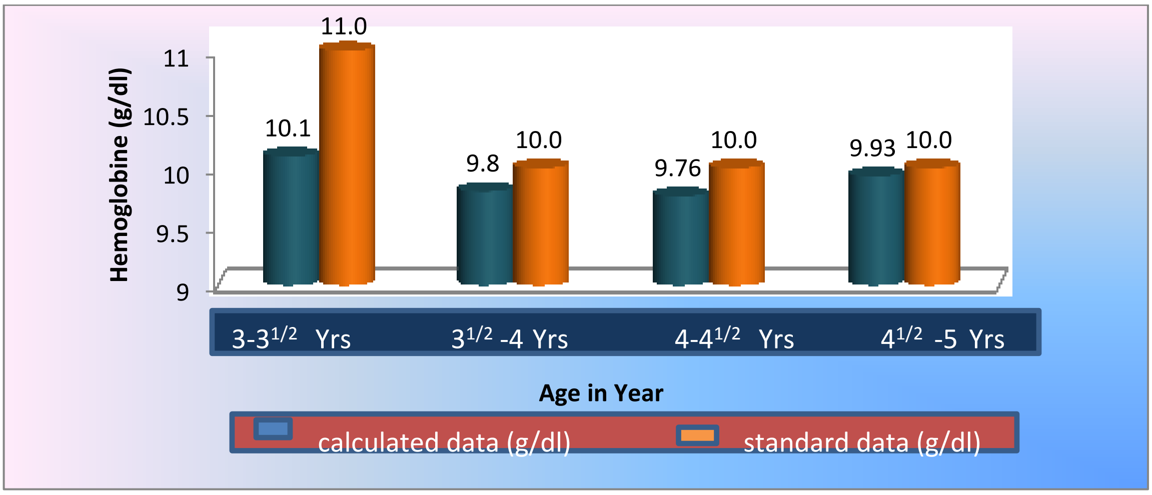
The results of the sample for the haemoglobin (Hb) for four age groups of girls i.e. $3\text{-}3^{1/2}$ years, $3^{1/2}$ – 4 years, 4- $4^{1/2}$ years, $4^{1/2}$ – 5 years showed that the mean for the samples are 10.1g/dl, 9.8g/dl, 9.76g/dl and 9.93 g/dl respectively. The corresponding norms of W.H.O. are >12g/dl (not anaemic), 10-12 g/dl (mild to moderate anaemia) and <10g/dl (marked anaemia). The results for the sample shows that three categories $3^{1/2}$ – 4 years, $4\text{-}4^{1/2}$ years and $4^{1/2}$ - 5 years with mean value 9.80 g/dl and 9.76 g/dl and 9.93 g/dl are marked anaemic condition while only one category for $3\text{-}3^{1/2}$ years with mean value 10.10 g/dl is mild to moderate anaemic condition as per WHO Standard.

Thus, from the above results it may be inferred that the haemoglobin (Hb) level of girls of the slum areas is marked anaemic condition as per WHO norms in most of the categories.

As such the hypothesis that – 'The haemoglobin of boys and girls will be within normal range' is not accepted for girls also since the haemoglobin of girls is not according to WHO Standard.

**Graph No. 02**

**Graphical Presentation of haemoglobin of Preschool Children (Girls) with WHO Standard**




The poor haemoglobin level among most of the children relate to nutritional dediciency problems to poor hygenic conditions. All the children belong to low income group family where the parent struggle to maintain their daily needs which results in imbalanced, low protein and iron deficient diet for the children. The iron and vitamin c deficiency is reflected in low haemoglobin level in such children. Physical illness and poor mental health can effect a person's ability to eat because of which anaemia, low body weight and bulimia is seen. Other than this the most important factor is unhygenic factor of slum areas which results in repeated infection.

Earlier workers also reported similar findings. Kejo et al. (2019) observed that prevelance rate of anaemia was 84.6%.The observed high prevalence could be due to deficiency of iron nutritives among under five children associated with poor food availability and nutritional deficits.Nolla et al.(2014) also observed that the prevalence of deficiencies in albumin,calcium,magnisium,zinc,phosphorus were 49.2, 73.56 ,45.96 62.98 and 62.23% respectively.

Thus, from the discussion it becomes clear that the condition of the pre-school children as far as haemoglobin level is concerned is not good and is below the norm of WHO. The researches quoted above also emphasises on their anaemic condition. It is advisable that proper eductaion regarding inclusion of iron rich foods and locally available low cost nutrients fruits and vegetables like amla,Guava and green leafy vegetablaes etc. should be given to the parents so that they are ablele to provide nutritious food to their children. It is also suggested that the children may be enrolled in an aganwadi centres so that there is proper care of their diet and health,through mid day meal programme. If this could be done there are chances that their health conditions might improve to the positive limits.

**Conclusions :-** The Biochemical Assessment of Haemoglobin level of Preschool children (boys and girls) were not according to WHO standard . They were below WHO standard and they found marked and moderate anaemic condition.

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# Public Speaking –An Important Skill for Personality Development

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**Abstract :-** Speaking in public is the most important trait of a developed personality. A person who speaks with confidence is considered to be bold, confident and attracts lot of attention. Effective public speaking is the trait of the most successful personalities. All film personalities, cricketers, political leaders speak effectively in public. Speaking confidently helps in enhancing career oppurtunities, building better relations and helps in discovering the inner talent of people. Effective speaking also helps us in becoming better human beings. One of the most important aspects of personality development is the behavior of an individual. The behavior gets reflected in the speech of a person. The tone and pitch of the voice represents the attitude of an individual. The voice modulation plays a major role in effective speaking. The intonation of voice plays a great role in effective speaking. Language used also creates an impact in impressing the listeners. Speaking English language has become a fashion statement nowadays. As a matter of fact, speaking confidently in any language which is understood by maximum people, is considered effective speaking. Parents, Guardians must give due importance to public speaking as it plays an important part in helping the students in attaining personal and professional goals. Those who are bold and confident, they come out in public and speak confidently which spreads positivity around them. Powerful speakers can influence the thinking of the masses and help in the nation building process.

**Key Words** :- speaking, language, voice, trait, personality

**Introduction :-** Subhash Chandra Bose, once said in a speech in a public rally, "Give me blood and I will give you freedom". Hearing this speech thousands of Indians joined the Indian national army to fight against the Britishers. John f Kennedy, President of America said, "Ask not what your country can do for u, ask what you can do for your country". Narendra Modi said, "Made in India"and inspired many NRI's and foreign businessmen to establish their business in India. These are examples of powerful public speaking.These leaders spoke and changed the destiny of their nation. This shows the impact of words of these powerful personalities. Those who can speak well will definitely turn out to have powerful personalities but vice versa is not true. Many leaders like Manmohan Singh, Sonia Gandhi are not very good speakers on public platforms. They may be famous in their fields but not good speakers and due to this lack of capacity of good public speaking these personalities fail to create an impact on public. Therefore it is seen that good public speaking definitely makes one's personality effective and powerful. Public speaking is an art which can be learnt. Ralph Waldo emerson says, "All great speakers were bad speakers at first". People can learn and improve themselves as speakers. There are certain characteristics which are must for effective public speaking

a) **Confidence** - This is the most important quality not only for effective public speaking but also to develop one's personality. Confidence comes when one is well prepared with what needs to be spoken. It also comes with lot of practice. One needs to try to speak publicly again and again such that the hesitation gets removed and there is no hitch while speaking.

b) **Voice modulation** - This is again is a very important characteristic. A person needs to learn how loudly or softly one needs to speak on a mike. Many a times change in pitch of the voice is needed to stress a point. Speaking on the mike and without the mike also makes a lot of difference. While speaking on mike one's voice must be controlled, pitch must be normal. Voice plays an important role in powerful speaking.

c) **Connect with the audience -** One needs to form a connect with the audience. A good public speaker forms a proper connect with the audience. Once the connect with the audience is established the speaking becomes powerful and effective. All good speakers form a proper connect with the audience. Proper connection with the audience is essential for effective speaking. Once one understands the pulse of the audience it becomes easy to get connected and deliver what the audiences expects.

d) **Easily understood language** - A very important part of effective speaking is to speak in a language which is mostly understood by common people. If one is speaking in a foreign country or any place one needs to speak in a locally understood language. Then only we can form a connect with the audience. Once the language is familiar with the audience they are able to grasp things easily.

e) **Knowledge about the subject** - One should have sound knowledge of one's subject to deliver effectively. If one has complete information about the content to be delivered then confidence oozes out automatically. One can use the technical tools to make the presentation effective. Tools like video, audio, powerpoint slides etc.

f) **Body Language** - Body language plays an important role for effective speaking. When a person speaks on stage his body language is noticed. A person should move on stage, show some hand gesture and body movements. This also helps in forming a connect with the audiences. A powerful speaker always has a powerful body language.

**Conclusion :-** These are some of the main characteristics of effective public speaking. If one is able to follow these characteristics, one is able to speak effectively. On the other hand if one is able to speak effectively one is able to develop one's personality. For personality development, effective public speaking is an essential ingredient. If any person can develop the art of powerful speaking using the techniques, mentioned above then one can definitely improve one's appearance on stage. Public speaking not only enhances one's personality but also helps in building relations. It helps in becoming a better human being. All students should try to improve their public speaking. It is an art that can be cultivated. If students develop this art of public speaking then they can help in nation building process. A powerful speaker is successful in creating an impact in the minds of the audiences.

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# Digital India – A programme to transform India into digital empowered society and knowledge economy

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**Abstract :-** Connecting digital programs and government programs It is a well-known fact that Digital India is the result of many innovations and technological advances. They change people's lives in many ways and will empower the society in a better way. Launched by Indian Prime Minister Narendra Modi on 1 July 2015, it is both a close and beneficiary of India's other flagship schemes such as BharatNet, Make in India, Startup India and Standup India, Industrial Corridors, Bharatmala, Sagarmala.

The Digital India 'program is an initiative of Hon'ble Prime Minister Shri Narendra Modi, which will drive new progress in every field and make innovative efforts for GeNext. The idea behind the concept is to create a participatory, transparent and responsive system. The Digital India Drive is a dream project for the Government of India to remodel India into a knowledge economy and a digitally empowered society, with good governance and delivering services to citizens by bringing coordination and coordination in public accountability. Competence of Information Technology in Government Departments. Today, the nation wants to be completely digital and the program seeks to provide benefits to the user and service provider alike. Therefore, an effort has been made in this paper to understand Digital India - as a campaign where technology and connectivity will come together to impact all aspects of governance and improve the quality of life of citizens.

**Keywords** :- Digital India, Internet, digital technology, e-revolution, e-governance.

**Introduction :-** India was first online 1986. The Internet, then, was in use only for academic research communities and defense purposes. During 1995, VSNL opened an Internet access modem to the public using the Internet. The Digital India program was launched by Prime Minister of India Narendra Modi on 1 July 2015 with the aim of connecting rural areas with high-speed Internet networks and improving digital literacy. The Digital India program is a flagship program of the Government of India, with a vision to transform India into a digitally empowered society and knowledge economy. Internet usage has increased due to the fall in smartphone prices over the past few years and the decline in internet data prices, which was certainly driven by the arrival of Reliance Jio in 2016. (Report, n.d.) Economic growth and policy reforms have led to a strongly positive global sentiment about India's future. In 2017, India had 331.77 million internet users and this figure is expected to grow to 511.89 million internet users by 2022.

India is the second largest online market worldwide after China. In 2017, credit rating agency Moody's upgraded India's sovereign credit rating by a notch after 14 years and advanced India's outlook from positive to stable. India has jumped 23 places in the World Bank's Ease of Doing Business ranking for 2019. Favorable demographics will drive strong consumption growth, while a stable and reform-focused policy framework will support an environment conducive to business. Investment. However, in order to unlock India's widely vested economic potential, the country will need to accelerate and maintain its vertical trajectory on key human development indicators and aim for inclusive progress. The future presents an opportunity for India to address the challenges of employment, skills, health and sustainable living at the national level and to initiate efforts to reduce economic and human development inequality at the regional level. There is also an opportunity to strengthen the ecosystem for innovation and entrepreneurship, allowing India to achieve the full potential of a young and naturally entrepreneurial population that now has access to knowledge and technology that address real needs and challenges Can drive innovations to solve. Business, government and policy leaders have a unique opportunity to become the custodians of India's long-term economic prosperity and inclusive society. Digitization is a definite extension to markets, health, education and poverty alleviation.

**Digital India: Concepts :-** In the era of digital economy, we can call data as 'currency' of the 21st century. Many apps do not have any means of income, but their only benefit is data. This internet-based business model is called Surveillance Capitalism, where all social media apps and other such platforms use their own data collected from users and receive income from it. Companies like Google, Facebook and Amazon have built their empires through the data economy.

Apart from surveillance capitalism, most of the world's consumer data is in the hands of a few digital companies like Google, Facebook and Amazon, which are considered to be the giants of online search, social media and online retail respectively ... and their strength means their market power This creates an unbalanced and uncomfortable situation for new market players. In such a situation, both producers and consumers of data suffer and this has caused a twin problem of data privacy and Net Neutrality.

The Digital India Mobile App is a mobile-based application developed to provide easy access to Digital India program information via smart phones and other mobile devices. The latest status, quiz, competition and discussion forum etc. can be accessed through the mobile app. Any latest updates on the Digital India portal are made known to registered users through a pop-up. Through the government's Digital India, people should be provided everyday amenities.

**Key Componants Of The Digital India :-** Keeping in view the changing scenario in the country, the digital economy can be divided into three main components:

1. The Digital India program of the Government of India has promoted financial inclusion as well as the use of digital infrastructure. The plan to provide nationwide access to digital infrastructure including high speed WiFi has given a boost to the digital economy in India. One of the notable reforms under the Digital India program is the Government e-Marketplace, a portal for government procurement, where MSMEs are facilitated to participate in procurement activities.

2. The second phase of the digital economy is the growth in electronic and mobile commerce in India. The technologically savvy younger generation considers online purchase the simplest means of purchasing goods. This has led to the expansion of e-commerce and m-commerce in the country.

3. The amount of data increases at every level in the digital economy. Our economy is going through a period of understanding and analyzing such data. In view of this, the Government of India has launched its own open data portal where data is available for analysis. In view of the ever-increasing amount of data and strategic importance, the government is helping to provide training and research in the field of data analytics for the digital economy.

In today's digital age, data privacy and equal access to the Internet is like clean air or clean drinking water. It has become a central pillar of the socio-economic and political dynamics of the society. It would be better in the public interest to protect this pillar as a collective right through laws and make big companies holding Big Data accountable.

**Schemes :-**

1. National e-Governance Plan: DIP, MyGov.in, UMANG, PAN, AADHAR, Digital Locker, etc.
2. Entry: E-way bill payment for e-panchayat, e-NAM, electricity, water, property, tax etc.
3. Finance: Go Cashless Go Digital, RuPay, BHIM, DigiDhan, GST, and e-way bills.
4. Education: Digital Board, CBSE, NCERT, AICTE, NEET portal and e-Basta and e-Pathshala.
5. Wings: Portal for DISHA, INDEA, IDEATE, COE-IT, CERT-IT, and other schemes.

**Digital India has nine pillars :-**

1. Broadband Highway
2. Universal Access for Mobile
3. Public Internet Access Program
4. E-Governance - Reforming Government through Technology
5. Electronic delivery of e-revolution services
6. Information for all
7. Electronics manufacturing target net zero imports
8. IT Jobs
9. Early Crop Program

**The Main Impact Of Digital India :-**

1. Important interrelations of rural areas
2. Increasing Digital Literacy
3. Promote inclusive development of electronic services and products
4. Digitally converting government services
5. To provide digital infrastructure and empowerment to citizens.

**Benefit From Digital India Program :-**

1. The purpose of digital locker systems is to reduce the use of physical documents and to share e-documents across agencies. The e-documents will be distributed through registered repositories, which will ensure the authenticity of the documents online.

2. "MyGov.in is implemented as a platform for citizen participation in governance through" discussion "," do "and" publicized "approaches. The mobile app for MyGov is designed for users on mobile phones Will bring facilities.

3. Swachh Bharat Mission (SBM) mobile app will be used by people and government organizations to achieve the goals of Swachh Bharat Mission.

4. The Sign Framework will allow citizens to digitally sign a document online using Aadhaar authentication.

5. Online Registration System (ORS) has been introduced under eHospital application. This application provides important services like online registration, payment of fees and appointment, online clinical report, online availability of blood, etc.

6. The National Scholarship Portal is a closed solution to end the scholarship process with the right of student application, verification, approval and disbursement to terminate the beneficiary for all scholarships provided by the Government of India.

7. "For the large-scale digitization of records in the country, an initiative called Digitize India Platform (DIP) has been initiated which will facilitate efficient delivery of services to the citizens.

8. Government of India has taken an initiative called Bharat Net, a high-speed digital highway to connect all 2.5 lakh gram panchayats of the country. This will be the world's largest rural broadband connectivity project using optical fiber.

9. BSNL has introduced Next Generation Network (NGN) to replace 30-year-old exchanges, which are a way to manage all types of services such as voice, data, multimedia / video and other types of packet switched communication services. IP based technology.

10. BSNL has extensively deployed Wi-Fi hotspots across the country. User can latch on BSNL Wi-Fi network through their mobile devices.

11. In order to distribute citizen services electronically and to improve the transactions of citizens and officials with each other, universal connectivity is mandatory. The government also realizes this need, including the 'broadband highway', which is one of the pillars of Digital India. While connectivity is one criterion, enabling and providing technologies to facilitate the delivery of services to citizens makes one another.

**Highlights of progress in Digital India :-**

• More than 12,000 rural post office branches have been digitally connected and soon payment banking will also become a reality for them.

• The government has planned to create village digital village 'all over the country by combining all the schemes with technology. , Digital Village 'will be powered by services such as LED lighting, solar energy, skill development centers and e-education and e-health.

• Electronic transactions related to e-governance projects in the country have almost doubled in 2015 due to Digital India program. According to the government website Electronic Transaction Aggregation and Analysis Layer (Taal), there were

3.53 billion transactions in 2014, nearly doubling to 6.95 billion in 2015.

• Progressive policies and aggressive focus on 'Make in India' have played a key role in the revival of the electronics manufacturing sector.

**Impact of Digital India**

**A. Economic impact :-** According to analysts, the Digital India plan could increase GDP by $ 1 trillion by 2025. It can play an important role for gross-economic factors such as GDP growth, employment generation, labor productivity, increase in number of occupations and revenue leakage.

According to a World Bank report, a 10% increase in mobile and broadband penetration leads to an increase in per capita GDP by 0.81% and 1.38%, respectively. India is the second largest telecom market in the world, with 915 million wireless subscribers and the third largest internet market in the world, with around 259 million broadband users. There is still a huge economic opportunity in India as the tele-density in rural India is only 65% where more than 75% of the population lives. The future growth of the telecom industry in terms of subscriber growth is expected to be from rural areas as urban areas are saturated with tele-density of more than 160%.

**B- Social Impact :-** Social sectors like education, healthcare and banking are not able to reach the citizens due to barriers and limitations such as middleman, illiteracy, ignorance, poverty, lack of money, information and investment. These challenges have led to unbalanced development in rural and urban areas and have marked a significant difference in the economic and social status of people in these areas.

Modern ICT makes it easy for people to get access to services and resources. The penetration of mobile devices can be highly useful as a complementary channel of public service delivery in addition to the creation of entirely new services that can drastically impact the quality of life of users and lead to social modernization.

The poor literacy rate in India is due to unavailability of physical infrastructure in rural and remote areas. This is where M-education services can play an important role by accessing distance education. According to estimates, digital literacy in India is only 6.5% and internet penetration is 20.83 out of 100. The Digital India project will be helpful in providing real-time education and partially overcome the challenge of teacher shortage in the education system through smart and virtual classrooms. Education to farmers, fishermen can be provided through mobile devices. High-speed networks can provide adequate infrastructure for online education platforms such as large-scale open online courses (MOOCs).

Mobile and Internet banking can improve financial inclusion in the country and create a win-win situation by creating an inter-ecosystem and revenue sharing business model for all parties in the value-chain. Telecom operators get additional revenue streams, while banks can pass on the least potential costs to new customer groups.

Factors such as a growing population, poor physician-patient ratio (1: 870), high infant mortality, rising life expectancy, low-quality physicians and most of the population living in remote villages, support and justify the need for tele-medicine. Huh. Country. M-Health can promote innovation and increase access to health services.

Digital platforms can help farmers in (crop choice, seed variety), context (weather, plant protection, farming best practices) and market information (market value, market demand, logistics).

**C- Envirnomental Impact :-** Major changes in technology will not only bring changes in the economic system but will also contribute to environmental changes.

Next generation technologies will help reduce carbon footprint by reducing fuel consumption, waste management, greening workplaces and thus leading to a greener ecosystem. The ICT sector helps in efficient management and utilization of scarce and non-renewable resources.

Cloud computing technology reduces carbon emissions by improving mobility and flexibility. Energy consumption could decline from 201.8 terawatt hours (TWh) in 2010 to 139.8 TWh in 2020 due to a 28% reduction in carbon footprint from 2010 levels.

**Challenges & Suggestion of Digital India Program in India**

**Challanges :-** Some of the challenges in successful implementation of Digital India program are -

1. **Lack of education** - Majority of the population in the country is still not qualified enough to use digital devices and technology. Most people are not able to use an ordinary mobile phone.

2. **Lack of infrastructure and necessary technology** - lacks the necessary infrastructure to move the Digital India campaign efficiently digitally. The technical structure and technology required for the campaign is still not readily available in the country. Conditions in rural areas are even more inadequate. In addition, servers are overloaded due to work pressure.

3. **Financial and technical issues** - India is still a developing country. Such planning requires huge financial resources and the country is somehow lacking in that area. This requires financial support from other sources. The country has to face some of the technical issues such as appropriate bandwidth, firewalls, filters, anti-virus software, protection from hackers, buffering.

4. **For citizens as well as government personnel** - For the successful implementation of the program, a significant effort is required for both citizens and government personnel. But the devil may care that there is a barrier in the passage. In addition, the older generation is drawn to its methods and discovers traditional ways to make things easier and convenient. The Indian political power structure and lack of interdepartmental coordination exacerbate the problem.

5. **Cybercrimes and confidence reduction** - Cyber security is still not given as much importance as it should be. People find online transactions risky due to security issues. Cyber laws are also not given much attention. Furthermore, most people still lack confidence in machines and prefer things done by hand. Ineligible cyber services are also one of the reasons.

6. **There are still high cost** - electronic devices and Internet services and are very expensive for an average Indian citizen. When many people do not have enough money for basic living needs, spending on electronic devices leaves a picture.

7. **Training Needs** - Employees who are working on this campaign require proper training to effectively and efficiently, to replace various government departments managed by the machine. It is a difficult task to train so many people of different calibers and interest in a different discipline. Most of the population lacks the basic technical qualifications required for the job.

8. Rural BPO program will also create employment opportunities, digitization and e-governance. This work has also been pending for many years.

**Suggestion :-** The Digital India campaign cannot succeed on its own. Policy changes are needed to make Digital India a reality. Some of the suggestions are -

1. Civil literacy is the first step in empowering citizens. People should know how to secure their online data.
2. A large-scale awareness program should be organized to make this program a success. About Internet services benefits to enhance the Internet increased use, particularly the need to educate and inform citizens in rural and remote areas.
3. Digital segmentation needs to be addressed.
4. Building materials are not the strength of the government. The mission requires content and service partnerships with telecommunications companies and other companies.
5. PPP model should be explored for sustainable development of digital infrastructure.

6. Private sector should be encouraged to develop last mile infrastructure in rural and remote areas. To encourage the private sector, there should be favorable taxation policies, quick approval of projects.
7. The success of the Digital India project depends on maximum connectivity with minimal cyber security risks. It kept us maintains the need of a strong anti-cyber crime team database and to its security round the clock.
8. To improve skills in cyber security, we need to encourage cyber security courses at the undergraduate level and encourage international certification bodies to start various skills based cyber security courses.
9. It is needed to demand effective participation and commitment and efforts of various departments. Different policies in different areas should support this goal.
10. For successful implementation, various legislations that have long hindered the development of technology in India should be amended.

The rise of digital networks: In 2030, India will have around 370 million Generation Z consumers aged 10–25 years old, who grew up in India with ubiquitous Internet, smartphones, digital media and digital consumption platforms. As they begin to consume, earn and spend, they will actively use the technological consumption model, and in turn affect their household consumption behavior.

**Conclusion :-** The vision of Digital India is grand. This is indeed a huge step towards building a strong nation. A digitally connected India can help improve the social and economic status of people through the development of non-agricultural economic activities besides providing access to education, health and financial services. However, it is important to note that ICT alone cannot lead to the overall development of a nation. Literacy overall growth and development, basic infrastructure, the overall business environment, can be realized through the support and enhance elements such as the regulatory environment.

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# Drivers and level of Agricultural Regional disparity in Punjab

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**Abstract :-** Punjab is the top performer state during the green revolution era which played a noteworthy contribution for the food self-sufficiency to the nation. But the agriculture performance has not evenly throughout the state. Districts like Ludhyana, Sangrur and Moga were more developed then the south-western region of the state. The study constructs a composite agricultural development index (ADI) which can provide the whole picture of the agricultural development. The ADI founded highest in Kapurthala (69.47) followed by Ludhiana and Fazilika and Mukatsar are the lagged districts.

**Key words :-** Agriculture, Region, Agricultural Development Index, Punjab.

**Introduction :-** One of the most often repeated clichés about Indian economy is that it is an agrarian state, though this is correct, the various confines of this sector point out towards unresolved issues. The importance of the can be gauged by its contribution towards GDP (about 15.87 percent in 2019) and in total employment of the country. Though its share has come down in recent years which is a good sign for the economy, but it is still higher as compared to the developed countries of the world. India has become self-sufficient in food grain production because of the policy interventions of the seventies which prompted the country to become an exporter of food grains but this move has negatively impacted the overall development of the citizens. The distribution aspect of this production is still a persistent issue with the state neglecting this area in the post liberalisation era with a mad rush towards markets (Majumdar, 2006).There was opening up of the economy which transcended to agriculture as well which had its own repercussions and in the nineties and early 21st century there has been a lot of literature looking at the various aspects of globalisation and its impact on Indian agriculture (Ashok Gulati, 1998, Gulati et. al. 1999, Balakrishnan, 2000, Vaidyanathan, 2000, Archana Mathur et. al. 2006). In the post Green Revolution period, a number of states emerged as leaders in terms of total agricultural production and land productivity. Punjab became the face of the achievements of IADP and over the years it has contributed the maximum in food grain production. The importance of this state can be ascertained from thefact that Punjab has a share of only 1.54 percent in the total area of the country, but due to the geographical features of the state and the of the farmers, 85% of the area is covered by agriculture. From several years Punjab state contributing a major role in food production. Many of economists and sociologists called it as a ''FOOD BOWL OF INDIA''. In 1960 when two programmes such as Intensive Agriculture Area Programme (IAAP) and Intensive Agriculture District Programme (IADP) were implemented to make India self-reliant on food stuffs then Punjab was coming to the states where High yield varieties, Irrigation investment increase, Intensive inputs utilization was used. As a result of this green revolution in Punjab also led to a surprising increase in agriculture productivity (Bhalla and Singh, 1997; Hazell 1982; Singh et. al. 2013). But after some time the growth in productivity could not be sustained and in the following years it stabilized. As a result of the agrarian crisis which led to farmers suicides in Punjab the farmers in Punjab are in crisis today as the prices of agricultural commodities are rising steadily. On the one hand but on the other hand the farmers production price is increasing slightly. Due to which the peasantry is constantly facing deficit, the farmers of Punjab have to pay the price. Although deterioration of resources and groundwater level is falling, due to continuous cycle of wheat and paddy crops cultivation in Punjab. As a result, fertile land of Punjab state becoming barren.

According to previous studies, the agriculture of Punjab has reached a steady state as technology is being used in this state at very high level. Not every district will have the same consumption of fertilisers and other inputs. In this paper it has been observed that according to the Agricultural development index in 2016-2017, which district is developing the most and which district is slowing down.

To move further also discuss the causes behind those districts where has low agricultural development index and also explain solution of this problem, thereby raising the standard of living of the farmers and enhancing the agricultural productivity of the state of Punjab. The major objectives of the study are to estimate district wise agricultural development index of Punjab state. Furthermore, the study has mapping of development for identify the legged region. This study paper is divided into two sections, the first section describe the agricultural drivers and the agricultural development index and finally explain the problems with the results.

**Data base and methodology :-** For the present study, secondary data on various indicator of agricultural development have been collected from Directorate of Economics and Statistics, ministry of agriculture, Statistical abstract of Punjab 2018, and Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India. Data compiled on selected agricultural developmental indicator at district wise for all district of Punjab state for the year of 2016-17.

**Agricultural development Index :-** As we know the idea of contraction of index in not a new one some authors also construct (Singh et. al., 2013; Chand and Singh, 2016; Singh et. al., 2018; Srivastava et. al., 2019) index in agriculture, but no one studied Punjab at district level. Agricultural development index (ADI) was constructed to rank Punjab districts in term of level of agriculture development. ADI was constructed as a composite index of seven indicators reflecting different aspects of development in agriculture. The description of the selected indicators, its functional relationship with agricultural development and data source are presented in table 1.

**Table 1. Indicators of agricultural development**

| S. N | Indicator | Description | Relationship with ADI | Weight % | Data source |
|---|---|---|---|---|---|
| 1 | Agricultural Productivity | $AP = \frac{GVA_{agri\&allied}}{NCA} * 100$ | Positive | 15 | Estimated: Using CSO and Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare data |
| 2 | Crop productivity | $CP = \frac{GVA_{Crop}}{NCA} * 100$ | Positive | 15 | Estimated: Using CSO and Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare data |
| 3 | Cropping intensity % | $CI = \frac{GCA}{NCA} 100$ | Positive | 12.5 | Estimated: Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare data |

| | | | | | |
|---|---|---|---|---|---|
| 4 | Irrigation coverage % | $IC = \frac{GIA}{GCA} * 100$ | Positive | 12.5 | Estimated: Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare data |
| 5 | Fertiliser use (Kg/ha) | Use of fertiliser per hector | Positive | 12.5 | Statistical abstract Punjab |
| 6 | Electricity use (KWh/ha) | $Ect = \frac{Ectricity_{agri}}{NCA}$ | Positive | 12.5 | Estimated: Statistical abstract Punjab and DES |
| 7 | Market area coverage (Ha) | $Mrkt = \frac{NCA}{No\ of\ RM}$ | Negative | 20 | Estimated: Statistical abstract Punjab and DES |

As measurement units of independent indicators of agricultural development index were different, these were normalized and transformed into dimension-less number. For those indicator exhibiting positive relationship with agriculture development (i.e. higher values are better) was transformed using following formula;

$$Sd_i = \frac{X_i - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

On the other side when a variable negative associated ADI the normalized values (i.e. lower values are better) were calculated as;

$$Sd_i = \frac{\text{maximum value} - X_i}{\text{maximum value} - \text{minimum value}}$$

After transformation, indicators were scaled between 0 and 1 with the best agricultural performing district at 1 and worst performing state at 0. These transformed indicators were used for construction of composite agricultural development index (ADI) as

$$ADI = \frac{\sum Sd_i * W_i}{\sum W_i}$$

Where $Sd_i$ is the independent indicators and multiplied with weight ($W_i$). Allocation of weight is presented in table 1. ADI varies between 0 and 100 with the district with higher ADI values were ranked at higher place in level of agricultural development.

**Results and discussion :-** Punjab as a state has become the role model for agriculture growth and there are various reasons for this. Table 2 discusses the various drivers of agricultural development in various spaces of the state. The highest agricultural productivity in Pathankot district is Rs. 534723 per hectare and Bathinda district has lowest Rs. 173648 per hectare. In case of crop productivity per hectare the Pathankot district is occupied second position.

**Table 2: Mean value of drivers of agricultural development across district in Punjab in 2016-17**

| District | AP (Rs/ha) | CP (Rs/ha) | CI% | IC % | Fert. Use (Kg/ha) | Elec. use (KWh/ha) | Markt. Cov. (Ha) |
|---|---|---|---|---|---|---|---|
| **Amritsar** | 255279 | 143058 | 187.4 | 100.0 | 246 | 1371 | 27398 |
| **Barnala** | 249969 | 154865 | 197.5 | 100.0 | 240 | 2543 | 24868 |
| **Bathinda** | 173648 | 126181 | 187.0 | 99.8 | 213 | 1527 | 29367 |
| **Faridkot** | 225797 | 141116 | 190.8 | 100.0 | 223 | 1055 | 31790 |
| **Fatehgarh Sahib** | 250439 | 147653 | 187.3 | 100.0 | 251 | 1898 | 20406 |
| **Fazilka** | 187043 | 142320 | 187.2 | 99.9 | 209 | 394 | 63155 |
| **Firozpur** | 222670 | 133171 | 184.3 | 100.0 | 330 | 1391 | 27308 |
| **Gurdaspur** | 211074 | 138239 | 197.8 | 97.3 | 230 | 1064 | 20855 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Hoshiarpur** | 377516 | 153789 | 164.8 | 98.0 | 217 | 1860 | 40898 |
| **Jalandhar** | 219813 | 129845 | 166.3 | 100.0 | 228 | 1715 | 20630 |
| **Kapurthala** | 304862 | 173733 | 206.6 | 100.0 | 215 | 1592 | 26590 |
| **Ludhiana** | 282113 | 159456 | 200.9 | 100.0 | 308 | 1539 | 22992 |
| **Mansa** | 185492 | 117262 | 193.6 | 99.5 | 205 | 1241 | 31465 |
| **Moga** | 237243 | 161803 | 198.5 | 100.0 | 258 | 1902 | 24159 |
| **Muktsar** | 221335 | 137294 | 198.4 | 99.9 | 225 | 570 | 57030 |
| **SBS Nagar** | 298761 | 159023 | 193.5 | 95.6 | 462 | 1556 | 32085 |
| **Pathankot** | 534723 | 161509 | 191.3 | 63.8 | 338 | 313 | 23983 |
| **Patiala** | 251129 | 149450 | 199.8 | 99.9 | 148 | 2356 | 28515 |
| **Rupnagar** | 405446 | 140259 | 171.1 | 82.9 | 544 | 1458 | 20244 |
| **SAS Nagar** | 352346 | 156705 | 136.8 | 97.7 | 274 | 2995 | 15492 |
| **Sangrur** | 221212 | 156969 | 198.9 | 100.0 | 124 | 2694 | 20877 |
| **Tarn Taran** | 209989 | 119265 | 180.7 | 100.0 | 211 | 2021 | 27200 |
| **Punjab** | **245509** | **143735** | **189.0** | **98.8** | **241** | **1600** | **26994** |

**Source: Author's estimation**

In Rupnagar district, fertilizer per hectare is more than double then the use of fertilizers per hectare in Punjab. The main reason of high consumption of fertilizer is due to more area under vegetables crops especially under cauliflower and potatoes. However, electricity consumption in this district and area under regulated market is much lower than the state average. In Pathankot district, only 313 KWh/ha per hectare electricity is used, which is five times less than the per hectare area in Punjab.

The highest crop intensity in Punjab is in Kapurthala and Ludhiana districts. The lowest crop intensity is 136.8 in Shaheed Bhagat Singh Nager. Pathankot district has 63.8 percent area under irrigation in Punjab. 100 percent of areas under irrigation district as the names of the districts are Tarn Taran, Sangrur, Ludhiana, Kapurthala, Ferozepur, Faridkot, Barnala and Amritsar. Regulated market numbers are higher in Shaheed Ajit Singh Nagar and Lowest in Fazilka district.

**Table3: Descriptive statistics of selected agricultural development drivers in 2016-17**

| Indicator | Mean | SE of mean | Upper Limit | Lower Limit | CV % |
|---|---|---|---|---|---|
| **Agricultural productivity (Rs/ha)** | 267177 | 18201 | 321780 | 212574 | 32.0 |
| **Crop productivity (Rs/ha)** | 145589 | 3145 | 155024 | 136155 | 10.1 |
| **Cropping Intensity %** | 187 | 3.4 | 197 | 177 | 8.4 |
| **Irrigation coverage %** | 97 | 1.8 | 102 | 92 | 8.5 |
| **Use of Fertiliser (Kg/ha)** | 259 | 20.0 | 319 | 199 | 36.2 |
| **Electricity use (KWh/ha)** | 1593 | 147.5 | 2036 | 1151 | 43.4 |
| **Coverage (Ha/regulated market)** | 28968 | 2448.2 | 36313 | 21624 | 39.6 |

**Source: Author's estimation**

The above table (table 3) gives the district wise agriculture productivity, Crop productivity, Power consumption etc. It is also necessary to analysis the situation in Punjab given drivers. Table 3 shows that a huge variation in agriculture productivity. The average crop intensity in Punjab is 187 percent, meaning that more than one crop is grown in a year. The area under irrigation in Punjab is 97 percent. But the variation is very low. Fertilizer utilization is 259 kg per hectare. The upper limit of fertilizer use is 319 kg per hectare which shows that large area of the state of Punjab there is more use and lower limit indicates that in some area less use of fertilizer. Electricity consumption is 1593 units per hectare.

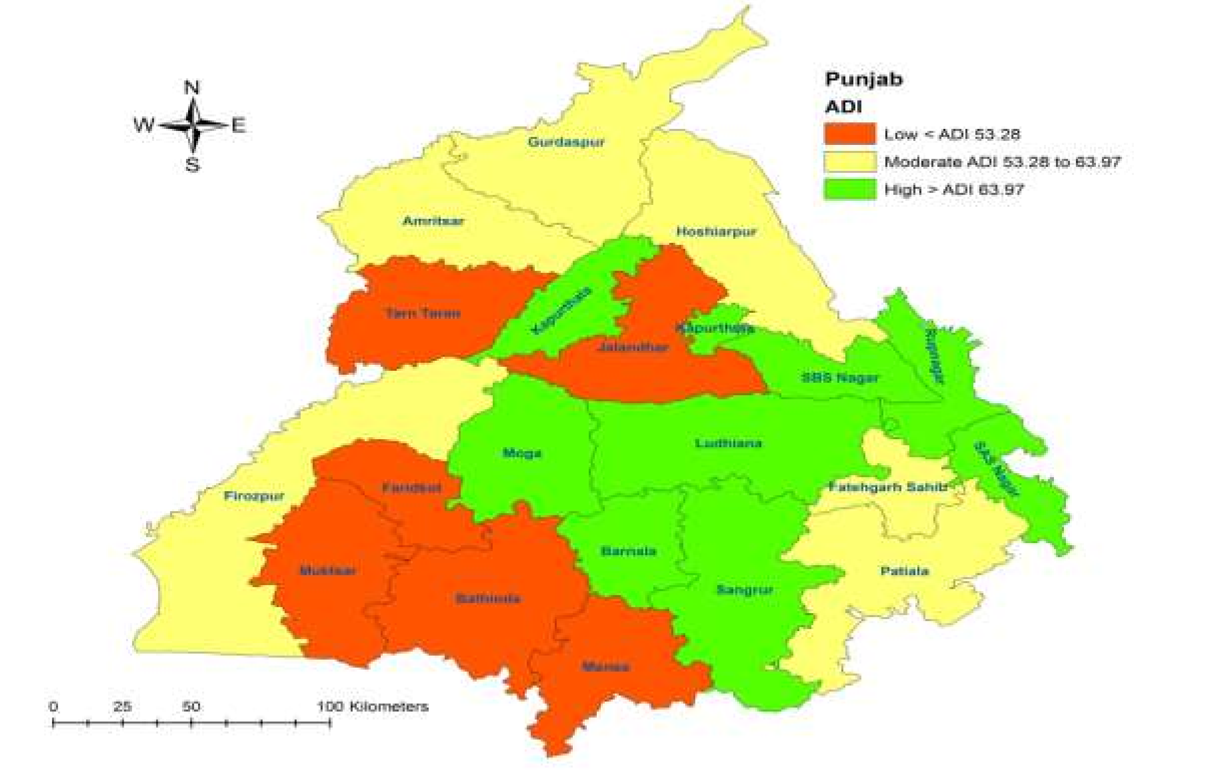
**Table4: District wise Agricultural development index during 2016-17 in Punjab**

| District | ADI | Rank |
|---|---|---|
| **Kapurthala** | 69.47 | 1 |
| **Ludhiana** | 67.75 | 2 |
| **SAS Nagar** | 66.57 | 3 |
| **Barnala** | 66.45 | 4 |
| **SBS Nagar** | 66.31 | 5 |
| **Moga** | 65.79 | 6 |
| **Sangrur** | 64.97 | 7 |
| **Rupnagar** | 64.31 | 8 |
| **Fatehgarh Sahib** | 61.93 | 9 |
| **Patiala** | 60.31 | 10 |
| **Pathankot** | 59.33 | 11 |
| **Amritsar** | 55.37 | 12 |
| **Hoshiarpur** | 54.31 | 13 |
| **Gurdaspur** | 54.03 | 14 |
| **Firozpur** | 53.49 | 15 |
| **Jalandhar** | 50.54 | 16 |
| **Faridkot** | 50.24 | 17 |
| **Tarn Taran** | 48.06 | 18 |
| **Bathinda** | 46.28 | 19 |
| **Mansa** | 43.03 | 20 |
| **Muktsar** | 37.60 | 21 |
| **Fazilka** | 31.66 | 22 |
| **Punjab** | **56.11** | **NA** |

**Source: Author's estimation**

There is also a considerable difference in excessive use of electricity, with the upper limit being 2036 units and lower limits being 1151 unit. There is also significant difference in regulated market per hectare, with approximately 40 percent variation. The above table describes the determinants of agriculture and it is important to study how agricultural development is taking place in each district.

Punjab's agricultural development index was 56.1. The highest agricultural development index is occupied by Kapurthala (69.47), followed by Ludhiana and SAS Nagar Mohali .The lowest agricultural development index is in Fazilaka.




**Map 1: Regionalisation of Districts of Punjab based on agricultural development Index**

To understand the regionalization in Agricultural development of the state in maps has been created. The map shows the agricultural development index, which divided into three category. Districts lies in under green color sowing higher agricultural index denoted (High> ADI 63.97), Meanwhile those districts have moderate agricultural index denoted by light yellow color (moderate ADI 53.28 to 63.96), and those districts have low ADI represented by orange color in a map (Low>ADI 53.28). Whole central Punjab has lie under high agricultural development zone, this is because the region adopted the modern technology in the initial stage of green revolution due to their ecological and natural resource endowment. On the other side south-western part (Mukatsar, Faridkot, Fazika, Mansa and Bathinda) at the bottom side in agricultural development it is due to the land and water quality of the region. The region is known as cotton ballet of the state and attached with Rajasthan state. This area is semiarid eventually merging into desert and cropping pattern is too different then the other side of the Punjab state. Resulting, agricultural and crop productivity is lower side in this region.

**Conclusion :-** Punjab has been a major contribution to the agricultural production. But since 1980 agricultural production has been stagnant. This study shows that there is considerable variation in agricultural production in the districts of Punjab. In districts where the agricultural development index is low, production can be increases by using new seeds, machinery or new technology. In the districts where the agricultural development index is getting higher, efforts should be made to further enhance the facilities there. Adoption of such reforms will increase the income of the farmers and will help the farmers to stop suicides and make agriculture a profitable business rather than a loss trap. Another advantage of this would be that Punjab, which had been far superior to other states in agricultural production, would regain its former important place. To enhancing the legged region of the state it is very important that how are the suitable cropping pattern. The cotton ballet is also suitable (lower ADI zone) for **Keenow** (a variety of citrus fruits) cultivation. If the state government take initiative to establish agro food processing units especially for **Keenow** juice industry, the region get lots of benefits.

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# A Study on Role of Media in Religious Tourism in India

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**Abstract :-** Nowadays it is recognized that the media has an important role in building and maintaining the image of religious destinations. It is also undisputed that the dynamic on-line environment is an active factor in promoting religious tourism at global level. However due to poor media coverage, religious tourism is little known domestically and internationally. Therefore, understanding how the media works is actually imperative regarding the desire to use this knowledge to promote religious tourism destinations.This paper aims to analyze the religious tourism market and at the same time to investigate media discourse and how it support the religious tourism. The media contribute greatly in activating tourist attractions. Media is playing an important role in the growth, development and promotion by creating a better awareness and understanding to cater to the needs and requirements of domestic and international tourist.

**Introduction :-** Religion is one of the factors that motivate people to set out on a journey. Millions of people travel towards the great pilgrimage centers located throughout the world. From statistic point of view, approximately 240 million people pertaining to great religious cults start off their pilgrimage annually. The popularity of pilgrimages determined, within the last decades, the religious tourism to occupy an important segment of world tourism's economic dynamics. Thus, it was determined that in relation to other touristic products, the religious phenomenon is a very limited field of research. The specialists consider that both religious tourism market and marketing communication in the field are less studied. It is just recently that researchers, travel agencies and governments noticed the great number of travelers starting off, from religious reasons, towards sacred locations. Thus, the sacred places are not only seen as cultural locations voided of their religious component, as simple touristic attractions addressed to those interested in culture and passionate about history.

**Literature Review :-** The literature review supported the justification of the effects of media, which impact the tourism industry. The media include television, newspapers, music, movies, magazines, books, billboards, radio, broadcast satellites, and the Internet (Campbell, Martin, & Fabos, 2011). According to Jenkins (2006), various information and media sources (e.g. print media such as books and newspapers; broadcast media such as radio and television; entertainment such as films) are collaborating, vertically integrating, and converging towards the digital sphere. Gartner et al. (1992) examined that media have a positive influence on destination image formation when the stories introduce or describe about a certain place. They asserted that the influence of media would increase when a message receiver had insufficient knowledge and information of the destination. According to Moutinho (1987), information searching was a part of the process of checking various sources before consumers make their purchase decision. Consumers perceive the demand for more knowledge, which catalyzes the will to search for more information for the alternatives. A large number of existing studies have showed that media is important in destination image formation and tourists' intentions to visit (Govers, Go, & Kumar, 2007). Films and television programs will continue to influence beliefs and behaviors individually and socially as the use of television and video popularize quickly (Brown & Singhal, 1993). Kim, Agrusa, Lee, and Chon (2007) stated that television is one of the most effective tools for appealing the public among visual media. The fact that visiting the place featured in the drama of the viewers who are impressed by the image of the drama is animatingly. Riley and Van Doren (1992) conducted a research about the effect of attracting tourists through film and asserted that film has an ability to advertise the destination in the long run, which could lead to enhance the image of the featured destination and increase public awareness of the town by utilizing the storyline and the perfect camera framing. Film is also considered as a more credible and trustworthy mass media source compared to other promotional materials (Connell, 2005; Tasci, 2009). The use of travel guidebooks is widely welcomed by tourists such as beach tourists, film tourists, etc (Law, Bunnell, & Ong, 2007). Zillinger (2007a, 2007b) found that travel guidebooks played an important role in guided tourism investigating tourists' behavior when they traveled. Robertson and Rogers (2009) defined newspaper was an important medium in the decision making process of tourists. Nowadays, people generally recognize that the Internet is the most used information source (Choi & Lee, 2009; Sørensen, 2003). The Internet has had a profound impact on business generally since the mid-1990s (Wirtz, Schilke, & Ullrich, 2010). It has resulted in creating new business models and provided more choice and information for consumers (Benson & Standing, 2008). Consequently, a significant amount of destination marketing has also shifted to the web. According to Yoo et al. (2013), official state tourism websites have been a role of major information sources for journalists and tourists.

**Objectives of the Study :-** The following are the major objectives of the paper.

1. To study about the impact of media on religious tourism
2. To understand the cultural, social and environmental issues with reference to media

**Data :-** Secondary data has been used for this purpose. The data is based on Tourism Statistical Year Book 2018, Indian Tourism Statistics, Religious Tourism Report FICCI.Whereas reports from other sources have also been used.

**Perspective of Religious Tourism in India :-** There are two distinct aspects to Religious Tourism in India; one, the faith of the domestic tourist, who has a spiritual attachment to the deity/ destination in line with their religious beliefs; the other is the 'foreign' tourist, someone belonging to a different religion, region or country, for whom the destination and the religious practices have the dimension of 'novelty', a spiritual experience different from their own, despite the ethical values being delivered remaining the same. From the domestic market's perspective, there is a fine line dividing business and belief. Many temples, mosques, churches, gurudwaras and other major religious centres, in today's socio-economic structures, are tangible assets in terms of infrastructure and the workforce they employ, thereby implying that the institution has to monetize itself in order to be able to meet its everyday survival in societal environments. Based upon the nature of the product, intensity and region of travel, Religious Tourism is divided into the following major categories :

- Pilgrimages
- Missionary travel
- Leisure (fellowship ) vacations
- Faith-based cruising
- Crusades, conventions and rallies
- Retreats
- Monastery visits and guest-stays
- Faith-based camps
- Religious tourist attractions

An indication of the religiosity of Indians lies in their willingness to travel on pilgrimage or for religious reasons. The share of religious travel among all overnight travel undertaken by Indians was almost four times the share of travel on business, and over seven and a half times the share of travel for purposes related to education, show survey data from the National Sample Survey Office (NSSO). The overwhelming bulk — nearly 86% — of overnight trips were, however, made for reasons that were identified as "social", according to the NSSO data. The survey, which was carried out as part of the National Sample Survey (NSS) 72nd Round between July 2014 and June 2015, and its results published as a detailed report on Domestic Tourism In India in July 2017, identified 5.84 crore overnight journeys that respondents acknowledged they had undertaken in the period up to 30 days before they were surveyed. For the purposes of the survey, "overnight trips" were defined as journeys lasting more than 12 hours. More than 48 lakh out of these 5.84 crore overnight trips — 8.29% — were pilgrimages, or undertaken for religious purposes. In terms of absolute numbers, many more rural Indians (30 lakh) made these journeys than city-dwellers (18 lakh). After social and religious reasons, the third biggest reason for travelling was business. Some 12.6 lakh out of the 5.84 crore overnight trips — 2.16% — were on business. As many as 5.01 crore overnight trips were social visits. Over 6.39 lakh trips (1.09%) were made for reasons of education or training; 14.6 lakh (2.50%) for "Other" reasons.

**Findings :-** Over the years media have contributed towards shaping religious tourism into a responsible industry by promoting the following good practices :

1. It protects the environment and maximizes the positive social impact of religious tourism.
2. It generates greater economic benefits for local people and enhances the well-being of host communities.
3. It makes positive contributions to the conservation of natural and cultural heritage and promotes the world's diversity.
4. It provides more enjoyable experiences for tourists through more meaningful connections with local people.
5. It helps to understand the local cultural, social and environmental issues.

**Conclusion & Recommendations :-** Indian tourist, travelers and excursionists are being influenced by different types of attractive presentation by specialized television channels, articles by renowned journalists, and fantastic coverage by travel magazines. Gradually all these media are creating a positive image and a picture of religious tourism in the attitudes, minds, perception, psychology, behaviour or and in the final selection of the site (inbound and outbound tourist). As the verdict goes, media have a social responsibility to enhance the blending of local, national and international cultural values for enriched politics, society and economy.

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# Problems of women facing in families in rural areas of Kashmir (A study of district Kulgam)

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**Abstract :-** Women in rural areas, being the biggest sector are the back bone of the whole economy. They are the key agents for achieving the economic, environmental and social changes required for overall development. The focus of this paper is to highlight the problems of women facing in rural areas of Kashmir. In Kashmir valley, rural women are the most susceptible section of the society. They not only face extreme degradation and harassment, but also are subject to prolonged depression. The issue of rural women in Kashmir is of dominant importance to political thinkers, reformers and social scientists.

**Key words** :- women, Kashmir, problems economic, political thinkers.

**Introduction :-** Women constitute half of the world population, and contribute two- third of world's work hours. A woman earns one-third of the total income and owns less than one-tenth of the world's resources. It means she is the largest omitted category in almost all respects. A woman is treated as second grade citizen and is neglected and ignored in all walks of life. In the history of human development, women have been as important as man. Without the participation of women in national activities, the social, economic or political progress of a country will be stagnated. (Soumitro, 2012). In fact, the status, employment and work performed by women in society is the indicator of a nation's overall progress. The world over women struggles to break the bonds that bind them and challenges the unequal sharing of power in society.

**Rural women in Jammu and Kashmir :-** Kashmiri society is patriarchal in nature, which has restrained women within four walls (Mohd, 2009). Especially, in rural areas, women had limited acquaintance to modern communication tools and low level of education with limited freedom of interaction because of discrimination and violence. Gender discrimination is on rise due to prevailing social, economic and political turmoil. Low participation of rural women in the socio-economic and political activities, which has badly affected the process of development, thus it has eroded their freedom of speech and expression, freedom of education. Women in rural areas of Jammu and Kashmir also face a lot of greater challenges i.e domestic violence, insufficient and disorganized health care, lack of decision making authority, low status, illiteracy, lack of awareness, and ignorance. Enormous population of women in Jammu and Kashmir is unemployed and another significant section consists of widows and half-widows. The state government passed the protection of women from domestic violence act (PWDVA), in 2010 (Showkeen, 2015). One of the very important facts of women in jammu and kashmir and other parts of India, is that the women should realize the importance of their own identity for society in general for their own in particular. They should also realize that only education would empower them greatly.

**Area of study :-** The present study was conducted in Kulgam District (a newly formed district land by villages approximately around 265 villages, the district is at 9th position in the state by number of villages. District Kulgam is located at 33.65oN 75.02oE having a geographical area of 119791 hectares including 478 hectares of forest land, 3569 hectares of follow land. As per-notification No. SRO185 dated 22 may 2007 Kulgam was made one of the twelve district of Kashmir.

**District highlights :-** District Kulgam is a newly created district that came into existence after being carved out from district Anantnag and made functional administratively with effect from 2nd April, 2007.

**Research objectives :-**

1. To assess the decision making powers of rural women in families.
2. To highlight the problems of rural women facing in their families.

**Methodology and data collection :-** The present study is based on the both primary as well as secondary source of the data. Interviewing was the principle method of data collection.

Study consists of 300 married respondents of the study area. In which 30 villages were selected on the basis of random sampling further from each selected village 10 respondents were taken for study purpose.

**Respondent's profile :-**

**Age wise distribution of the Respondents**

**Table 1.1**

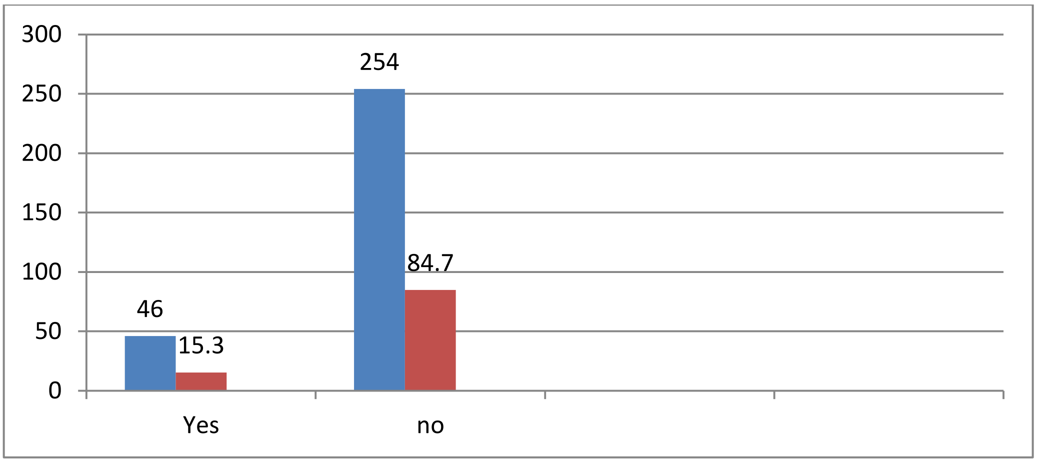
| Age. | No. of respondents | Percentage % |
|---|---|---|
| 18-20 | 29 | 9.7 |
| 21-25 | 97 | 32.3 |
| 26-30 | 89 | 29.7 |
| 31-35 | 85 | 28.3 |
| **Total** | **300** | **100** |

The above table shows the age wise distribution of the respondents. It shows that out of 300 respondents, 29 percent respondents belong to the age group between 18-20 years. While 32.3 percent respondents belonged to the age group 21-25 years, 29.7 percent respondents belonged to the 26-30 years and 28.3 percent respondents belonged to the age group between 31-35 years.

**Decision Making Power of Respondents in family**

**Table 1.2**

| Options | No. of respondents | Percentage |
|---|---|---|
| Yes | 46 | 15.3 |
| No | 254 | 84.7 |
| **Total** | **300** | **100** |




The table and figure clears that 84.7 percent respondents revealed that they were not having decision making power in the family and can't interfere in the family matters. While 15.3 percent revealed that have power of making decisions in the family. These 15.3 percent respondents belong to Nuclear families. Hence it is clear from the table that the majority of the respondents were not having power of decision making in their families.

**Problems of rural women facing in their families**

**Table 1.3**

| | | |
|---|---|---|
| 1 | Lake of liberty | 73.6% |
| 2 | Lake of freedom to express their feelings and thoughts | 87.3% |
| 3 | Lake of choosing their task according to their will and ability | 51% |
| 4 | Can't enjoy their lives outside their homes | 69.3% |
| 5 | Can't wear clothes according to their own choice | 57.9% |
| 6 | Can't interfere in family matters | 78% |
| **7** | Can't take decisions of their own children | 72.31% |

The above table indicates that rural women are facing so many problems in their families.

**Conclusion** :- Coming to the conclusion point we can say that being so called modern, women are still facing discrimination in every field of life as they are not treated positively. The laws which are made by government for the safety of women are not implemented properly.

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# Arts and Craft of Jammu and Kashmir

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**Abstract :-** Kashmir is a famous place in the world. Art and craft have been for centuries and make Jammu and Kashmir an ultimate place; it attracts people from all over India and the rest of the world. Craftwork is a type of work makes amazing and attractive devices by hand or utilizes basic tools. Craftwork is the major source of income of the Jammu and Kashmir. The craft products are famous in India and also in European countries.

**Keywords :-** Manufacture, Design, Embroidery, Product and Beauty.

The decades' old wealthy tradition of creativity and art needs no introduction when it comes to Jammu and Kashmir. The impressive **Handicrafts of Jammu and Kashmir** make it prominent all over the world. Some kind of well-designed art work, present almost everything in Jammu and Kashmir, be it embroidery on the shawls, papier mache, steel ware, leather work and wood work. When it comes to Jammu and Kashmir Handicrafts, the places of Anantnag and Srinagar have been quite populous for enhancing its creative beauty. They are world prominent for carpets and wooden furniture.

### Renowned Art and Crafts of Jammu and Kashmir

**Carpets :-** It is one of the most expensive and world- renowned arts of Kashmir. Originally, the art of making carpets started from Samarkand in Central Asia. Later, the process itself witnessed a fantastic growth with the artisans from Iran experimenting with the motifs and textures. Carpets from Kashmir are made of wool and even silk, are available in large number of variety.

**Basket Weaving :-** These are made of willow rushes and this form of weaving can be used to make baskets or even lamp-shades. A little costly, they can also be used as glass holders or picnic baskets. **Hazratbal (Srinagar) Kashmir** is known for basket weaving all over India.

**Embroidery :-** The Kashmiri embroidery is identified as **Kasida** and is renowned all over the world. It is beautiful and very rich and elaborates in color. Quite interestingly, it is also done on saris and shawls.

**Kahmiri Shawls :-** It was Sultan Zain-ul-Abidin who established it as a flourishing industry. Shawls of Kashmir are famous worldwide for their design, color, and embroidery. The fleecy wool gathered from the Kel goat is used for making Pashmina Shawls. There are also famous ring shawls; even at the international levels. This is because they are so delicate and stylish, that they can easily pass from a ring, itself. A high cost and elegant shawl designs and motifs, equally embellished on both sides.

**Papier Mache :-** Paper-mache was introduced in Kashmir by Zain-ul-Abidin. The art of paper making is originated in China in the first or second century A.D. From there it was brought to Samarqand about 1300 years and then to Kashmir in the middle of the 15th century. Since then Kashmir has been celebrated for this art of fine quality paper. It doesn't matter how similar the papier- mache articles look at first glance; they have their own identity and creativity. Three grades of paper are used for its preparation. In the process of making it, the paper is soaked in water until the time it disintegrates. Then an adhesive solution is used to mix it over, eventually molding it into different shapes which are later colored and varnished.

**Tweed :-** Tweed may be a pure wool product that goes through eight steps of wool cutting to take various shapes. Products of Tweed are available as long winter coats, jackets, blazers, waistcoats, suits, trousers, caps; also wedding suits. Apart from providing good insulation during winters, it is also a flourishing form of art and craft in Kashmir.

**Art of Wood work :-** Wood-carving is an ancient craft of the land. Kashmir is a land of forests and magnificent trees. Walnut trees grow in plenty in the valley**.** The wood of these trees is used to create various furniture and showpiece items. Kashmir has talented artists whose wood works have taken the products to an international level. The state is known for **semi carvings, lattice work, lotus flowers** and **chinar motifs**. While on a shopping spree, products to pick up are **furniture** (tables, chairs, writing desks, dining tables, etc.), cigar, and **cigarette boxes, jewelry boxes, photo frames** and countless other articles.

**Conclusion :-** After studying "the importance "art and craft of Jammu and Kashmiri." Kashmir is a heaven on earth. Kashmir is wealthy not only in its beauty but it is also the homeland of various decorative renowned art and craft products. The handicraft products of Kashmir are known throughout the world for its exquisite designs. The art and crafts of Kashmir are the major contributions to the economy of the state. There is the dearth of professional workers who are always alive to produce handmade products. Although there is heavy winter snowfalls in Kashmir but the climatic conditions never discourage these craft men until these products found a big market in India and abroad. Handicraft industries were initially owned by the Sultan Zain-ul-Abidin who himself was a great lover of art and craft. He invited masters from Iran, Turan and also from the other parts of India and gave them a special privilege to settle down in Kashmir. The art of paper making work was brought to Kashmir in the middle of the Fifteenth Century. The designs of Paper mache work were done on the various handcrafted items that have a strong imprint of an ancient tradition. The art of paper mache work was introduced in Kashmir by Sultan Zain-ul-Abidin who imported experts from Samarkand to train the local people. The shawls made in Kashmir occupy a valuable place among textile products.

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# Role of Monetary and Fiscal Policy for Sustainable Growth

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**Abstract :-** Sustainable growth is the growth of economy which can be maintained in long run without sacrificing the needs of future generations. This paper looks into the relevance of fiscal and monetary policy in achieving the target of economic growth in a developing economy. As we know in a developing economy. Economy growth which is sustainable in the prime objective and government and central bank with the instrument like fiscal and monetary policy tries to create a situation favorable to sustainable growth. The paper highlight the special condition of developing economy and particular role of monetary and fiscal policy to suit the situation of economic growth which is sustainable. We know by experience that in a developing economy, economy growth which is sustainable can be achieved by increasing the rate of capital formation by enhanced saving schemes and proper investment plans. We also look how these policies can divert resources from unproductive to productive which can yield proper result as desired. We know that wild inflation and bit of liquidity or credit is desirable for developing economy. On other hand the paper also highlight the importance of fiscal instrument and their application in developing economy finally paper ends with a balances mix of monetary and fiscal policy to suit the situation of sustainable growth.

**Keywords :-** Financial Instruments, Monetary Instruments, Sustainable Economic Development, Monetary Policy.

**Introduction :-** Financial and monetary instruments and investigation methods are the tools for improving the economy , with targeting to achieve a sustainable economic development. It was proven that the period of economic transformation significantly changed the perception of the role of financial and monetary instruments in economic development and reinstated their priority in the system of state regulation of an emerging market economy. Nowadays, the state economic policy should take into account the development priorities of global markets and the rules and regulations of global competition. Further stabilization of the monetary sphere should bring with it a gradual reduction in reserve requirements, which will improve the conditions for attracting funds by banks and public institutions and enhance the competitiveness of commercial banks in general. Improvement of the mechanism of monetary and fiscal policy within the framework of the general state economic policy should contribute to the advancement towards macroeconomic balance, including internal and external balance of the economy, optimal combination of parameters of economic growth, employment, price of goods and services, and payments to the country.

Significant of Monetary Policy are as follows:

1. Monetary policy is an important tool of monetary management. It has been used for the purpose of economic stabilization and economic development.
2. Such a policy evolves efficiently the aggregate supply of money in circulation by effective credit control.
3. Monetary policy in under developed and developing economy is regarded as an important instrument for stimulating the process of economic growth by ensuring sufficient credit supply and controlling inflation, maintaining equilibrium in the balance of payment, it also provided inessential credit for the development of Agriculture industry trade and services.
4. Monetary policy in developing economy therefore has to play a greater role. On one hand, it has to control inflation on other hand it has to provide adequate amount of credit for economic growth of a developing nation. So Monetary policy in a developing economy has to play a

wider role of credit expansion and credit control to suit economic development.

**Meaning of Monetary Policy** :- Monetary policy is defined in narrow and broad sense. In narrow sense monetary policy refers to credit control policy of central bank, but in broader sense, monetary policy include all the monetary and non monetary measures which influence the cost and supply of money.

**Objective of Monetary Policy :-** The main objective of monetary policy is to achieve economic stability and full employment. Beside Monetary policy also achieves in developed countries several others objectives such as exchange rate stability, price stability, exchange rate stabilization and economic growth.

But the socio economic condition in developing economy is different from those of advance economics. The major thrust of underdeveloped economics is not economic stability but economic growth. Thus the major role of monetary policy is taken to be granted for promoting economic development. Most of the Underdeveloped and also developing economics are characterized by low per capita income, poverty, unemployment lack of capital formation, a low rate of saving and investment. In such an economy monetary policy is expected to raise the level of employment.

The chief objective of monetary policy in developing economy is to increase the rate of growth .it is regarded as a main instrument of economic growth with maintainance of price stability and exchange stability.

**Monetary Policy and Price Control :-** Monetary policy in developing economy plays a dynamic role in promoting economic growth with price stability. Besides providing Additional credit for economic growth, the central bank also keeps the forces of inflation under control. The monetary policy in these countries can achieve economic growth only when they achieve two divergent goals of credit expansion and credit control. A proper monetary policy thus has to maintain a perfect balance between the two.

Prof Basu Rightly Observes “A monetary policy should keep price stability and keep employment generally high. A conflict may arise between the goals of inflation control and economic growth. Economy has to keep proper balance between the two.

**Role of Central Bank in Developing Economy :-** In underdeveloped economy central bank passes effective measures to control the supply of money in the economy, there are traditional and nontraditional methods of controlling credit in the economy. A growth oriented monetary policy leaks excessive inflation only .in developing economy inflation is desirable because it helps in stimulating growth forces. An Anti inflationary must also take in account the factors of growth. It must lock for both Quantitative / qualitative change. The central banks through its monetary policy should therefore divert from low to high growth promoting sectors. The flow of fund for to non essential and inflation generation sectors should be strictly prevented. The planning commission emphasizes this aspect of monetary policy and thus observed, That Central Bank in a developing economy can hardly confine itself to regulation of overall supply of money but it would have to take active role in creating machinery needed for economic growth, secondly finance awardable in the direct needed.

**Tools of Credit Control in Developing Economy** :- Besides difference in the objective of monetary policy in developed and developing economics. The tool of credit control was also to be used in the different manners which are needed to be modified according to the needs of a developing economy. The under developed money market central bank will have to depend on non traditional method of credit control.

Prof Sen believe that Bank rate policy may not prove effective, open market operation while feasible on certain occasion may not be possible on large scale .So central bank will have to think for nontraditional means variation. Reserve Ratio relative credit control. So, central bank must apply the method of selective credit control to allocate resource from unproductive to productive ways.

**Monetary Policy and Capital Formation :-** The growth oriented successful Monetary policy promotes capital formation by stimulating the rate saving and investment in the economy. Due to backwardness under developed countries generally suffer from low rate of Capital formation. So growing the rate of capital formation in the precondition for economic growth. The herculean task of capital formation is a developing economy is done in three ways:-

1. Promoting investment in private sector.
2. Providing additional resources for government sector for capital formation.
3. Creating institutional structure.

**The rate of Interest** :- It is important for monetary policy which can work in promoting private investment. The easy money policy means bringing down the cost of credit and reducing the rate of interest and that will induce people to increase their saving and investment and thus stimulate the rate of capital formation in the economy. The resources can be channelized into productive sector of economy.

Another way of stimulating capital formation is establishment and expansion of financial intuition such as bank and non banking companies. It will mobilize the saving in rural areas. The central bank should take responsibility of creating banking institution in rural areas so that rural saving must be mobilized in right direction. Central banking can also use deficit financing to provide additional resources taking Monetary policy as a instrument of capital formation .It has been rather over estimated, as it has limited success in underdeveloped and developing economy. As an instrument of capital formation monetary policy is not regarded as so effective as fiscal policy. Cheap money policy can provide easy credit for development but cannot be utilized unless the expectation of profit raises in the market, moreover such policy can lead to heavy inflationary pressure in the economy.

**Monetary Policy and Balance of Payment Equilibrium :-** In a developing economy monetary policy must aim to achieve Balance of payment equilibrium. The developing countries generally face B.O.P disequibrium or unfavorable balance of payment due to excess development imports over their lesser exports, they face foreign exchange crisis by using direct and traditional method of exchange control. In order to provide suitable environment for sustainable growth B.O.P disequilibrium should be tackled with effective monetary policy.

**Monetary Policy and Economic Growth :-** Economists now agree that monetary policy can play an important role in economic growth lay providing high level of employment and stable price. The basic function of economy is generally to satisfy the desire of people to maximum possible extent because they award to enjoy a very high standard of living standard. For this economy has to produce sufficient consumer good. In a free market economy fulfillment of two goods is essential condition for maintaining sustained growth.

1. The productive capacity of economy should be increased.
2. A corresponding increase in demand for increased production of goods and services should be attained. In short aggregate demand should be ensured for achieving high sustained economic growth .Monetary policy can help in achieving these objective in two ways :-

(a) It can create favorable environment for economic growth by promoting saving and investment in the economy. The monetary authority can maintain equilibrium between total supply of money and productive capacity.

(b) To achieve this objective monetary policy can adopt flexible monetary policy which means expanding credit supply in the case of deficient demand and restricting money supply in the case of excess demand.

**Limitation of Monetary Policy :-** In developing country monetary policy acts as an effective instrument for achieving economics growth. But monetary policy has certain limitation for these economies as there capital market is rather under developed and unorganized so the traditional method of credit control such as Bank rate and open market operation got limited effect.

**Fiscal Policy and Sustainable Growth**

**Meaning of Fiscal Policy :-** In simple words, fiscal policy concern itself with government expenditure and taxation and public debt on income, production and employment. In simple word we can say package of economic measures of government regarding its public expenditure, public revenue and public borrowing. In other word its refers to instrument by which government tries to regulate or modify economic affairs of economy keeping in view certain objective. It can also outcome the influence on resources utilization on the level of a aggregate demand through effecting the level of aggregate consumption and investment expenditure in the economy. Moreover it also suggests measures to control the economic fluctuation which may become violent and create panic in the economy.

Objective of Fiscal Policy in Development Economy

The fiscal policy in developed economies is to maintain the condition of full employment, economic stability and stabilise the rate of economic growth. For under developed economy. The main purpose of fiscal policy is to accelerate the rate of capital formation therefore the objective of fiscal policy is different in developed and underdeveloped economy.

In developing economy where monetary policy alone cannot be effective due to underdeveloped money and capital market. Fiscal policy along with monetary policy can play a vital role in accelerating the rate of economic growth and bringing about stability in the economy.

**Role Of Fiscal Policy In Developing Countries :-** The various tools of fiscal policy such as budget, taxation public expenditure and public debt go a long way in maintaining full employment without inflation.

Fiscal policy has following important rules in developing economy.

1. **To Mobalise Saving** :- The foremost aim of fiscal policy in developing economy is to mobilise recourses in public and private sector . Generally the national income and per capita income is low due to very low rate of saving. Therefore government in these countries, through forced saving pushes the rate of saving and capital formation which in turn accelerate the rate of economic development. Therefore increasing the rate of saving is important to some extent progressive taxation, heavy duty on unproductive items can guide resources in proper direction.

2. **To Accelerate The Rate Of Growth** :- Fiscal policy promotes the rate of growth by saving the rate of investment in public as well as in private sector. Therefore various tools of fiscal policy such as taxation, public borrowing public expenditure and public work etc should be perfectly balanced to suit the condition of economic growth. In short investment in the basic capital good industries in social overhead is the pillars of economic development in developing economy.

3. **To Encourage Socially Optimal Investment** :- In underdeveloped or developing economy fiscal policy encourage investment in this productive channel which is considered socially and economically desirable. This means optimal investment which promotes economic development and avoid wasteful expenditure is correct for developing economy. This fiscal policy should aim to make investment in social and economic overhead such as transport, communication, health and education. This tends to raise the productivity, widen market and at same time. unproductive expenditure is checked and diverted towards productive channels.

4. **Inducemnt Of Investment And Capitial Formation** :- Fiscal policy play a crucial role in underdeveloped or developing countries by making investment in industry and services of public utility on one side and giving encouragement to private sector on other side by giving them assistance in production and technical help to the new industries . So fiscal policies in developing economies play double role of regulator and also induces private and public sector to invest and thereby helping in capital formation.

5. **To Provide Employment Opportunities** :- Since in developing countries like India population grow at very fast pace. The aim in fiscal policies in those countries are to make high doses of public expenditure in the sectors .which can promote employment and to reduce underemployment

and unemployment. The state should make an effort and should introduce community development programme involving more labour and less capital .besides private enterprise should be encouraged through tax consumer, tax holiday cheap loan and subsides. The process will help and encourage domestic industries and generate employment opportunities. Moreover state should provide social amenities with stress on family planning and population control.

6. **Fiscal Policy And Economic Stability** :- Still another role fiscal policy play in developing economy is to maintain reasonable economy, and maintain reasonable internal and external economic stability. Generally a developing country is prone to international cyclical fluctuation. For bringing balanced growth fiscal policy should control cyclical i.e., deficit budgeting in depression and surplus budgeting in inflation. In recession public work programme through deficit financing bring fruitful result. So fiscal policy play a important role in economic stability.

7. **To Check Inflationary Tendencies** :- Inflationary tendencies are one of many problem of developing economies as these countries make heavy doses of investment in developing economies as these counters make heavy doses of investment in developmental activities . thus there is always imbalance between demand and supply of real resources with injection of purchasing power, demand rises but supply remain inelastic on account of structured rigidities market , imperfection and other bottleneck . In developing economy null inflation in desirable but excess inflation must be avoided by fiscal policy.

8. **Reduction Of Inequilities** :- Since inequalities of income and wealth is vast in a developing economy. Fiscal policy has an important role of to play in reducing inequality. Taxation of income and property at progressive rate, imposition of heavy duties on luxuries and concession on the good consumed by mass population. Government expenditure on agriculture cottage industries and provision of supply of essential commodities to poor at subsidised rate is important for fiscal policy.

**Conclusion :-** A choice may not be made between monetary and fiscal policy but more appropriate would be a mix of monetary and fiscal policies. Monetary policy primarily consists of measure of investment and money whereas fiscal policy effect on wider fronts. The discussion will depend on structural position of economy and level of acceptance of both in the given country. Therefore we can safety say that a developing economy monetary and fiscal policies should complement each other to achieve desired objective of sustained growth.

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# Education Tourism : Strategy for Sustainable Tourism Development with Reference of Hadauti and Shekhawati Regions of Rajasthan State

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**Abstract :-** Rajasthan is a main tourism State in the nation. It's glorious legacy, bright living customs, traditions, wonderful heritage, mesmerizing natural beauty ,vibrant folk, energetic people and delicious cuisines are exceptional attractions for both, domestic and foreign tourists. The substantial and indescribable tourism products of the State offer enormous potential for development of the tourism industry. Improvement of tourism assets and expanding both, domestic and international tourists' arrivals is a high need for the State especially for the important regions like Hadauti and Shekhawati. Lack of educational programs, awareness, and promotion are few reasons that the regions are not able to attract the tourists towards them. In fact the tourists who are visiting Jaipur, Udaipur, Jodhpur, Pushkar etc. tourist places of Rajasthan are even not aware about the hidden treasures of Hadauti and Shekhawati regions. Moreover it the regions are facing the problems related with falling prices of agricultural, economical instability, poor infrastructure, lack of resources, unemployment, lack of entrepreneurship etc. In these situations it becomes more important to focus on the resource in which the regions are rich and distinct from other regions of the State. There is no doubt into the potential of tourism at Hadauti and Shekhawati regions. Tourism knowledge of these regions if provided in a learning methodology and strategically planned way these regions will make a benchmark on the State tourism. From Hedonistic tourism to spiritual every experience tourists can get at Hadoti as well as at Shekhawati region. Therefore, there is a requirement for developing Education Tourism at both the regions. It is the high time to change the present patterns of learning of tourism. The present paper is an attempt to stress upon the education tourism adoption as a growth strategy for the sustainable development of tourism in both the regions. The paper also highlights the hindrances and requirements for creating education tourism as an exclusive part of learning.

**Keywords :-** Hedonistic, Spiritual, Education, Tourism, Strategy.

**Introduction :-** Tourism today is one of the major global industries and an important source for economic growth and employment generation. Tourism is one of the biggest-growing industries on earth and its hegemony appears secure if the current rate of growth is maintained, World Tourism Organization (WTO, 2010). International tourist arrivals have grown steadily from 25 million in 1950 to over 1.1 billion in 2014. At present, 1 in every 11 people worldwide is employed by the tourism sector, with the industry generating US$ 7.6 trillion or 10% of the global GDP in 2014 (WTTC Travel & Tourism Economic Impact 2015). Tourism in recent times has been widely seen as one which has contributed tremendously to the economy of most destination areas, improving their foreign exchange, creating jobs, creating awareness, improving standards of living and contributing to image-building of destination areas, it is pertinent to note that most developing countries in the world today benefit so much from tourism without recognizing the real impact such tourism activities has on its economy based on the trickle-down nature of tourism benefits to its host (Okech, 2008). In the economic situation of a country like India tourism can play a vital role. Tourism is one of the main sources of internal revenue generation in the world today (Ajake & Amalu, 2012a; Hinch & Butler, 2007). Without a doubt India is able to attract the tourist from all over the world. According to the Travel and Tourism Competitiveness Report 2009 brought out by the World Economic Forum, the contribution of travel and tourism to gross domestic product is excepted to be at US$ 187.3 billion by 2019.The report also revealed that the real GDP growth for the travel and tourism economy is expected to achieve an average of 7.7 per cent annum over the next 10 years. Export earnings from international visitors and tourism goods are expected to generate US$ 51.4 billion (nominal terms) by 2019.Moreover,the sector which accounted for 6.4 per cent of total employment in 2009 is estimated to rise to 7.2 per cent of the total employment by 2019. The direct contribution of travel and tourism to GDP is expected to grow by 8.1% per annum INR 3414.8bn (2.0% of GDP) by 2021.By the same year Travel and Tourism account for 30,439,000 jobs directly, an increase of 5,508,000(22.1%) over next ten years. In the last six years, it has created 11 million jobs and has the potential to create another 37 million jobs (estimated by the NSSO, Ministry of Tourism) of the 120 million projected requirement by 2020.

There is no doubt that India is able to attract many International and National tourist towards its different tourist's destination. The known and famous destinations are getting popularity day by day because of it a State like Rajasthan is also started coming on tourism map. Still there is lot which is hidden in the heart of Rajasthan. Today the foreign tourists or domestic tourists are visiting to Jaipur, Udaipur, Jodhpur, Jaislmer, and Pushkar and so on. Highlighting the state tourism statistics, in the $8^{th}$ edition of Great Indian Travel Bazaar 2015, Vasundhara Raje Chief Minister of Rajasthan Government mentioned that the tourism sector in Rajasthan will see a major surge by 2020. "By 2018, we expect the foreign tourist arrivals to reach 2.5 million from the current 1.5 million and the domestic traffic to be around 50 million from the present 30 million."

Rajasthan was expecting 50 million tourists to visit the desert state by the end, meeting its 2020 target. The state has received 47 million tourists in 2017. The Target of 50 million tourist arrivals by 2020 in the state is likely to be met by the end of this year. The State has already witnessed over 47 million tourist arrivals by the end of 2017. The state is having diversity in the tourism products yet it is unrevealed in a strategic manner. To make the people (tourists) more acquaint with the knowledge of the hidden treasures of Rajasthan especially the rich circuits/regions such as Hadauti and Shekhawati education tourism can play a vital role.

**Education Tourism an Approach of Learning :-** The term education tourism or Edu-tourism refers to any "program in which participants travel to a location as a group with the primary purpose of engaging in a learning experience directly related to the location" (Rodger, 1998, p. 28). Educational tourism" is a "tourist activity undertaken by those who are undertaking an overnight vacation and those who are undertaking an excursion for whom education and learning is a primary or secondary part of their trip".(Brent Ritchie, 2009).It is comprised of several sub-types including ecotourism, heritage tourism, rural/farm tourism, and student exchanges between educational institutions. The notion of traveling for educational purposes is not new (Gibson, 1998; Holdnak & Holland, 1996; Kalinowski & Weiler, 1992) and its popularity in the tourism market is only expected to increase (Gibson, 1998; Holdnak & Holland, 1996). This type of tourism may be categorized into the following dimensions; cultural / historical, eco-tourism / nature based tourism / rural tourism, and study abroad programs (Ankomah and Larson, 2004).' Life Long Learning (LLL) is "all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective. (European Commission, 2003).

**Curriculum and Tourism Curriculum :-** There is no agreed definition of curriculum, but the word curriculum derives from a Latin word, Currere, referring to the running of a course, as in a chariot race (Marsh and Willis, 2007; Hewitt, 2006). One basic view is that curriculum is "what is taught"( Geofferey Squires, First Degree: The

Undergraduate Curriculum Buckingham, England: Society for Research into Higher Education, 1990).In the twentieth century, the term curriculum broadened to include subjects other than the classics (Marsh and Willis, 2007). Sometimes, the word curriculum is also used to describe "a discipline, a specific area of knowledge and academic study" (Hewitt, 2006, p. 406). Tourism education had its beginnings in technical or vocational schools (Airey, 2004; Lo, 2005; Inui, Wheeler, & Lankford, 2006). (Busby, 2001) with educators mainly focusing on producing skilled and knowledgeable personnel for the industry. This emphasis has given short shrift to the value or meaning of tourism education. Courses in tourism were initially introduced in technical and vocational schools. Courses were then transitioned into undergraduate and graduate programs (Ring, Dickinger, & Wober, 2009). Bodewes (1981) believes tourism is an application of established disciplines, as tourism does not have sufficient doctrinal processes to be classified as a full academic discipline.

Smith and Cooper (1999) believe curriculum must be context-related rather than context-bound. This statement urges academics to rethink appropriate curriculum designs containing the necessary content, while also providing room for knowledge flexibility (Rowntree, 1982; Scrimshaw, 1983; Lawton, 1989; Squires, 1990; Goodlad, 1995; Tribe, 2002). Lawton (1989) said that the curriculum planning model should start with two initial stages, namely, philosophical and sociological analyses. Philosophical questions relate to the aims of education and the meaning of worthwhile education. By contrast, sociological questions relate to the present society. A tourism curriculum requires the development of a tourism society, that is not just for businesses but, rather, for all stakeholders (Tribe, 2001). Taylor and Richards (1985) explained curriculum as that which is taught. Tribe (2002) provides a more multifarious definition, curriculum is "...defined as a whole educational experience packaged as a degree program (p. 340)." Gunn (1998, p. 74) stress that the curriculum is "a series of courses of instruction that lead to graduation or certification or a degree, diploma, or similar terminal award.

The UK National Liaison Group for Higher Education in Tourism (NLG) (Holloway, 1995, p. 2 cited in Tribe, 2005) aimed to seek a agreement on the body of knowledge that would be acceptable to both academics and practitioners in the tourism industry.

The seven core subject areas of NLG are:
(1) Meaning and nature of tourism.
(2) Structure of the industry.
(3) Dimensions of tourism and issue of measurement.
(4) Significance and impacts of tourism.
(5) Marketing of tourism.
(6) Tourism planning and development.
(7) Policy and management in tourism.

In 2000, the NLG held another series of consultative meetings to align the core tourism subject areas with the tourism subject community. In turn, the following subject areas were agreed upon:

**Statement of the Problem :-** Tourism is not only an economic activity it is much more than it. The present research paper has been written to highlight the major issues which are related with two important regions of the Rajasthan State namely Hadauti and Shekhawati. It is identified that there is big gap between the promotion strategies which has been used for the tourism products available in these regions. Secondly, the society is not much aware regarding the significance of education tourism at the regions. Moreover it the educational institutions are not participating and not taking initiatives in the education tourism programs. The hidden treasures are yet to be explored in the regions. The economic conditions are again a problem for the development of the regions. The tourism sectors of Hadauti and Shekhwati regions have the potential to attract the learners towards the tourism products available (explored and unexplored).

**Objectives :-**

- To highlight the importance of Education tourism at Haduati and Shekhawati regions of Rajasthan.
- To suggest a model of integrated informal education with the formal education.
- To stress upon a new pattern of experiencing, learning and promoting the tourist destinations.
- To bring in light a pathway of International collaboration for experiencing and learning about this is yet unexplored.

**Resources at Hadauti Region for Education Tourism :-** Hadauti region is rich in vegetation, dense forests, lush green hills and fertile farms etc. Can be seen here. Hadauti is full of surprises from every nook. Despite of its rich heritage, culture and natural beauty the region is the most unexplored area of the State. Persistent river Chambal is the life line of the region. Other than Chambal Kali Sindh, Parvati and Parwan are the important rivers in the region. The region consists of four districts –Kota, Bundi, Baran and Jhalawar.

Kota city is a beautiful combination of traditional old monuments and innovative new technologies. Amazing forts and temples are located here. Kota is famous for its Kota Doria saris. The tourist attractions are Garh Palace, Maharao Madho Singh Museum, Braj Vilas Museum,Jag Mandir, near Kota places like Kshar Bagh,Kansua,Abheda Mahal,Garadia Mahadev Temple,Badoli Temple are best examples of architecture etc. For Baran , district it is famous that the place was created from 12 meaning bara villages of Solanki rulers and therefore it is called Baran. Near this district, there are lot many places which are yet unexplored. Places like Bilasgarh and Kanyadeh is still not any status of tourist destination despite of the truth that they have some hidden treasures stone sculptures, rock painting which are having own historical importance. The stone sculptures of Bials consist the lifestyle and the life cycle of human beings. The remains tell a story of a well - planned city. The stone sculptures are not less than the famous Khajuraho Temple of Madhya Pradesh of India. The Kama Sutra, art of sex is so well defined to educate the people in that era.

**The ruined Bilas's Stone Sculptures,**

**Hadauti Region**

**Source: Author (Ms. Chaitali Bhati, November 2019)**

The erotic carving is so much attractive that one cannot neglect it. The architectural ruins and antiques (around 1000-1500 sculptures) are lying in a open place without any type of protection from weather (uncovered).Although when the researcher asked the local residents they told that the Government is constructing a place where these sculptures could be kept. Still there is a high need to protect and educate the people regarding the importance of these ruined sculptures.

**The ruined Stone Sculptures outside and in the open area of Bilas Village, Hadauti Region**

**Source: Author (Ms. Chaitali Bhati, November 2019)**

On the other hand near the district Baran around 45 km, the Sorsan Sanctuary is located. The sanctuary is a place with high potential for tourism. Around 1800 Black Bucks, 324 Chinkaras,Indian Fox, Monitor Lizard and birds like Chestnut Bellied, Black Winged Kite Juvenile, Krestel etc. many species of birds are available here at the sanctuary The Amalsara is a adjoining place to the sanctuary where 6 big and beautiful huts has been already constructed with an investment of Rs- 50 Lakh. The sanctuary can be developed not only to viewing the animals and birds but much more could be provided at this place to any of the visitors. Brahmani Mata Temple, Amalsara Huts and Nagda all three jointly make the sanctuary a place where a tourist can view animals, stay and experience the spirituality along with the natural environment. The Brahmani Mata temple is located in a natural cave in the rocks and an unending flame in the temple has been burning from the **last 400 years.** Despite of the potential the sanctuary is neglected. People are not aware about the beauty of this place. In fact it is not well maintained. There is a high need for Education tourism for these types of sanctuaries of Hadauti region.

Baran is rich in heritage the Shergarh Fort, Sitabari, Bhand Deora, Nahargarh Fort, Gugor Fort are some of the forts at the nearby places of Baran. Other than these places Shahbad Fort, Kakuni are few important places for learning about the rich heritage of Hadauti region.

Jhalawar is a charming landscape of Hadauti region. This place is not only different it is distinct in nature. The most important place for learning is the Buddhist caves of Kolvi and the sculpture of Surya Mandir, Jhalara Patan.Jhalara Patan is a place where 108 temples were built over a few centuries. Most of them are destroyed. The Sun temple is the only one which is in fine shape. It is evenly beautiful to the Konark Sun Temple of Orissa. Gagron Fort is among the rarest forts which have both forests and water protected area. The fort is also comes in the UNESCO World heritage sites. Hadauti has lot to offer from eco –tourism, wildlife tourism, heritage tourism to culture tourism.

**Resources at Shekhawati Region for Education Tourism :-** Shekhawati region includes of the districts of Jhunjhunu, Sikar and Churu. The region is well known for wall paintings and frescos that adorn the havelis in this region. This region is also popularly referred to as the “open art gallery”. The wonderful fresco and wall paintings of the region is the most important source for education tourism. The havelies such as Ishwardas, Mohandas Haveli, Jhunjhunu, havelies of Mandawa, Nawalgarh etc. are of world fame. The region consists beautiful temples such as Rani Sati, Khatu Shyam, Shakhmbhari Mata, Jeen Mata, Salasar Balaji. The region is known for its pilgrimage tourism by the domestic tourist. The paintings of the regions are of 16$^{th}$ century in which scenes of epics such as Ramayana and Mahabharata has shown clearly. The modern inventions are also painted on the walls likewise cars, aeroplanes etc.One can learn a lot from the region about the art and culture. At the capital of Shekhawati region in the town of Jhunjhunu the participants can see Kamruddin Shah ki Dargah,Meatani Stepwell, Baadalgarh Fort, Khetari Fort, Birdi Chand wall and Ranti Sati temple.Other then Jhunjhunu Mandawa, Mukundargh, Nawalgarh, Fathepur are also a good source for exploration and learning about the tradition and culture of Rajasthan.

**Themes of Education Tourism :-** Education tourism can be developed and promoted on different themes in both the regions, Proposed themes of Education Tourism at Hadauti Region –

- Historical Tourism
- Heritage Tourism
- Archaeological Tourism
- Wildlife Tourism
- Educational Tourism
- Sports Tourism
- Farm/Agri Tourism

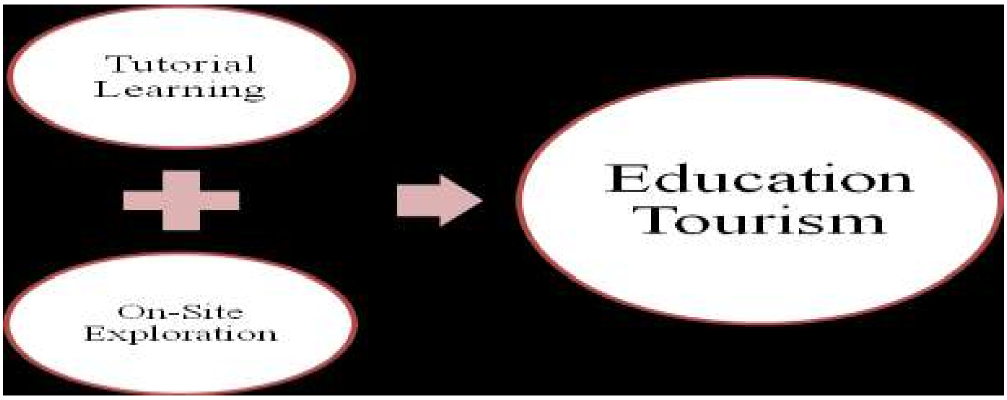
Proposed themes of Education Tourism at Shekhawati Region –

- Pilgrimage Tourism
- Eco-tourism
- Cultural tourism
- Culinary tourism
- Film tourism
- Rural tourism
- Highway Tourism

**Role of Universities in Education Tourism :-** The educational institutions are the backbone for the societal development of any State and country. The fortunate part with both the regions is that in these regions the status of education is quite high. The Hadauti region mainly if we will talk about Kota itself having three big Universities namely –University of Kota(the affiliating University of the region),Vardhman Mahaveer Open University and Rajasthan Technical University. Shekhawati is having more deemed and private Universities such as Mody University, Lakshmangarh, Singhania University, Sikar etc. Shekhawati University which is a Government University can also play a vital role for development of Education Tourism. The Universities may work with the different internal and external stakeholders that will produce workable and effective education tourism program. The Universities may start some program through distance learning for creating awareness and for the promotion of the tourists' destinations of the regions.

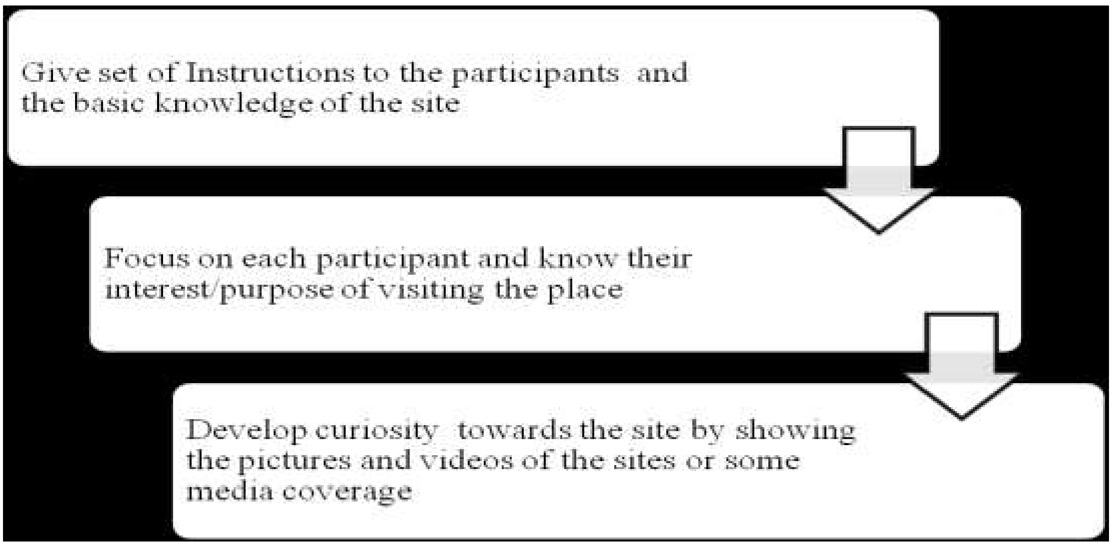
The learning model of the education tourism may consist two types of methods.
It is a combination of tutorial learning as well as of onsite exploration –

**Figure1: Education Tourism Model**



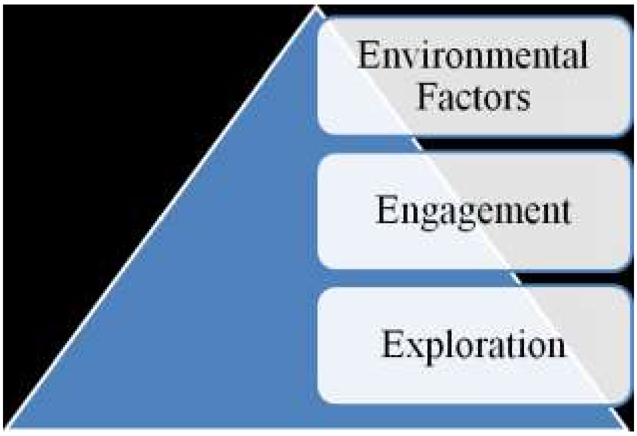

When we talk about the education tourism it is pre requites to decide about the line and length of the education tour program. The education tour program should be specific. For the theme and basic knowledge the participants may start from the tutorial learning and then move to the site for understanding and experiencing it. In the second step of site exploration participants will be able to grab the skills and acquaintance of the site.

**Figure 2: Tutorial Learning of Education Tourism**



**The 3 E's of Education Tourism Learning :-** Education tourism can avoid a large portion of negative impacts of tourism. When a tourist visits to a tourist destination he/she has to face many types of problems related with communication, cultural, safety etc. To avoid such type of problems education tourism can be a boon. As it involves cultural exchange and collaborations between different people of diverse nations. Therefore, education tourism is an actual learning process along with the safety and security of the tourists /participants. The education tourism will be beneficial only if the participants get benefits. For this while providing the learning the mentors and the organizers must keep in mind the perfect match between the 3 E's i.e. Environmental Factors – It could be the classroom/tutorial environment, ambience of the staying place etc. It is rightly said that environmental education itself provides learning. Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, fosters attitudes, motivations and commitments to make informed decisions and take responsible actions within the environment (Ajake,2006). A study was conducted by Ashley (2000) on environmental awareness and residents' commitment to tourism. It was discovered from the study that the private sector was the main actor in creating awareness on the need to be environmentally friendly, as well as provide necessary information on environment tourism in the area. He equally observed that providing necessary information about sustainable tourism issues, encouraged people to conserve biodiversity and cultural heritage. Engagement- In terms of active participation of the participants. They should be fully engaged without annoying their interest and preferences. Exploration –Without it the education tourism seems like body without blood. Exploration gives the practical learning to the participants about the sites.

**Figure3: Learning and Education Tourism 3Es**




**Hindrances of Education Tourism :-** The education tourism formulation and implementation are not easy task. There are some hindrances which are associated with it.

- The first and the foremost problem is of the poor image of the regions in the tourists market.
- Lack of skilled personnel to provide training and practical exposures to the participants.
- Lack of financial assistant to run Educational tour programs.
- Lack of specialists who will be able to organize the education tours .
- Lack of people who are well versed with the foreign languages.
- No branding and promotion of the tourist destinations of the regions.
- Lack of courses and training program of tourism at the Universities level.

Although the regions are facing many problems regarding education tourism still if the programs will be designed strategically surly Hadauti and Shekhawati regions can make wonders. As both the regions have something to offer to everyone. The advantages which these regions are having for education tourism such as the knowledge level of the local people is quite high regarding the tourists places of their region, the place like Kota is a education hub, transport connectivity is good from other places of India.

**Benefits of Education Tourism :-** Education tourism is beneficial in many means for the society at large. Without any doubts education tourism is a tool to provide the development from the grass root of any region, state and country. It is a medium through which the tourists' destinations will be able to get a identity on the global in fact the education tourism is a niche to explore the hidden treasures of a place. The figure 4 is providing a glimpse of the benefits which the Hadauti and Shekhawati Regions may get through education tourism.

**Figure 4: Benefits of Education Tourism to the Hadauti and Shekhawati Region**


**Findings and Suggestions :-** The education tourism is a learning process which is actually not focused on economic gains for the participants as well as for the trainers. Education tourism is more about the societal development rather than economic development. Yes off course it indirectly provides a boost to the economic status of any country. As participants visit from one place to another they stay on the destination .In the whole process the people are getting employment and business opportunities. For the regions like Hadauti and Shekhawati which are yet not fully explored it is suggested that the Government, Private Sector and educational institutions should come forward for education tourism .In the light of it few suggestions are recommended –

- A record can be kept for education tourism. The Universities should work with the local people to know the interest of the visitors.
- Skill enhancements trips will be a wonderful way to attract and de-stress the participants.
- Encourage the local people to participate in the education tourism programs. This will give them a participative feeling as well as an earning opportunity.
- The ambiance and facilities related with accommodation, food etc. Can be offered in the local and traditional way. This will again give a excitement to the participants and they feel more closer to the place.
- Be caution while giving the training .Don't try to treat the participants as children.
- The Government should make it mandate for the Universities and educational institutions to organize at least one education tour in a year. The organizations may set free to choose the topic and the theme on which they would like to arrange the education tour.
- For encouraging the education tourism the regions may offer some summer, winter schools, invitations on special occasions such as Diwali, Holi, Christmas, Kite Flying Festival etc.

**Conclusion :-** Education tourism is a mutual beneficial way for the learners and for the society at large. Education tourism is a need in present scenario for the States like Rajasthan. Moreover it the edu tourism can work as a backbone for the survival of many rural area people by generating the employment sources to their places (villages)only. Today the Indian youth is running towards the Urbanization this is again a problematic situation in terms of de-population at villages and over populated cities, high crime rates, unemployment etc. As India is a country of villages the education tourism is the source through which we may attract the Youth Back to Villages .A state like Rajasthan which is highly rich in terms of heritage, monuments, step wells, fresco paintings, forts, palaces and temples most of these are located in village areas .Therefore, it is a prime time need to concentrate on the projects and process of education tourism. So, the employment will generate at these areas and the hidden treasures will be explored. Not only will this education tourism develop the skilled manpower. The little efforts by the educational institutions, Government and private sector can make wonders in making the regions Hadauti and Shekhawati the top most choice for education tourism on the globe.

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# Joseph Conrad's Typhhon: A Study of Narrative Structure

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**Abstract :-** One of the very important aspects of the novel Typhoon is its structure. The novel is written in the manner of a historical narrative in which events happen chronologically. The narrative has been presented chronologically through the eyes of Captain MacWhirr. The same technique is applied by Joseph Conrad. This is called linear form of narrative. This is the type of narrative that we come across in this novel. At none stage of the novel has this linear structure has been disturbed. In the representation of characters Joseph Conrad has used the technique of multiple point-of view. In this novel Joseph Conrad used simple, unobtrusive and precise words for the purpose of describing the devastating physical experience. For the narrator informs us, "Facts can speak for themselves with overwhelming precision". (Typhoon, On Internet) The entire episode of the storm is very forcefully told, with Joseph Conrad relying heavily on specific detail. This novel possesses unique qualities of language. Joseph Conrad himself admitted it. In a letter to J. B. Pinker on 10 May 1917, on receipt of Andre Gide's French translation of Typhoon: "I was not fully aware how thoroughly 'English' the Typhoon is. I am immensely pleased of this, of course. There are passages that simply cannot be rendered into French – they depend so much for their meaning upon the very genius of the language in which they were written." (Conrad Letters, P. 88-89) The various events of the novel Typhoon have been neatly divided into six chapters in chronological order. Here we come across certain sailors, including their officers, who man the steam-ship 'Nan-Shan' on her way to Fu-Chau. In the course of this journey the ship encounters a storm of a very fierce order. How the officers of the ship, under the capable guardianship of Captain MacWhirr, tackle this journey is the basic narrative plot of the novel. The ship of full of human cargo of two hundred Chinese workers saving whose life is the prime objective of the officers and mariners.

**Keywords :-** Narrative, immensely, sailors, chronological.

One of the very important aspects of the novel is its structure. The novel is written in the manner of a historical narrative in which events happen chronologically. The narrative has been presented chronologically through the eyes of Captain MacWhirr. The same technique is applied by Joseph Conrad. This is called linear form of narrative. This is the type of narrative that we come across in this novel. At no stage of the novel has this linear structure has been disturbed. In the presentation of characters Joseph Conrad has used the technique of multiple point-of view. In this novel Joseph Conrad used simple, unobtrusive and precise words for the purpose of describing the devastating physical experience. For the narrator informs s us, "Facts can speak for themselves with overwhelming precision". (Typhoon, On Internet) The entire episode of the storm is very forcefully told, with Joseph Conrad relying heavily on specific detail. Conrad repeatedly revised the text for its various English and American appearances. These revisions are a combination of minor matters of spelling and more important changes to the presentation of his two main characters, Jukes and MacWhirr.

Typhoon is one of those works of Joseph Conrad that has been interpreting in a variety of ways. In the initial stages this narrative was hailed as an uncomplicated story, whose "preoccupations are nearly all on the surface …. Thus 'Typhoon' requires no elaborate interpreting." (Guerard, P. 294) Jocelyn Baines also concurred with this view when he said that it was "one of Conrad's simplest, important tales, and has none of the ambiguous moral and philosophical overtones with which 'Heart of Darkness' or Lord Jim reverberate."(Joselyn Baines, P. 157) There is one critic; Frederick Karl oscillates in his critical evaluation of the novel, hailing it at one time as being "as dull as its hero MacWhirr," and at another as "almost top-quality work."(P. 505) Recent criticism has re-evaluated narrate as a serious work. William W. Bonney hails it as "a remarkable part of the Conrad canon,"(Bonney, P. 34) while Paul Kirshner calls it "an artistic feat of the highest order."(Kishner, P. 13)

Joseph Conrad was a great writer of the sea. In the novel Typhoon he presents an animated and dramatic narrative of life on board ship when a storm is raging in the sea. People aver that this storm scene is one of the best storm scenes in literature. The plot of the novel centers round the daring acts and exploits of Captain MacWhirr, from Belfast. He is one of Joseph Conrad's most fascinating characters; he was drawn by Conrad with great sympathy. He has risen to the present post because of his unemotional reliability. During the raging storm the actions of MacWhirr win him laurels from all and sundry. His heroism and endurance earn praise of one and all. Although the novel was published in 1902, in 1919 Joseph Conrad added an 'Author's Note' in which he declared that the central incident was based on a real life incident but added that this incident was not a part of his own and personal experiences. He added that rumours about this incident had been afloat in the East though had never encountered anybody who was concerned in the incident. So, the novel is not based on hard facts but on hearsay. The protagonist of this novel is MacWhirr. The character of MacWhirr is based on one captain under whose command Joseph Conrad performed many chores on the Highland Forest. The 'Author's Note' appended to the narrative explicitly informs us about the real subject-matter of the narrative is: "Not the bad weather but the extraordinary complication brought into the ship's life at a moment of exceptional stress by the human element below her deck. Neither was the story itself ever enlarged upon in my hearing." (Typhoon, on internet)

This is a gripping storey of the sea, presented with a great economy of style and some humorous observation of the characters. In Typhoon we have a straight and uninvolved plot that deals with the journey of the cargo ship Nan-Shan from the southward, to the port of Fu-Chau. The novel Typhoon is based on the seafaring life at the turn of the twentieth century. In fact, it is the narrative of a fierce encounter of the steamer named Nan-Shan with a mature tropical cyclone in the north-western part of the Pacific Ocean. The storm scene is basic to the action of the story; it is also expository in nature. Joseph Conrad narrates the storm scene keeping in view the time sequence. Because of this care the narrative the story comes to us in traditional and uncomplicated manner, leaving aside a few flashbacks. By constant reference to the fall of the temperature and very hot surroundings, Joseph Conrad has prepared us ultimate narrative story. The raging and bellowing storm is the vast canvas, in this novel, against which the commanding officers and characters are judged; their ideas and feelings, likes and dislikes, sympathies and antipathies are measured.

The commander Captain of the ship MacWhirr, is a very hardworking and capable Captain who is fully conscious of his routine duties. He is very loyal and devoted to the needs of the Nan-Shan and equally conscious of his duties to the ship's owners. There is one drawback in his character – he is devoid of imagination. Yet he is always conscious of his duties. And he does his work by remembering his duties as a Captain. This keeps his masters happy and fully satisfied. The other crew members include Youngman Jukes - most probably an alter ego of Conrad from the time he had sailed under Captain John McWhirr - and Solomon Rout, the chief engineer. When confronted with the raging storm, MacWhirr dealt with it in a very calm and composed manner without being perturbed. This results in his saving the ship and bringing it out of harm. The second mate of the ship is not as strong nerved and tough as MacWhirr. There were about 200 Chinese laborers returning home with seven years wages in their possessions.

Jukes very politely requests his Captain to steer around the storm. MacWhirr thought that his request was preposterous. MacWhirr felt utterly lost as the crew and the Chinese laburers feel the storm's fury. Throughout the tempest

MacWhirr does not desert his post and remains on the deck, hanging on for life in the murky night, as the heavy rain, fierce wind and high rising waves toss the ship.

In the midst of all this, a messenger informs the Captain MacWhirr that the Chinese labourers placed beneath the foredeck were frightened about their money and began to quarrel amongst themselves. MacWhirr sent Lukes and some other seamen to calm down these Chinese labourers.

In spite of the doubts, skepticism and fears of Jukes and crew-members, MacWhirr kept his cool and continued to steer the ship during the period of this fierce storm. He was sure that if he continued on the course they could come out of the predicament soon. The vast immense sea and the monstrous storm provide opportunities for the characters to be aware of their defects and shortcomings, and further persuade them to work in unison so that they all could survive.

Captain MacWhirr works according to the rule book. This saves him from many critical and odd situations. At one place Jukes casually comments that navigating under the Siamese flag makes him feel disquieting. Perhaps because he does not feel at home sailing in a non-British ship. This strange comments leads Captain MacWhirr to the rule book, to see the maps of all the sailing nations. MacWhirr concludes that Juke means the flag had been made incorrectly. Being devoid of intelligence, MacWhirr does not understand the joke. Hence, seeing no difference between the printed flag and the flag on their ship, he objects to the comment of Jukes. MacWhirr measures the Siamese flag with exact numbers and cites them as evidence for his judgment. Although the measurement proves MacWhirr's argument, his interaction with Jukes shows his incapability to understand the non-literal terms. "By exaggerating the extent to which MacWhirr is obcessed with numbers, Conrad shows his disagreement with MacWhirr's rigidity and his lack of imagination." (Yinghan Guo, P. 52)

The narrative comes to an end with the information that the ship has safely anchored in the port at Fu-Chau. That was a bright sunny day when the ship reached the port. No loss of limbs or property was there. MacWhirr, entered the port safe and sound. No loss of life was reported. MacWhirr also solved the problem of the Chinese labourers by dividing the dollars equally between them all. Three dollars remained at the end. These dollars were given to the "three most damaged coolies." (Typhoon, On Internet) In this way no dissatisfaction was there among the succeeded in collecting their wages without any riot and furor. In the end everyone was happy as they reached the port at Fu-Chau.

This centrality of the character of MacWhirr is referred to by Joseph Conrad in the Author's Note: "What was needed of course was Captain MacWhirr. Directly I perceived him I could see that he was the man for the situation." (Typhoon, On Internet) Thus, we can say that Joseph Conrad introduced Captain MacWhirr to substantiate the deeper significance of the narrative before the audience.

In the novel Typhoon Conrad attempts a fairly lengthy description of MacWhirr's appearance, "His hair was fair and extremely fine, clasping from temple to temple the bald dome on his skull in a clamp as of fluffy silk. The hair of his face, on the contrary, carroty and flaming, resembled a growth of copper wire. . . (Typhoon, On Internet) About MacWhirr's height we are told: "He was rather below the medium height, a bit round shouldered, and so sturdy of limb that has clothes always looked a shade too tight for his arms and legs." (Typhoon, On Internet)

The character of MacWhirr as created by Joseph Conrad is also cryptic and enigmatic and even at the conclusion of the narrative we feel that we do not know enough about MacWhirr's character and temperament. At the opening of the narrative MacWhirr's physical appearance is described which replicates his mental capacities. We are told that he was "simply ordinary, irresponsive, and unruffled." (Typhoon On Interent) Even if this description attempts to say that MacWhorr was non-descript, the word 'unruffled' provides some clues of his character. In the later part of the narrative when the crew is in great danger because of the raging storm, MacWhirr, however, remains unperturbed, undisturbed and unruffled. This quality of stolidity, all the same, is a rare virtue. He faces everything with what we might hail as 'a calm resignation'. But for those people who remain unfamiliar with such natures, he appears to be stupid, as he certainly appears to Jukes.

Joseph Conrad also provides us with a history of his family background. He is the only son of a petty and insignificant grocer in Belfast. At the age of fifteen he stealthily runs away from his home, never to return. This testifies to the adventurous nature of the boy. He is described as "Having just enough imagination to carry him through each successive day, and no more, he was tranquilly sure of himself; It was, in truth, as impossible for him to take a flight of fancy as it would be for a watchmaker to put together a chronometer with nothing except a two-pound hammer and a whip-saw in the way of tools." (Typhoon On internet)

Thus we can safely assert that MacWhirr was a person of contrasting or contradicting qualities and these characteristics turn him at once into an elusive and mysterious character. If these contrasts in his character alienate the readers from him, he has other virtues that make him a loveable and endearing figure. His firmness, strength, and courage and especially trustworthiness in the face of danger are without doubt very admirable qualities. He may be the most close-mouthed person in the trade, but he is extremely dependable. His deep love for his wife and children is also an endearing quality. He undertakes risky duties and performs them to the great satisfaction of everyone. This he does so that his family can have a life of no worries. It is a different matter altogether that his wife and children do not care or worry much about him till they lead an easy and comfortable life. In fact, his wife feels afraid about the day when he would say goodbye to his job. However, she is a very self-centered lady. So does not go through those parts of the letter where MacWhirr expresses concern about living through the storm to be able to love her again. His love, care and sacrifice for his family proclaim his human values. All the same he still remains a mysterious and singular and exceptional character. Jukes rather proudly makes this declaration to one of his friends that one could not find a quieter Captain than MacWhirr. One would sometimes think that he did not have enough sense to see anything wrong but it wasn't so. It couldn't be so as he had been in command for a considerable period of time and those who sailed with him always reported, "He doesn't do anything actually foolish, and gets his ship along all right without worrying anybody." (Typhoon, on Internet) Jukes tells his friend that MacWhirr had never been any controversy. But he (Jukes) never sought to capitalize on this, because he would dislike it. Although when he was on duty MacWhirr understood everything but when off duty he would never understand more than half of what anyone told him. It would not be of any use to annoy him as he was "so jolly innocent that if you put your thumb to your nose and wave your fingers at him he would only wonder gravely to himself what got into you." (Typhoon, On Internet)

All the same, despite lack of imagination Captain MacWhir does his day-to-day chores with great confidence and conviction. Joseph Conrad very faithfully remarks about McWhirr: “Having just enough imagination to carry him through each successive day, and more, he was tranquility sure of himself; and from the very same cause he was not in the least conceited.” (Typhoon, On Internet) One lesson that MacWhirr learns from the experience of the storm is that not everything can be learnt from books; some things can be learnt from experience as well.

The ship Nan-Shan also described in detail. The ship was moving in the direction of Formosa Channel about ten O’clock without causing any disturbance the passengers. The Nan-Shan moved, “with her flat bottom, rolling chocks on bilges and great breadth of beam had the reputation of an exceptionally steady ship in a sea-way” (Typhoon, On Internet)). The portraiture of the Chinese passengers is also made in the narrative in a very realistic and straightforward manner. In the narrative, it seems that the real interest of Joseph Conrad is not in the factual description of the fierce storm, but what goes on below deck. Here the Chinese passengers are the main focus of the narrative. In the Author’s Note Joseph Conrad wrote: “. the interest for us was not the bad weather but the extraordinary complication brought into the ship’s life at a moment of exceptional stress by the human element below her deck." (Typhoon, On Internet)

The Chinese passengers have their own identification. They are wearing somber clothes; have yellow faces and wear pigtails their hair spread over their shoulders. The coolies having nothing else to do leaned back, conversed, smoked; while some coolies standing by the rail were looking in the void, some were engaged in drawing water over the side, while some few others just slept on hatches. Several small parties of six sat on their beds and talked. Some coolies were gambling, some others were busy with their own personal chores.

In this novel there is a special thing to be talked about. Like all mundane people, MacWhirr loved and worshipped the ship like a girl. He expressed or articulated his profound feelings very volubly and unreservedly: the "Old girl was as good as she was pretty" (Typhoon, on internet). The ship Nan-Shan was, in fact, a very good ship. The ship was owned by Messrs Sigg and Sons. It sailed under a Siamese flag. There is great fellow-feeling and camaraderie on the ship. It is said: "We have no brass-bound uniforms, but there we are like brothers. We all mess together and live like fighting-cocks. All chaps of the black-squad are as decent as they make the kind, and old Sol, the Chief, is a dry stick. We are good friends (Typhoon, on internet) Captain Mac Whirr is not a very uneducated man, so his language is always informal. He uses many set phrases during a conversation. One of these is: "What the devil are you doing there" (Typhoon, On Internet).

The major theme of the novel Typhoon is the sense of solitude and feeling of aloneness, an expressed physical isolation greater then spiritual isolation. In Typhoon we come across many people who feel and remain very lonely and isolated. Such isolated people are supposed to play complex roles under disturbing situations. Jukes, Solomon Rout, the helmsman and the boatswain - each in his turn face the burden of this isolation. MacWhirr's isolation is very great and he cannot hope for any relief "from any one on earth". "Such is the loneliness of command" (Typhoon, On Internet). But MacWhirr does not suffer any qualms of conscience; he undergoes no spiritual convulsions as he is fully convinced of the correctness of his action.

The language of the narrative also calls for attention. Typhoon is characteristically a novel of action. Because of this the language that Joseph Conrad has used here is also straightforward and uncomplicated and simple. The narrator of the story clearly informs us "Facts can speak for themselves with overwhelming precision". (Typhoon, On Internet) The specific details of the events are provided to us with a forceful and pointed language; there are no conundrums of language here.

The physical descriptions in Typhoon are especially and markedly forceful, with Joseph Conrad relying on specific detail and simile rather than on metaphor. Images are often sharp and have a surface metallic toughness. The narrator at times employs highly poetic and resonant language. For example, the sea in snowy movement of foam is "like a dazzling sheet emitting a bluish glow under the blackness of the cloud." (Typhoon, On Internet) The water in the bilges (the areas on the outer surface of a ship's hull where the bottom bends to meet the vertical sides) rolls incessantly and the lumps of coal moving here and there "rattled like an avalanche of pebbles on a slope of iron" (Typhoon, On internet). A similar image is repeatedly used by Joseph Conrad to describe the coolies. They stream like "a mass of rolling stones down a bank." (Typhoon, On Internet) We see the crew members thumping the deck with their feet and moving their arms in an unrestrained manner. Joseph Conrad describes the clothes of Jukes "as heavy as lead, cold and dripping like an armour of melting ice" (Typhon, On Internet). The storm shatters him, but after sometime he recovers his determination and moral pluck and courage, and prepares himself to face the storm as a man "safe in a shirt of mail" (Typhoon, On Internet) would do. The Engines of the ship are described with great love and affection: "There was the prudent sagacity of wisdom and the deliberation of enormous strength in their movements" (Typhoon, on Internet)). The members of the crew are all are often commended for operating with the courage and robustness of machines. The ship's helmsman's face is "like a stone head fixed to look one way from a column" (Typhoon, on Internet). This image suggests that the helmsman works the ship with great determination and fixity of purpose to counteract onslaught of the storm. The boatswain murmurs "like an industrious gorilla" (Typhon. on Internet). This image suggests that just as the gorilla is endowed with supernatural strength in the same manner the boatswain growled. Joseph Conrad then turns his attention towards the Chinese collies as if they have become animals and beasts. For this purpose Joseph Conrad uses animal imagery to great purpose. The coolies moan and howl "like baying hounds" (Typhoon, on Internet); the coolies are compared to bees "on a branch" (Tyohoon, On Internet); they move "like a mass of rolling stones". (Typhoon, On Internet)

Joseph Conrad has embellished the language with 'marine' terms such as 'bunker,' 'bridge', 'cuddy', 'forecastle', 'starboard' and the like. The members of the crew are not called by their names, but by their calling: 'mate', 'captain', 'boatswain', 'engineers', and 'donkey-man. Conrad uses simple, clear and precise language in Typhoon to describe an overwhelmingly physical experience. For the narrator tells us, "Facts can speak for themselves with overwhelming precision". Physical descriptions in Typhoon are specially forceful, with Conrad relying on specific detail and simile rather than metaphor. Images are often mechanistic and have a surface metallic hardness.

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# A Conceptual Paper - Impact of Technology on HR Practices

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**Abstract :-** In nowadays top leaders fully realize the power of technology tools for reaching business targets. The utilization of technological tools helps not only to fulfil defined company's goals but to optimize the work processes as well. Trends and results of the contemporary studies constantly confirm contribution of the technological tools in Human Resources (HR) area i.e. to accomplish assigned HR tasks by using the source of technological capabilities. Our world has become a global village. The improved means of communication, technological advancements, computer and internet have brought the horizons closers and changed the functioning of the business world in a great way. Many business functions can be performed speedily and with much more accuracy with the aid of computers and the Internet. The impact of technology has been observed in all areas of business including HR practices. Human Resource Management (HRM) is no longer limited to recruitment and training. It has become an indispensable part of every organization. Technology and HRM both are closely associated to each other. IT has significant impact on increasing the efficiency of recruitment, maintenance, development and decision-making functions. The following paper gives a brief overview about possibilities of technological usage in HR field for measuring and tracking human capital and using the HR technological system generally. The present paper is an attempt to study the impact of information technology (IT) on HR practices.

**Keywords** :- Information Technology, Human Resources management, company's goals, Training & Development, Recruitment, Human Resources Practices.

**Introduction :-** "The HR professionals should remember that employees are the lifeblood of any company. If we create a great workplace experience for them, they'll pay you back one hundred fold in feedback and productivity", Craig Bryant.

Human Resources are the most significant and vital for the success of any organization. The roles and skills of HR managers have grown considerably in recent times due to the adoption and use of new technologies. The managers are now able to perform the traditional functions of procurement, maintenance, development and utilization more effectively and efficiently. The human resource managers can now take up more challenging roles in the organizations. The growing use of information technology in human resource has significantly increased the efficiency of HR management activities and processes, increased their speediness and reduced cost. It has created an effective and efficient communication system, employee engagement, talent management, employee development, performance management, training and learning. In addition, the use of HRIT provides value to the organization and raise HR professionals' status in the organization (Ulrich, 1997).

There is no underestimation of importance and effect of the Human Resources management at all. Lately, management of Human Resources and its needs are becoming the centre of the attention of each individual employer in every organization. The orientation of company on human resources starts to be one of the key tasks of a strategic management and Human Resources play an important role in all strategic decisions. Managers of Human Resources ask for more strategic position of their department within the organization with the aim to get to the essence of the problem how to manage, to motivate and to increase the performance of organization. The importance of human potential for company increases proportionally with the speed of changes which appear in the business area because human capital represents a basic qualitative parameter of fruitfulness of any changes. Following that, Human Resources Management (HRM) must aim at achieving the competitiveness of the company in the field of HR by means of providing constant educational and training programs for personal development of employees.

It has been scientology proven that one of the supporting pillars which can contribute to the fulfilment of the personal policy is the usage of IT technologies in HR. Information and Communication Technologies (ICT) - a catchall term for techniques associated with mobile communication, internet, new media and PCs - allow companies to improve their internal processes, core competencies, organizational structures as well as relevant markets on a global scale.

The traditional HRM style mainly focused on supportive personnel activities for a company including collecting employee information, monitoring individual performance, and implementing organization policies. The new role of HR manager should understand the business strategy and formulate the corresponding management strategy on human resources to improve delivered service, and act as a strategy partner with top management team (Beer, 1997; Mohrman & Lawer, 1997).

HR professionals should adopt technologies that support organizational changes and create a proper developmental climate to develop innovative and knowledge-based organizations.

Craig Bryant In his paper **"Five Predictions for Where HR Technology Is Going in 2014"** observed that HR professionals at companies large and small should be ready for a few changes and trends that the new year could bring. A brief description of the challenges before HR is given below:

1. Hiring is likely to be on rise and this would mean, competition for talent will increase. HR managers need to hire people who could increase overall productivity and develop employee's perception in relation to company's overall operations.

2. HR people can spend more time on the human aspects of the workplace, and less time chasing papers and emails. This would lay foundation of good organizational culture. HR would play a significant role of helping employees to learn, grow, and contribute which will be a key differentiator in an increasingly competitive marketplace for talent.

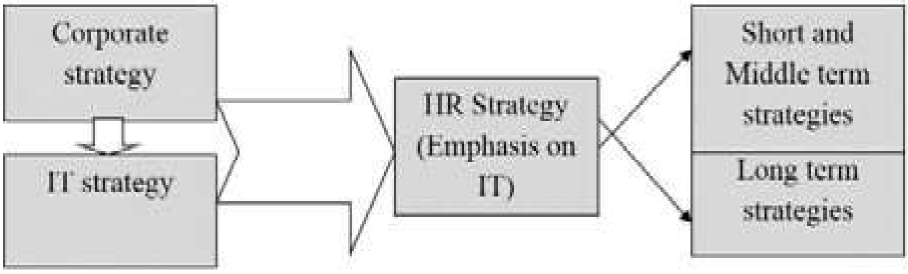
3. Comprehensive HR tools coupled with stunning point solutions for recruiting and performance management are coming of age and are increasingly accessible to smaller organizations. It will help small organizations to compete in the talent market. It is good for entrepreneurship, diversity and innovation.

4. As the technology improves and education makes its way, organizations will have more cost- effective options and will be able to put more choices into their employee's hands.

5. As the economy gains momentum again, would-be startup founders will get more as they will be more confident about throwing their hat into the ring. The newer, tech-centric innovators and professionals will have better opportunity than the traditional HR consultancies.

The HR professionals should remember that employees are the lifeblood of any company. If we create a great workplace experience for them, they'll pay you back one hundred fold in feedback and productivity.

**The Framework of IT in Human Resources Plan**




**Objectives of the Study :-** Experts opinion that one of the biggest impacts of technology on human resource management comes from the way in which technology alters industries and lifestyles. Keeping this view in mind an attempt is made to answer to the following questions.

- How technology is changing the HRM practices ?
- How technology is changing the skill requirements of employees?
- What are the positive and negative impacts of changing the technology on employees as well as organizations?

**Statement of the Problem :-** Many researchers have been undertaken in the past to study the changing role of HR function. Hr is no longer now restricted to procurement of manpower. HR professional are rather involved in complete transformation of HR processes with the use of latest technology. The use of IT in HR is likely to reduce cost, improve service, and achieve effectiveness. Keeping these facts in mind, the present study has been undertaken.

**Methodology of the Study :-** This paper has been prepared on the basis of available published articles, journals, books, internet, magazines, and seminar papers on technology and HRM practices in various organizations all over the world. Secondary data has been used for the present study. The secondary data has been collected from extensive desk research through library, different published materials and the world-wide web. The study has been made to examine the IT tools used for HR Planning, Recruitment, Communication and Engagement, Maintenance and Development.

**Role of Technology in Changing the HRM Practices :-** Technology has changed the business world many times over. In the Information Age, the advent of computers and the Internet has increased that impact significantly. Many businesses cannot even function without the use of computer technology. This impact is seen in nearly all areas of business, including human resources, where technology continues to have a significant impact on HR practices.

**Recruiting :-** One way in which human resources has been significantly impacted by technology is in the area of recruiting. Before the Internet, HR recruiters had to rely on print publications, such as newspapers, to post jobs and get prospects for open positions. Other methods such as networking also were used, but HR recruiters did not have the ability to post a job in one or more locations and have millions of people see it all at once. Technology has made recruiting more efficient and, in the hands of the right recruiter, more effective as well.

**Training :-** Information technology makes it possible for human resources professionals to train new staff members in a more efficient manner as well. The ability to access company information and training programs from remote locations eliminates the need for trainers to work directly with new hires on all training. Some interaction will always be necessary on some level, of course, but training in virtual classrooms makes it possible for the HR professionals to train a large number of employees quickly and to assess their progress through computerized testing programs.

**Data Storage and Retrieval** :- Human resources professionals generally process a considerable amount of paperwork and also have to keep much of that paperwork on file for a considerable period of time. The use of electronic imaging has made it possible for companies to store and retrieve files in an electronic format. Technology also makes it possible for human resources professionals to simply print the forms that are needed for employees. Printing on demand eliminates the need to dig through an endless number of files in the file cabinet to find what is needed.

**Performance Management :-** Enhanced performance management is another by product of technological improvement. Human resources professionals can use computer technology to assess employee performance and also to get employee feedback to be used for the betterment of the organization. Various software programs make it possible for human resources professionals to examine employee performance using metrics to ensure that employees are meeting performance standards. Employees that don't measure up can be subjected to additional training or let go in favour a replacement who can come in and do the job.

**Ethics and Employee Rights :-** Electronic surveillance of employees by employers is an issue that pits an organization's desire for control against an employee's right to privacy. The development of increasingly sophisticated surveillance software only adds to the ethical dilemma of how far an organization should go in monitoring the behaviour of employees who do their work on computers. For instance, the web activity of every one of Xerox's 92,000 employees- in countries around the world is routinely monitored by the company. In October 2006, Xerox fired 40 of its employees because they were caught in the act of surfing to forbidden web sites. The company's monitoring software recorded the unauthorized visits to shopping and pornography sites, and every minute they had spent at those sites.

**Motivating Knowledge Workers :-** Are there unique challenges to motivating knowledge workers in Bangladesh? The answer appears to be "yes". Knowledge workers appear to be more susceptible to distractions that can undermine their effort and reduce their productivity. And with access to the Internet, some of these workers play online games, trader stocks, shop, and search for another job. The average U.S. employee with Net access is spending 90 minutes each day visiting sites unrelated to his or her job. Recent estimates t indicate that 30 to 40 percent of lost worker productivity is due solely to cyber-loafing and this cyber- loafing is costing U.S. employers alone $ 54 billion a year. Ironically, it's these same workers, who often have skills which make them very marketable, and many realize their employers' dependence on these skills. As a result human resource managers are facing an unusual dilemma.

**Paying Employees Market Value :-** It's becoming more difficult today for organizations to find and keep technical and professional employees. So many have implemented an extensive list of attractive incentives and benefits rarely seen by non-managerial employees in typical organizations: for instance, signing bonuses, stock options, cars, free health-club memberships, full-time onsite concierges, and cell phone bill subsidies. These incentives may benefit their recipients but there are downsides. One is the effect these rewards have one others who don't get them. The other is the increasing problem created by stock options. Specifically, while they look very good when a firm is growing and the stock market looks favourably on the company's future, stock options can de-motivate employees when condition turn negative.

**Communications** :- The rules of communication are being rewritten. Because these rules are designed around comprehensive, integrated Information networks, communication is no longer constrained. Employees can communicate instantly anytime, with anyone, anywhere. At the Ford Motor Company, for instance, all of its 400,000 employees were given a home computer and Internet access for $ 5 a month. This will allow Ford Management to keep in close touch with its employees, and allow employees to easily communicate with each other and readily access company information and service.

These open communication systems break down historical organizational communication pattern flows. They also redefine how activities such as meetings, negotiations, supervision, and water-cooler talk are conducted. For instance, virtual meetings allow people in geographically dispersed locations to meet regularly. Moreover, it's now easier for employees in Charlotte and Singapore to covertly share company gossip than for those offline employees who work two cubicles apart. And employees in a number of industries even have web sites that are becoming electronic grapevines.

**A Legal Concern :-** Organizations that use technology – especially the Internet and electronic mail-must address the potential for harassment, bias, discrimination, and offensive sexual behaviour from Internet and e-mail abuses. There is increasing evidence that many employees fail to use the same constraints in electronic communications that they use in traditional work settings.

As one individual noted, human resource managers "all know that they can't hang up a Penthouse calendar in the workplace. They all know that they can't make a racist or sexist joke in the workplace. But those same people may think it's acceptable to send racist and sexist jokes via e-mail or download pornography at work. HRM must have policy that defines inappropriate electronic communications, reserves the right to monitor employee Internet and e-mail usage, and specifies disciplinary actions for violations.

**Work-Life Balance** :- An increasing number of employees are putting in 12 hour- days, plus working 6 and 7 days a week. Many of today's dynamic organizations appear to be at the forefront of the trend toward workplace cultures. These organizations are increasingly expecting people to work 60 to 70 hours a week. Add in the ability of technology to blur the lines separating work and home plus the dramatic increase in two-career couples, and you have the ingredients for a potential crisis. People are increasingly finding that work is squeezing out personal lives. And many are questioning this lifestyle. Balancing work life and personal life is likely to become one of the most important upcoming issues for HRM.

**Analysis and Interpretation** :- To achieve the above objectives, the study is divided into two parts -

- Traditional Vs. New HR Functions
- Role of Technology in HR

**Traditional Vs New HR functions**

**Traditional HR :-** Storey (1995) has stated that – "The traditional personnel managers paid attention to labor management, but did not participate into a company's planning and strategy decision. They paid great attention to control their employees, including carefully designing the contracts and rules for monitoring the employees."

Till the last two decades of the 20th century, HR function was designated as the personnel management performing the functions of personnel administration and industrial relations including recruitment, selection, training and development, performance appraisal, rewards and industrial relations. HR was not given due importance in the organizations. The role of HR manager in the organization was limited frame rules and regulations for employee management. Actual decisions were implemented by the line managers as they were responsible for building employee relations and maintaining peace.

During this period, there was a shift in the role of HR professionals as they were being considered for strategic business issues. Scope of HR was widened to some extent with new HR functions relating to strategic business issue. Besides, performing the routine HR issues at the operational level and procurement and maintenance of workforce at managerial level, he was involved to higher level in policy formulation to get talented and qualified people and analyze long-term manpower demand. Thus, HR professionals began to be included in organizational policy framework. However, it was still mainly involved with routine administrative matters only in most of the organizations.


**Figure 1: Traditional HR Function**

It can be inferred from the above discussion that HR in its traditional role was concerned with administration of HR function, making decisions on issues of industrial relations and forwarding them to line managers. Later a new role was added i.e. to participate in policy framework for forecasting long- term manpower demand.

**New HR** :- There was considerable change in the role of HR professionals in the last decade of the 20th century. Ultrich (1997) defined four roles of HR professionals including - role of strategic business partner, change agent, administrative expert and that of employee champion. **As strategic business partners**, HR professionals work with top executives to develop, implement and appraise competitive business strategies, HR strategies, policies and practices and supportive business strategies. In their role **as change agents**, they manage the Organizational changes and create new culture where its employees are motivated to participate in the new situation. **As administrative experts**, they help in designing organizational processes, building organizational capacity to gain competitive advantage, reducing cost, adding value and better HR services to make HRM works more effective and efficient. In the role of **employee champions,** the HR professional plays a significant role of motivating the employees and provides them training to enhance their competencies. He represents the voice of the employees and is responsible for enhancing their commitment, skills, knowledge and capabilities of the employees.

The first decade of 20th century started with new role of HR in the organizations. The old roles of HR were widened and some new functions and responsibilities for HR professionals were assigned. HR which initially had lesser significance as compared to other functions like finance and marketing was now gaining significance similar to its counterparts.

The role of HR professional as strategic business partner has been confirmed by other studies also (Svoboda & Schroder, 2001). Kraut (2005) opined that HR department sets closer relationship with the whole organization. He viewed the role of Line managers as executors and proponents of HR policies and strategies. Besides, the line managers are the policy-makers and executors of own department. HR professionals should assist the line managers to connect the aim of department with whole business objective, and help line managers on HR related tasks.

The changing role of HR professionals in the present scenario made Ulrich and Brockbank (2005) to develop a new model. The model explains five functions of HR professional which replaced their earlier model with four roles developed in 1997 as explained earlier. These five roles were: strategy partner, functional expert, employee advocate, human capital developer and HR leader. They also specified the responsibilities with each role.

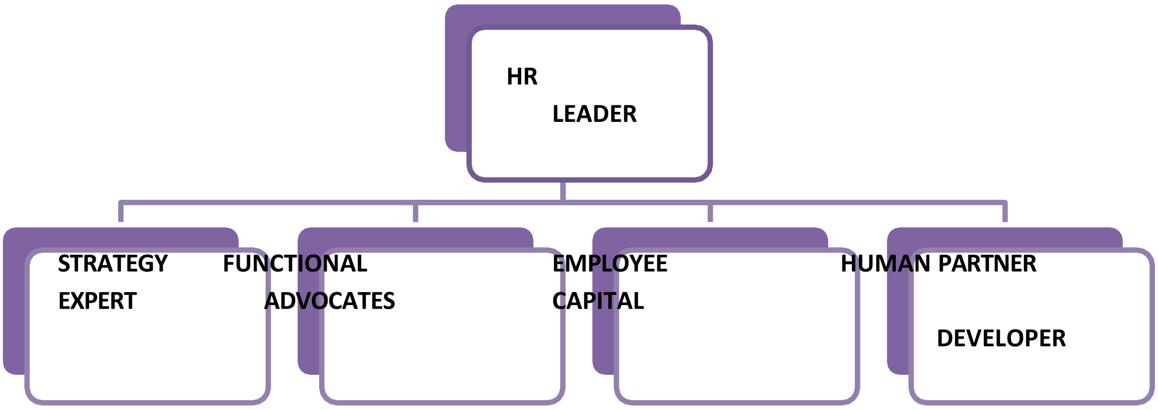



**Figure2: New Role of HR Professional**
**[Source: Five roles of HR professional (Ulrich, 2005)]**

These roles are briefly explained below :-

The **Strategy Partner** has multiple roles including business expert, change agent, and knowledge manager. The change agent which was designated as separate role in the previous model now becomes part of the strategy partner. The role of strategy partner is to help line managers to reach their goals. **Functional Expert** in this model is an extension of the traditional function of administrative expert. Its scope now includes the use of technologies for administrative efficiency and is responsible for the HR practices delivery. **Employee Advocate** is concerned with the employees. The employee advocate focuses on current employees to ensure friendly relationship between employees and employers. **Human Capital Developer** also deals with the employees. It lays emphasis on the future workforce, including developing present employees for future development as well as acquiring suitable workforce externally. **HR Leader** controls the whole situation. The leadership is a function of all the above mentioned four roles. HR leader should set the relationships with each HR function, and supervise the whole HR community.

Truss et al. (2002) have done the research about different roles of HR professionals in different types of organizations viz. creating effective communication channels between different work levels, employment administration and labor relations, acting as the internal consultant for their employees, services to assist in the career development of employees; to coordinate with line management and to support employees; and focus on executive and strategic issues.

It can be concluded that HR function has shifted its rationale from technology-oriented to strategy- oriented. The relationship of HR professional manager with line manager and the employees has also changed. HR professionals as business partners have started working in alignment of HR strategies with business strategies, and collaborating with line managers of other departments. HR professional is shaping the organization at the strategy level; at the managerial level, he is working with Line Managers in a collaborative manner and at the operational level he has now no role to play. The line managers deal with the employees to execute the policies. They perform new tasks such as planned development, talent management, etc. It is, thus, creating values for the business enabling its growth and prosperity.

The HR professionals today need focus on the development of employees with potential and constantly stimulation of their motivation. They provide training and studying program to help workforce to reach new qualification level, keep competitive knowledge and skills, and maintain the advance of business (Gutierrez, 1995).

**Role of Technology in Human Resource Management :-** Technology in human resource (HR) management is another application of companies using hardware and software to aid human activities. Companies use all types of technology in human resource management. A few different roles for the technology can be hiring and selecting employees for interviews, managing employee paperwork or benefits, and securing sensitive employee files. Many different types of hardware or software are available for this purpose. Companies can either use an external software package or create their own, depending on their needs.

Many companies now use Internet-based employee applications or other technology in human resource management for finding new employees. A significant benefit for online applications is the existence of knockout questions. These questions prevent unqualified individuals from making it too far through the employee application process. For example, if a company desires a certain level of education, an answer about earned college degrees may appear on employee applications. Those who answer "no" to the question will not be included on the list of potential interviews for a company's open job position.

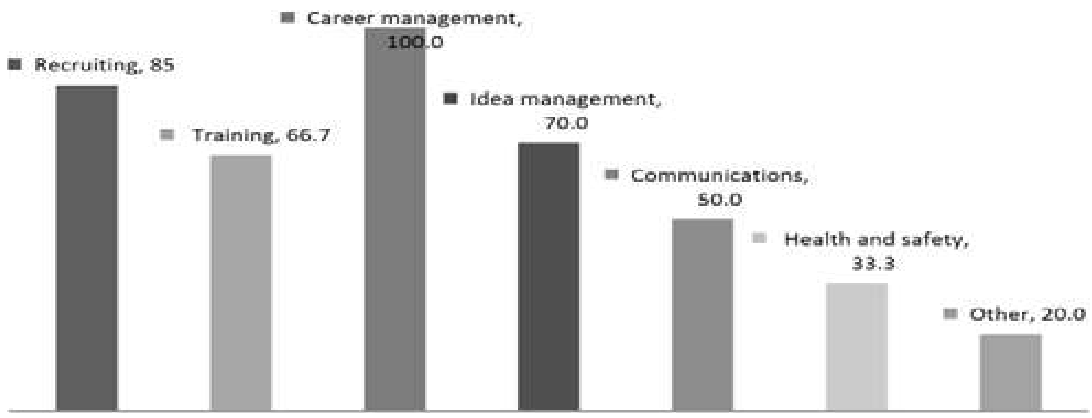
Employee paperwork for new and existing hires is often a time-consuming process. Technology in human resource management allows a company to find new ways of handling paperwork relating to employee hires and benefits. For example, all new hires may need to fill out paperwork for medical, dental, retirement, or other benefits. The use of an online enrolment system is common and beneficial. A company can create an intranet that all employees can access in order to fill out documents, review current benefits, or handle other tasks related to specific benefits.

Companies must have secure environments for storing employee documents. While all companies typically have specific storage rooms devoted to this purpose, technology in human resource management can also be beneficial. Here, encrypted spreadsheets or other software packages allow companies to restrict access to payroll or other sensitive documents. The use of outside payroll services may result in a company using an external website for transferring sensitive documents. Technology often helps a company prevent theft from payroll documents through comprised transfer methods.

Technology in human resource methods is not without its drawbacks. Moving traditional activities from a manual to technological process can be time-consuming and expensive. Additionally, the potential for hardware or software to fail is also a problem that a company may need to consider. Being prepared for all technological issues is a must as failure to properly handle employee data can result in heavy fines or penalties. Today the world is globalizing. In the globalize world, technology is creating a situation where human resource management must begin to search for mobile and skilled employees capable of successfully performing their duties in a foreign land.

The technology of cars and airplanes modified the transportation industry. Automobile and aviation companies grew, creating a demand for more employees and training. Railroad companies were affected by the same technology. HR departments in these companies had to reduce the workforce and create early retirement systems.

**Figure-03: IT Tools Usage in Some HR Field In %**



The introduction of computers into banks changed employment needs. Before computers, HR specialists recruited large numbers of unskilled and semiskilled employees. Computers, however, required highly skilled programmers and systems analysts. Robot is a more common and sophisticated technology and it affects organizational productivity and the quality of work life for employees. The good news is that hazardous and boring jobs have been taken over by robots. Dangerous jobs- such as working with toxic chemicals and paints have changed by substituting robots for people. Similarly, highly repetitive assembly tasks increasingly have been taken over by robots during the late 1990s. Productivity and quality are likely to improve, but the huge costs are involved with the robots.

Long, Yu (2009) has mentioned that a survey of HR executives by SHRM (Society for Human Resource Management) indicates that extensive use of HRIT which requires HR processionals to focus on developing IT-based HR applications. The finding suggests that IT can reduce routine Work and allow better information communication and autonomy, which leads to fundamental change in the nature of HR professionals' work. He also explained different roles of HR are mentioned in the form of diagram which is presented in modified form above.


**Figure 3: An Overview of HR Roles**

HRIT has caused significant impact on HR functions. The application of HRIT can change the information flows significantly, due to the fact that the system enables users more efficiently to collect, disseminate and access the information (Stone, Romero & Lukaszewski, 2006).

A number of tools have been developed such as e-recruiting system, e-selection system e-performance system, and e-compensation system. For example, in the recruitment, without the face-to-face interview and inquiry HRIT can make the applicants easier to collect information about jobs and to access to the HR professionals. Similarly, information about employee skills, qualities, appraisal data etc. can help in making decisions about their promotions, information on employee feedback can be used for improving their qualities. Further, the modern techniques like internet, email, sms etc. are quite useful in sending and updating information and executing tasks and can reduce the constraints of place and time.

**The Impact of IT on HR Functions Transformation :-** Information technology is expected to improve the performance of Human Resource Management (HRM) by shifting its focus from administration or personnel management to strategic HRM. The strategic role of HRM is supposed to add value to the HR function, and leads the essence of HR function to transform. This study examines HR function, HR function transformation and Human Resource Information Technology (HRIT), by investigating the role of HRIT playing in HR function transformation process, and the interrelationship between them. The research consists two parts: a theoretical review and a meta- analysis of empirical data. For both parts, all the research data comes from peer-review academic papers, and 43 of them are used. In the theoretical chapter, HR function, HR function transformation and HRIT are conceptualized. Firstly, the HR professional is moving from operational level to strategic and managerial levels. Line managers have taken an important part of HR function. Secondly, HR function transformation is a business process that changes the HR tasks and expands the involvement of actors in HR function, and that makes HRM concentrate more on strategic, value- creating activities for the long-term business objective.

Thirdly, HRIT is supporting and forcing the traditional HR function to transform, and changes the way of management. However, HR professionals need to pay attention to deal with the drawbacks brought by HRIT, which might leads negative effect on both social interaction and information accuracy. In the second part, the analysis of empirical evidence provides insight into the practice role of HRIT in HR transformation. The empirical evidence shows that the devolution and decentralization of HR function is leading to role dissonance between HR professionals and line managers, and the HR professionals do not always focus on strategic issue but still put attention to daily managerial and operational tasks. On the other hand, the HRIT is considered as indispensable parts on supporting HR function transformation. It is because HRIT provides the platform and opportunity for HR function transformation and shifts the traditional HR function to technology-based new function.

**Negative Impacts on Employees and Organizations in changing the Technology**

- Due to the technological changes job opportunities may shrink so that a large number of employees become unemployed.
- Lack of ample knowledge about modern technology the employees can't enter into the job which job he/she is desired.
- In underdeveloped and developing countries organizations sometimes can't Recruit the required number of technical knowledge oriented employees to perform their organizational activities.

**Conclusion :-** From the above discussion, we can draw the following conclusions :

1. There is a shift in HR functions from traditional personnel functions such as recruitment, selection, training and development, performance appraisal, rewards to consultative strategic business issues and policy formulation to some extent in 80's.
2. The scope of HR activities was widened in 90's with HR professional performing the role of strategic business partner, change agent, administrative expert and that of employee champion.
3. During the 1st decade of 21st century, HR professional was assigned new roles including strategy partner, functional expert, employee advocate, human capital developer and HR leader with wide range of activities as mentioned by Ultrich. Later, the globalizations and liberalization policies and increasing use of IT in HR, HR professional is now performing the role of Strategy Maker, Organizational Developer and Internal Consultant continuously monitoring HR strategies and policies, keeping a track record of employee till retirement, managing employee talent and Passing instructions on HR issue.
4. The task of HR professionals has been simplified with new technological tools, communication technologies and new

application software have made and they can now spend more of their time on policy framework, strategic planning and other such issues.

5. Various HR functions of HR can be effectively managed through the use of computers and IT tools. For example, the functions of recruitment, employee selection, employee management and workforce planning are managed through Internet, web portals, video conferencing, data warehouse etc.; training, maintenance and performance evaluation, feedback, employee turnover, tardiness and absenteeism analysis, management and planning functions, succession planning etc. through Internet, Intranet, employee portals, and company portals etc. It appears that the role of technology in HR management is likely to increase in the coming years. The significance of HR function in the organizations has increased much in the last 20 years. New roles are likely to be added with the changing scenario. Talent acquisition, competency mapping, newer appraisal systems like 360 degree feed forward, retention, contractual labor, compensation, employee engagements, rewards etc. are the new roles being added. Newer software and technological tools will certainly help the HR professional in these new assignments. Nevertheless, the role is HR has become more challenging in the organization.

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# Rural Development

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**Rural development :-** is the process of improving the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated areas.

Rural development has traditionally centered on the exploitation of land-intensive natural resources such as agriculture and forestry. However, changes in global production networks and increased urbanization have changed the character of rural areas. Increasingly tourism, niche manufacturers, and recreation have replaced resource extraction and agriculture as dominant economic drivers. The need for rural communities to approach development from a wider perspective has created more focus on a broad range of development goals rather than merely creating incentive for agricultural or resource based businesses. Education, entrepreneurship, physical infrastructure, and social infrastructure all play an important role in developing rural regions. Rural development is also characterized by its emphasis on locally produced economic development strategies. In contrast to urban regions, which have many similarities, rural areas are highly distinctive from one another. For this reason there are a large variety of rural development approaches used globally.

Rural development is a comprehensive term. It essentially focuses on action for the development of areas outside the mainstream urban economic system. we should think of what type of rural development is needed because modernization of village leads to urbanization and village environment disappears.

**Development Actions :-** Rural development actions are intended to further the social and economic development of rural communities.

Rural development programs have historically been top-down from local or regional authorities, regional development agencies, NGOs, national governments or international development organizations. Local populations can also bring about endogenous initiatives for development. The term is not limited to issues of developing countries. In fact many developed countries have very active rural development programs.

Rural development aims at finding ways to improve rural lives with participation of rural people themselves, so as to meet the required needs of rural communities. The outsider may not understand the setting, culture, language and other things prevalent in the local area. As such, rural people themselves have to participate in their sustainable rural development. In developing countries like Nepal, Pakistan, India, Bangladesh, China, integrated development approaches are being followed up. In this context, many approaches and ideas have been developed and implemented, for instance, bottom-up approach, PRA- Participatory Rural Appraisal, RRA- Rapid Rural Appraisal, Working With People (WWP), etc. The New Rural Reconstruction Movement in China has been actively promoting rural development through their ecological farming projects.

**Agriculture** :- Agriculture is the science and art of cultivating plants and livestock. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enabled people to live in cities. The history of agriculture began thousands of years ago. After gathering wild grains beginning at least 105,000 years ago, nascent farmers began to plant them around 11,500 years ago. Pigs, sheep and cattle were domesticated over 10,000 years ago. Plants were independently cultivated in at least 11 regions of the world. Industrial agriculture based on large-scale monoculture in the twentieth century came to dominate agricultural output, though about 2 billion people still depended on subsistence agriculture into the twenty-first.

Modern agronomy, plant breeding, agrochemicals such as pesticides and fertilizers, and technological developments have sharply increased yields, while causing widespread ecological and environmental damage. Selective breeding and modern practices in animal husbandry have similarly increased the output of meat, but have raised concerns about animal welfare and environmental damage. Environmental issues include contributions to global warming, depletion of aquifers, deforestation, antibiotic resistance, and growth hormones in industrial meat production. Genetically modified organisms are widely used, although some are banned in certain countries.

The major agricultural products can be broadly grouped into foods, fibers, fuels and raw materials (such as rubber). Food classes include cereals (grains), vegetables, fruits, oils, meat, milk, fungi and eggs. Over one-third of the world's workers are employed in agriculture, second only to the service sector, although the number of agricultural workers in developed countries has decreased significantly over the centuries.

**Etymology And Scope** :- The word agriculture is a late Middle English adaptation of Latin agricultūra, from ager, "field", which in its turn came from Greek, and cultūra, "cultivation" or "growing". While agriculture usually refers to human activities, certain species of ant, termite and ambrosia beetle also cultivate crops. Agriculture is defined with varying scopes, in its broadest sense using natural resources to "produce commodities which maintain life, including food, fiber, forest products, horticultural crops, and their related services". Thus defined, it includes arable farming, horticulture, animal husbandry and forestry, but horticulture and forestry are in practice often excluded.

**History :-**

**Origins** :- The development of agriculture enabled the human population to grow many times larger than could be sustained by hunting and gathering. Agriculture began independently in different parts of the globe, and included a diverse range of taxa, in at least 11 separate centers of origin. Wild grains were collected and eaten from at least 105,000 years ago. From around 11,500 years ago, the eight Neolithic founder crops, emmer and einkorn wheat, hulled barley, peas, lentils, bitter vetch, chick peas and flax were cultivated in the Levant. Rice was domesticated in China between 11,500 and 6,200 BC with the earliest known cultivation from 5,700 BC, followed by mung, soy and azuki beans. Sheep were domesticated in Mesopotamia between 13,000 and 11,000 years ago. Cattle were domesticated from the wild aurochs in the areas of modern Turkey and Pakistan some 10,500 years ago. Pig production emerged in Eurasia, including Europe, East Asia and Southwest Asia, where wild boar were first domesticated about 10,500 years ago. In the Andes of South America, the potato was domesticated between 10,000 and 7,000 years ago, along with beans, coca, llamas, alpacas, and guinea pigs. Sugarcane and some root vegetables were domesticated in New Guinea around 9,000 years ago. Sorghum was domesticated in the Sahel region of Africa by 7,000 years ago. Cotton was domesticated in Peru by 5,600 years ago, and was independently domesticated in Eurasia. In Mesoamerica, wild teosinte was bred into maize by 6,000 years ago. Scholars have offered multiple hypotheses to explain the historical origins of agriculture. Studies of the transition from hunter-gatherer to agricultural societies indicate an initial period of intensification and increasing sedentism; examples are the Natufian culture in the Levant, and the Early Chinese Neolithic in China. Then, wild stands that had previously been harvested started to be planted, and gradually came to be domesticated.

**Civilizations** :- In Eurasia, the Sumerians started to live in villages from about 8,000 BC, relying on the Tigris and Euphrates rivers and a canal system for irrigation. Ploughs appear in pictographs around 3,000 BC; seed-ploughs around 2,300 BC. Farmers grew wheat, barley, vegetables such as lentils and onions, and fruits including dates, grapes, and figs. Ancient Egyptian agriculture relied on the Nile River and its seasonal flooding. Farming started in the predynastic period at the end of the Paleolithic, after 10,000 BC. Staple food crops were grains such as wheat and barley, alongside industrial crops such as flax and papyrus. In India, wheat, barley and jujube were domesticated by 9,000 BC, soon followed by sheep and goats. Cattle, sheep and goats were domesticated in Mehrgarh culture by 8,000–6,000 BC. Cotton was cultivated by the 5th–4th millennium BC. Archeological evidence indicates an animal-drawn plough from 2,500 BC in the Indus Valley Civilisation. In China, from the 5th century BC there was a nationwide granary system and widespread silk farming. Water-powered grain mills were in use by the 1st century BC, followed by irrigation. By the late 2nd century, heavy ploughs had been developed with iron ploughshares and mouldboards. These spread westwards across Eurasia. Asian rice was domesticated 8,200–13,500 years ago – depending on the molecular clock estimate that is used – on the Pearl River in southern China with a single genetic origin from the wild rice Oryza rufipogon. In Greece and Rome, the major cereals were wheat, emmer, and barley, alongside vegetables including peas, beans, and olives. Sheep and goats were kept mainly for dairy products.

In the Americas, crops domesticated in Mesoamerica (apart from teosinte) include squash, beans, and cocoa. Cocoa was being domesticated by the Mayo Chinchipe of the upper Amazon around 3,000 BC. The turkey was probably domesticated in Mexico or the American Southwest. The Aztecs developed irrigation systems, formed terraced hillsides, fertilized their soil, and developed chinampas or artificial islands. The Mayas used extensive canal and raised field systems to farm swampland from 400 BC. Coca was domesticated in the Andes, as were the peanut, tomato, tobacco, and pineapple. Cotton was domesticated in Peru by 3,600 BC. Animals including llamas, alpacas, and guinea pigs were domesticated there. In North America, the indigenous people of the East domesticated crops such as sunflower, tobacco, squash and Chenopodium. Wild foods including wild rice and maple sugar were harvested. The domesticated strawberry is a hybrid of a Chilean and a North American species, developed by breeding in Europe and North America. The indigenous people of the Southwest and the Pacific Northwest practiced forest gardening and fire-stick farming. The natives controlled fire on a regional scale to create a low-intensity fire ecology that sustained a low-density agriculture in loose rotation; a sort of "wild" permaculture. A system of companion planting called the Three Sisters was developed on the Great Plains. The three crops were winter squash, maize, and climbing beans.

Indigenous Australians, long supposed to have been nomadic hunter-gatherers, practised systematic burning to enhance natural productivity in fire-stick farming. The Gunditjmara and other groups developed eel farming and fish trapping systems from some 5,000 years ago. There is evidence of 'intensification' across the whole continent over that period. In two regions of Australia, the central west coast and eastern central, early farmers cultivated yams, native millet, and bush onions, possibly in permanent settlements.

**Revolution** :- In the Middle Ages, both in the Islamic world and in Europe, agriculture transformed with improved techniques and the diffusion of crop plants, including the introduction of sugar, rice, cotton and fruit trees (such as the orange) to Europe by way of Al-Andalus. After 1492 the Columbian exchange brought New World crops such as maize, potatoes, tomatoes, sweet potatoes and manioc to Europe, and Old World crops such as wheat, barley, rice and turnips, and livestock (including horses, cattle, sheep and goats) to the Americas. Irrigation, crop rotation, and fertilizers advanced from the 17th century with the British Agricultural Revolution, allowing global population to rise significantly. Since 1900 agriculture in developed nations, and to a lesser extent in the developing world, has seen large rises in productivity as mechanization replaces human labor, and assisted by synthetic fertilizers, pesticides, and selective breeding. The Haber-Bosch method allowed the synthesis of ammonium nitrate fertilizer on an industrial scale, greatly increasing crop yields and sustaining a further increase in global population. Modern agriculture has raised or encountered ecological, political, and economic issues including water pollution, biofuels, genetically modified organisms, tariffs and farm subsidies, leading to alternative approaches such as the organic movement.

**Types** :- Pastoralism involves managing domesticated animals. In nomadic pastoralism, herds of livestock are moved from place to place in search of pasture, fodder, and water. This type of farming is practised in arid and semi-arid regions of Sahara, Central Asia and some parts of India.

In shifting cultivation, a small area of forest is cleared by cutting and burning the trees. The cleared land is used for growing crops for a few years until the soil becomes too infertile, and the area is abandoned. Another patch of land is selected and the process is repeated. This type of farming is practiced mainly in areas with abundant rainfall where the forest regenerates quickly. This practice is used in Northeast India, Southeast Asia, and the Amazon Basin.

Subsistence farming is practiced to satisfy family or local needs alone, with little left over for transport elsewhere. It is intensively practiced in Monsoon Asia and South-East Asia. An estimated 2.5 billion subsistence farmers worked in 2018, cultivating about 60% of the earth's arable land.

Intensive farming is cultivation to maximise profit, with a low fallow ratio and a high use of inputs (water, fertilizer, pesticide and automation). It is practiced mainly in developed countries.

**Contemporary Agriculture**

**Status** :- From the twentieth century, intensive agriculture increased productivity. It substituted synthetic fertilizers and pesticides for labor, but caused increased water pollution, and often involved farm subsidies. In recent years there has been a backlash against the environmental effects of conventional agriculture, resulting in the organic, regenerative, and sustainable agriculture movements. One of the major forces behind this movement has been the European Union, which first certified organic food in 1991 and began reform of its Common Agricultural Policy (CAP) in 2005 to phase out commodity-linked farm subsidies, also known as decoupling. The growth of organic farming has renewed research in alternative technologies such as integrated pest management, selective breeding, and controlled-environment agriculture. Recent mainstream technological developments include genetically modified food. Demand for non-food biofuel crops, development of former farm lands, rising transportation costs, climate change, growing consumer demand in China and India, and population growth, are threatening food security in many parts of the world. The International Fund for Agricultural Development posits that an increase in smallholder agriculture may be part of the solution to concerns about food prices and overall food security, given the favorable experience of Vietnam. Soil degradation and diseases such as stem rust are major concerns globally; approximately 40% of the world's agricultural land is seriously degraded. By 2015, the agricultural output of China was the largest in the world, followed by the European Union, India and the United States. Economists measure the total factor productivity of agriculture and by this measure agriculture in the United States is roughly 1.7 times more productive than it was in 1948.

**Workforce** :- Following the three-sector theory, the number of people employed in agriculture and other primary activities (such as fishing) can be more than 80% in the least developed countries, and less than 2% in the most highly developed countries. Since the Industrial Revolution, many countries have made the transition to developed economies, and the proportion of people working in agriculture has steadily fallen. During the 16th century in Europe, for example, between 55 and 75% of the population was engaged in agriculture; by the 19th century, this had dropped to between 35 and 65%. In the same countries today, the figure is less than 10%. At the start of the 21st century, some one billion people, or over 1/3 of the available work force, were employed in agriculture. It constitutes approximately 70% of the global employment of children, and in many countries employs the largest percentage of women of any industry. The service sector overtook the agricultural sector as the largest global employer in 2007.

**Safety :-** Agriculture, specifically farming, remains a hazardous industry, and farmers worldwide remain at high risk of work-related injuries, lung disease, noise-induced hearing loss, skin diseases, as well as certain cancers related to chemical use and prolonged sun exposure. On industrialized farms, injuries frequently involve the use of agricultural machinery, and a common cause of fatal agricultural injuries in developed countries is tractor rollovers. Pesticides and other chemicals used in farming can also be hazardous to worker health, and workers exposed to pesticides may experience illness or have children with birth defects. As an industry in which families commonly share in work and live on the farm itself, entire families can be at risk for injuries, illness, and death. Ages 0–6 may be an especially vulnerable population in agriculture; common causes of fatal injuries among young farm workers include drowning, machinery and motor accidents, including with all-terrain vehicles.

The International Labour Organization considers agriculture "one of the most hazardous of all economic sectors". It estimates that the annual work-related death toll among agricultural employees is at least 170,000, twice the average rate of other jobs. In addition, incidences of death, injury and illness related to agricultural activities often go unreported. The organization has developed the Safety and Health in Agriculture Convention, 2001, which covers the range of risks in the agriculture occupation, the prevention of these risks and the role that individuals and organizations engaged in agriculture should play.

In the United States, agriculture has been identified by the National Institute for Occupational Safety and Health as a priority industry sector in the National Occupational Research Agenda to identify and provide intervention strategies for occupational health and safety issues. In the European Union, the European Agency for Safety and Health at Work has issued guidelines on implementing health and safety directives in agriculture, livestock farming, horticulture, and forestry. The Agricultural Safety and Health Council of America (ASHCA) also holds a yearly summit to discuss safety.

**Production :-** Overall production varies by country as listed.

**Crop cultivation systems :-** Cropping systems vary among farms depending on the available resources and constraints; geography and climate of the farm; government policy; economic, social and political pressures; and the philosophy and culture of the farmer.

Shifting cultivation (or slash and burn) is a system in which forests are burnt, releasing nutrients to support cultivation of annual and then perennial crops for a period of several years. Then the plot is left fallow to regrow forest, and the farmer moves to a new plot, returning after many more years (10–20). This fallow period is shortened if population density grows, requiring the input of nutrients (fertilizer or manure) and some manual pest control. Annual cultivation is the next phase of intensity in which there is no fallow period. This requires even greater nutrient and pest control inputs.

Further industrialization led to the use of monocultures, when one cultivar is planted on a large acreage. Because of the low biodiversity, nutrient use is uniform and pests tend to build up, necessitating the greater use of pesticides and fertilizers. Multiple cropping, in which several crops are grown sequentially in one year, and intercropping, when several crops are grown at the same time, are other kinds of annual cropping systems known as polycultures.

In subtropical and arid environments, the timing and extent of agriculture may be limited by rainfall, either not allowing multiple annual crops in a year, or requiring irrigation. In all of these environments perennial crops are grown (coffee, chocolate) and systems are practiced such as agroforestry. In temperate environments, where ecosystems were predominantly grassland or prairie, highly productive annual farming is the dominant agricultural system.

Important categories of food crops include cereals, legumes, forage, fruits and vegetables. Natural fibers include cotton, wool, hemp, silk and flax. Specific crops are cultivated in distinct growing regions throughout the world. Production is listed in millions of metric tons, based on FAO estimates.

**Livestock Production Systems :-** Animal husbandry is the breeding and raising of animals for meat, milk, eggs, or wool, and for work and transport. Working animals, including horses, mules, oxen, water buffalo, camels, llamas, alpacas, donkeys, and dogs, have for centuries been used to help cultivate fields, harvest crops, wrangle other animals, and transport farm products to buyers.

Livestock production systems can be defined based on feed source, as grassland-based, mixed, and landless. As of 2010, 30% of Earth's ice- and water-free area was used for producing livestock, with the sector employing approximately 1.3 billion people. Between the 1960s and the 2000s, there was a significant increase in livestock production, both by numbers and by carcass weight, especially among beef, pigs and chickens, the latter of which had production increased by almost a factor of 10. Non-meat animals, such as milk cows and egg-producing chickens, also showed significant production increases. Global cattle, sheep and goat populations are expected to continue to increase sharply through 2050. Aquaculture or fish farming, the production of fish for human consumption in confined operations, is one of the fastest growing sectors of food production, growing at an average of 9% a year between 1975 and 2007.

During the second half of the 20th century, producers using selective breeding focused on creating livestock breeds and crossbreeds that increased production, while mostly disregarding the need to preserve genetic diversity. This trend has led to a significant decrease in genetic diversity and resources among livestock breeds, leading to a corresponding decrease in disease resistance and local adaptations previously found among traditional breeds.

Grassland based livestock production relies upon plant material such as shrubland, rangeland, and pastures for feeding ruminant animals. Outside nutrient inputs may be used, however manure is returned directly to the grassland as a major nutrient source. This system is particularly important in areas where crop production is not feasible because of climate or soil, representing 30–40 million pastoralists. Mixed production systems use grassland, fodder crops and grain feed crops as feed for ruminant and monogastric (one stomach; mainly chickens and pigs) livestock. Manure is typically recycled in mixed systems as a fertilizer for crops.

Landless systems rely upon feed from outside the farm, representing the de-linking of crop and livestock production found more prevalently in Organisation for Economic Co-operation and Development member countries. Synthetic fertilizers are more heavily relied upon for crop production and manure utilization becomes a challenge as well as a source for pollution. Industrialized countries use these operations to produce much of the global supplies of poultry and pork. Scientists estimate that 75% of the growth in livestock production between 2003 and 2030 will be in confined animal feeding operations, sometimes called factory farming. Much of this growth is happening in developing countries in Asia, with much smaller amounts of growth in Africa. Some of the practices used in commercial livestock production, including the usage of growth hormones, are controversial.

**Production Practices :-** Tillage is the practice of breaking up the soil with tools such as the plow or harrow to prepare for planting, for nutrient incorporation, or for pest control. Tillage varies in intensity from conventional to no-till. It may improve productivity by warming the soil, incorporating fertilizer and controlling weeds, but also renders soil more prone to erosion, triggers the decomposition of organic matter releasing $CO_2$, and reduces the abundance and diversity of soil organisms.

Pest control includes the management of weeds, insects, mites, and diseases. Chemical (pesticides), biological (biocontrol), mechanical (tillage), and cultural practices are used. Cultural practices include crop rotation, culling, cover crops, intercropping, composting, avoidance, and resistance. Integrated pest management attempts to use all of these methods to keep pest populations below the number which would cause economic loss, and recommends pesticides as a last resort.

Nutrient management includes both the source of nutrient inputs for crop and livestock production, and the method of utilization of manure produced by livestock. Nutrient inputs can be chemical inorganic fertilizers, manure, green manure, compost and minerals. Crop nutrient use may also be managed using cultural techniques such as crop rotation or a fallow period. Manure is used either by holding livestock where the feed crop is growing, such as in managed intensive rotational grazing, or by spreading either dry or liquid formulations of manure on cropland or pastures.

Water management is needed where rainfall is insufficient or variable, which occurs to some degree in most regions of the world. Some farmers use irrigation to supplement rainfall. In other areas such as the Great Plains in the U.S. and Canada, farmers use a fallow year to conserve soil moisture to use for growing a crop in the following year. Agriculture represents 70% of freshwater use worldwide.

According to a report by the International Food Policy Research Institute, agricultural technologies will have the greatest impact on food production if adopted in combination with each other; using a model that assessed how eleven technologies could impact agricultural productivity, food security and trade by 2050, the International Food Policy Research Institute found that the number of people at risk from hunger could be reduced by as much as 40% and food prices could be reduced by almost half.

Payment for ecosystem services is a method of providing additional incentives to encourage farmers to conserve some aspects of the environment. Measures might include paying for reforestation upstream of a city, to improve the supply of fresh water.

**Crop Alteration and Biotechnology**

**Plant breeding** :- Crop alteration has been practiced by humankind for thousands of years, since the beginning of civilization. Altering crops through breeding practices changes the genetic make-up of a plant to develop crops with more beneficial characteristics for humans, for example, larger fruits or seeds, drought-tolerance, or resistance to pests. Significant advances in plant breeding ensued after the work of geneticist Gregor Mendel. His work on dominant and recessive alleles, although initially largely ignored for almost 50 years, gave plant breeders a better understanding of genetics and breeding techniques. Crop breeding includes techniques such as plant selection with desirable traits, self-pollination and cross-pollination, and molecular techniques that genetically modify the organism.

Domestication of plants has, over the centuries increased yield, improved disease resistance and drought tolerance, eased harvest and improved the taste and nutritional value of crop plants. Careful selection and breeding have had enormous effects on the characteristics of crop plants. Plant selection and breeding in the 1920s and 1930s improved pasture (grasses and clover) in New Zealand. Extensive X-ray and ultraviolet induced mutagenesis efforts (i.e. primitive genetic engineering) during the 1950s produced the modern commercial varieties of grains such as wheat, corn (maize) and barley.

The Green Revolution popularized the use of conventional hybridization to sharply increase yield by creating "high-yielding varieties". For example, average yields of corn (maize) in the US have increased from around 2.5 tons per hectare (t/ha) (40 bushels per acre) in 1900 to about 9.4 t/ha (150 bushels per acre) in 2001. Similarly, worldwide average wheat yields have increased from less than 1 t/ha in 1900 to more than 2.5 t/ha in 1990. South American average wheat yields are around 2 t/ha, African under 1 t/ha, and Egypt and Arabia up to 3.5 to 4 t/ha with irrigation. In contrast, the average wheat yield in countries such as France is over 8 t/ha. Variations in yields are due mainly to variation in climate, genetics, and the level of intensive farming techniques (use of fertilizers, chemical pest control, growth control to avoid lodging).

**Genetic Engineering** :- Genetically modified organisms (GMO) are organisms whose genetic material has been altered by genetic engineering techniques generally known as recombinant DNA technology. Genetic engineering has expanded the genes available to breeders to utilize in creating desired germlines for new crops. Increased durability, nutritional content, insect and virus resistance and herbicide tolerance are a few of the attributes bred into crops through genetic engineering. For some, GMO crops cause food safety and food labeling concerns. Numerous countries have placed restrictions on the production, import or use of GMO foods and crops. Currently a global treaty, the Biosafety Protocol, regulates the trade of GMOs. There is ongoing discussion regarding the labeling of foods made from GMOs, and while the EU currently requires all GMO foods to be labeled, the US does not.

Herbicide-resistant seed has a gene implanted into its genome that allows the plants to tolerate exposure to herbicides, including glyphosate. These seeds allow the farmer to grow a crop that can be sprayed with herbicides to control weeds without harming the resistant crop. Herbicide-tolerant crops are used by farmers worldwide. With the increasing use of herbicide-tolerant crops, comes an increase in the use of glyphosate-based herbicide sprays. In some areas glyphosate resistant weeds have developed, causing farmers to switch to other herbicides. Some studies also link widespread glyphosate usage to iron deficiencies in some crops, which is both a crop production and a nutritional quality concern, with potential economic and health implications.

Other GMO crops used by growers include insect-resistant crops, which have a gene from the soil bacterium Bacillus thuringiensis (Bt), which produces a toxin specific to insects. These crops resist damage by insects. Some believe that similar or better pest-resistance traits can be acquired through traditional breeding practices, and resistance to various pests can be gained through hybridization or cross-pollination with wild species. In some cases, wild species are the primary source of resistance traits; some tomato cultivars that have gained resistance to at least 19 diseases did so through crossing with wild populations of tomatoes.

**Environmental Impact**

**Effects and costs :-** Agriculture imposes multiple external costs upon society through effects such as pesticide damage to nature (especially herbicides and insecticides), nutrient runoff, excessive water usage, and loss of natural environment. A 2000 assessment of agriculture in the UK determined total external costs for 1996 of £2,343 million, or £208 per hectare. A 2005 analysis of these costs in the US concluded that cropland imposes approximately \$5 to \$16 billion (\$30 to \$96 per hectare), while livestock production imposes \$714 million. Both studies, which focused solely on the fiscal impacts, concluded that more should be done to internalize external costs. Neither included subsidies in their analysis, but they noted that subsidies also influence the cost of agriculture to society.

Agriculture seeks to increase yield and to reduce costs. Yield increases with inputs such as fertilisers and removal of pathogens, predators, and competitors (such as weeds). Costs decrease with increasing scale of farm units, such as making fields larger; this means removing hedges, ditches and other areas of habitat. Pesticides kill insects, plants and fungi. These and other measures have cut biodiversity to very low levels on intensively farmed land.

In 2010, the International Resource Panel of the United Nations Environment Programme assessed the environmental impacts of consumption and production. It found that agriculture and food consumption are two of the most important drivers of environmental pressures, particularly habitat change, climate change, water use and toxic emissions. Agriculture is the main source of toxins released into the environment, including insecticides, especially those used on cotton. The 2011 UNEP Green Economy report states that "[a]agricultural operations, excluding land use changes, produce approximately 13 per cent of anthropogenic global GHG emissions. This includes GHGs emitted by the use of inorganic fertilizers agro-chemical pesticides and herbicides; (GHG emissions resulting from production of these inputs are included in industrial emissions); and fossil fuel-energy inputs. "On average we find that the total amount of fresh residues from agricultural and forestry production for second-generation biofuel production amounts to 3.8 billion tonnes per year between 2011 and 2050 (with an average annual growth rate of 11 per cent throughout the period analysed, accounting for higher growth during early years, 48 per cent for 2011–2020 and an average 2 per cent annual expansion after 2020)."

**Livestock Issues** :- A senior UN official, Henning Steinfeld, said that "Livestock are one of the most significant contributors to today's most serious environmental problems". Livestock production occupies 70% of all land used for agriculture, or 30% of the land surface of the planet. It is one of the largest sources of greenhouse gases, responsible for 18% of the world's greenhouse gas emissions as measured in $CO_2$ equivalents. By comparison, all transportation emits 13.5% of the $CO_2$. It produces 65% of human-related nitrous oxide (which has 296 times the global warming potential of $CO_2$) and 37% of all human-induced methane (which is 23 times as warming as $CO_2$.) It also generates 64% of the ammonia emission. Livestock expansion is cited as a key factor driving deforestation; in the Amazon basin 70% of previously forested area is now occupied by pastures and the remainder used for feedcrops. Through deforestation and land degradation, livestock is also driving reductions in biodiversity. Furthermore, the UNEP states that "methane emissions from global livestock are projected to increase by 60 per cent by 2030 under current practices and consumption patterns."

**Land And Water Issues** :- Land transformation, the use of land to yield goods and services, is the most substantial way humans alter the Earth's ecosystems, and is considered the driving force in the loss of biodiversity. Estimates of the amount of land transformed by humans vary from 39 to 50%. Land degradation, the long-term decline in ecosystem function and productivity, is estimated to be occurring on 24% of land worldwide, with cropland overrepresented. The UN-FAO report cites land management as the driving factor behind degradation and reports that 1.5 billion people rely upon the degrading land. Degradation can be deforestation, desertification, soil erosion, mineral depletion, or chemical degradation.

Eutrophication, excessive nutrients in aquatic ecosystems resulting in algal bloom and anoxia, leads to fish kills, loss of biodiversity, and renders water unfit for drinking and other industrial uses. Excessive fertilization and manure application to cropland, as well as high livestock stocking densities cause nutrient (mainly nitrogen and phosphorus) runoff and leaching from agricultural land. These nutrients are major nonpoint pollutants contributing to eutrophication of aquatic ecosystems and pollution of groundwater, with harmful effects on human populations. Fertilisers also reduce terrestrial biodiversity by increasing competition for light, favouring those species that are able to benefit from the added nutrients. Agriculture accounts for 70 percent of withdrawals of freshwater resources. Agriculture is a major draw on water from aquifers, and currently draws from those underground water sources at an unsustainable rate. It is long known that aquifers in areas as diverse as northern China, the Upper Ganges and the western US are being depleted, and new research extends these problems to aquifers in Iran, Mexico and Saudi Arabia. Increasing pressure is being placed on water resources by industry and urban areas, meaning that water scarcity is increasing and agriculture is facing the challenge of producing more food for the world's growing population with reduced water resources. Agricultural water usage can also cause major environmental problems, including the destruction of natural wetlands, the spread of water-borne diseases, and land degradation through salinization and waterlogging, when irrigation is performed incorrectly.

**Pesticides** :- Pesticide use has increased since 1950 to 2.5 million short tons annually worldwide, yet crop loss from pests has remained relatively constant. The World Health Organization estimated in 1992 that three million pesticide poisonings occur annually, causing 220,000 deaths. Pesticides select for pesticide resistance in the pest population, leading to a condition termed the "pesticide treadmill" in which pest resistance warrants the development of a new pesticide.

An alternative argument is that the way to "save the environment" and prevent famine is by using pesticides and intensive high yield farming, a view exemplified by a quote heading the Center for Global Food Issues website: 'Growing more per acre leaves more land for nature'. However, critics argue that a trade-off between the environment and a need for food is not inevitable, and that pesticides simply replace good agronomic practices such as crop rotation. The Push–pull agricultural pest management technique involves intercropping, using plant aromas to repel pests from crops (push) and to lure them to a place from which they can then be removed (pull).

**Global Warming :-** Global warming and agriculture are interrelated on a global scale. Global warming affects agriculture through changes in average temperatures, rainfall, and weather extremes (like storms and heat waves); changes in pests and diseases; changes in atmospheric carbon dioxide and ground-level ozone concentrations; changes in the nutritional quality of some foods; and changes in sea level. Global warming is already affecting agriculture, with effects unevenly distributed across the world. Future climate change will probably negatively affect crop production in low latitude countries, while effects in northern latitudes may be positive or negative. Global warming will probably increase the risk of food insecurity for some vulnerable groups, such as the poor.

Animal husbandry is also responsible for greenhouse gas production of CO 2 and a percentage of the world's methane, and future land infertility, and the displacement of wildlife. Agriculture contributes to climate change by anthropogenic emissions of greenhouse gases, and by the conversion of non-agricultural land such as forest for agricultural use. Agriculture, forestry and land-use change contributed around 20 to 25% to global annual emissions in 2010. A range of policies can reduce the risk of negative climate change impacts on agriculture, and greenhouse gas emissions from the agriculture sector.

**Sustainability :-** Current farming methods have resulted in over-stretched water resources, high levels of erosion and reduced soil fertility. There is not enough water to continue farming using current practices; therefore how critical water, land, and ecosystem resources are used to boost crop yields must be reconsidered. A solution would be to give value to ecosystems, recognizing environmental and livelihood tradeoffs, and balancing the rights of a variety of users and interests. Inequities that result when such measures are adopted would need to be addressed, such as the reallocation of water from poor to rich, the clearing of land to make way for more productive farmland, or the preservation of a wetland system that limits fishing rights.

Technological advancements help provide farmers with tools and resources to make farming more sustainable. Technology permits innovations like conservation tillage, a farming process which helps prevent land loss to erosion, reduces water pollution, and enhances carbon sequestration.

According to a report by the International Food Policy Research Institute (IFPRI), agricultural technologies will have the greatest impact on food production if adopted in combination with each other; using a model that assessed how eleven technologies could impact agricultural productivity, food security and trade by 2050, IFPRI found that the number of people at risk from hunger could be reduced by as much as 40% and food prices could be reduced by almost half. The caloric demand of Earth's projected population, with current climate change predictions, can be satisfied by additional improvement of agricultural methods, expansion of agricultural areas, and a sustainability-oriented consumer mindset.

**Energy Dependence** :- Since the 1940s, agricultural productivity has increased dramatically, due largely to the increased use of energy-intensive mechanization, fertilizers and pesticides. The vast majority of this energy input comes from fossil fuel sources. Between the 1960s and the 1980s, the Green Revolution transformed agriculture around the globe, with world grain production increasing significantly (between 70% and 390% for wheat and 60% to 150% for rice, depending on geographic area) as world population doubled. Heavy reliance on petrochemicals has raised concerns that oil shortages could increase costs and reduce agricultural output.

Industrialized agriculture depends on fossil fuels in two fundamental ways: direct consumption on the farm and manufacture of inputs used on the farm. Direct consumption includes the use of lubricants and fuels to operate farm vehicles and machinery.

**Agriculture and food system share (%) of total energy consumption by three industrialized nations**

| Country | Year | Agriculture (direct & indirect) | Food system |
|---|---|---|---|
| United Kingdom[187] | 2005 | 1.9 | 11 |
| United States[188] | 2002 | 2.0 | 14 |
| Sweden[189] | 2000 | 2.5 | 13 |

Indirect consumption includes the manufacture of fertilizers, pesticides, and farm machinery. In particular, the production of nitrogen fertilizer can account for over half of agricultural energy usage. Together, direct and indirect consumption by US farms accounts for about 2% of the nation's energy use. Direct and indirect energy consumption by U.S. farms peaked in 1979, and has since gradually declined. Food systems encompass not just agriculture but off-farm processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. Agriculture accounts for less than one-fifth of food system energy use in the US.

**Disciplines** :- Agricultural economics is economics as it relates to the "production, distribution and consumption of [agricultural] goods and services". Combining agricultural production with general theories of marketing and business as a discipline of study began in the late 1800s, and grew significantly through the 20th century. Although the study of agricultural economics is relatively recent, major trends in agriculture have significantly affected national and international economies throughout history, ranging from tenant farmers and sharecropping in the post-American Civil War Southern United States to the European feudal system of manorialism. In the United States, and elsewhere, food costs attributed to food processing, distribution, and agricultural marketing, sometimes referred to as the value chain, have risen while the costs attributed to farming have declined. This is related to the greater efficiency of farming, combined with the increased level of value addition (e.g. more highly processed products) provided by the supply chain. Market concentration has increased in the sector as well, and although the total effect of the increased market concentration is likely increased efficiency, the changes redistribute economic surplus from producers (farmers) and consumers, and may have negative implications for rural communities.

National government policies can significantly change the economic marketplace for agricultural products, in the form of taxation, subsidies, tariffs and other measures. Since at least the 1960s, a combination of trade restrictions, exchange rate policies and subsidies have affected farmers in both the developing and the developed world. In the 1980s, non-subsidized farmers in developing countries experienced adverse effects from national policies that created artificially low global prices for farm products. Between the mid-1980s and the early 2000s, several international agreements limited agricultural tariffs, subsidies and other trade restrictions.

However, as of 2009, there was still a significant amount of policy-driven distortion in global agricultural product prices. The three agricultural products with the greatest amount of trade distortion were sugar, milk and rice, mainly due to taxation. Among the oilseeds, sesame had the greatest amount of taxation, but overall, feed grains and oilseeds had much lower levels of taxation than livestock products. Since the 1980s, policy-driven distortions have seen a greater decrease among livestock products than crops during the worldwide reforms in agricultural policy. Despite this progress, certain crops, such as cotton, still see subsidies in developed countries artificially deflating global prices, causing hardship in developing countries with non-subsidized farmers. Unprocessed commodities such as corn, soybeans, and cattle are generally graded to indicate quality, affecting the price the producer receives. Commodities are generally reported by production quantities, such as volume, number or weight.

**Agricultural Science :-** Agricultural science is a broad multidisciplinary field of biology that encompasses the parts of exact, natural, economic and social sciences used in the practice and understanding of agriculture. It covers topics such as agronomy, plant breeding and genetics, plant pathology, crop modelling, soil science, entomology, production techniques and improvement, study of pests and their management, and study of adverse environmental effects such as soil degradation, waste management, and bioremediation.

The scientific study of agriculture began in the 18th century, when Johann Friedrich Mayer conducted experiments on the use of gypsum (hydrated calcium sulphate) as a fertilizer. Research became more systematic when in 1843, John Lawes and Henry Gilbert began a set of long-term agronomy field experiments at Rothamsted Research Station in England; some of them, such as the Park Grass Experiment, are still running. In America, the Hatch Act of 1887 provided funding for what it was the first to call "agricultural science", driven by farmers' interest in fertilizers. In agricultural entomology, the USDA began to research biological control in 1881; it instituted its first large program in 1905, searching Europe and Japan for natural enemies of the gypsy moth and brown-tail moth, establishing parasitoids (such as solitary wasps) and predators of both pests in the USA.

**Policy :-**

Direct subsidies for animal products and feed by OECD countries in 2012, in billions of US dollars

| **Product** | **Subsidy** |
|---|---|
| Beef and veal | 18.0 |
| Milk | 15.3 |
| Pigs | 7.3 |
| Poultry | 6.5 |
| Soybeans | 2.3 |
| Eggs | 1.5 |
| Sheep | 1.1 |

Agricultural policy is the set of government decisions and actions relating to domestic agriculture and imports of foreign agricultural products. Governments usually implement agricultural policies with the goal of achieving a specific outcome in the domestic agricultural product markets. Some overarching themes include risk management and adjustment (including policies related to climate change, food safety and natural disasters), economic stability (including policies related to taxes), natural resources and environmental sustainability (especially water policy), research and development, and market access for domestic commodities (including relations with global organizations and agreements with other countries). Agricultural policy can also touch on food quality, ensuring that the food supply is of a consistent and known quality, food security, ensuring that the food supply meets the population's needs, and conservation. Policy programs can range from financial programs, such as subsidies, to encouraging producers to enroll in voluntary quality assurance programs.

There are many influences on the creation of agricultural policy, including consumers, agribusiness, trade lobbies and other groups. Agribusiness interests hold a large amount of influence over policy making, in the form of lobbying and campaign contributions. Political action groups, including those interested in environmental issues and labor unions, also provide influence, as do lobbying organizations representing individual agricultural commodities. The Food and Agriculture Organization of the United Nations (FAO) leads international efforts to defeat hunger and provides a forum for the negotiation of global agricultural regulations and agreements. Dr. Samuel Jutzi, director of FAO's animal production and health division, states that lobbying by large corporations has stopped reforms that would improve human health and the environment. For example, proposals in 2010 for a voluntary code of conduct for the livestock industry that would have provided incentives for improving standards for health, and environmental regulations, such as the number of animals an area of land can support without long-term damage, were successfully defeated due to large food company pressure.

**Artisan :-** Traditional hand block print artisan in India.

An **artisan** (from French: artisan, Italian: artigiano) is a skilled craft worker who makes or creates material objects partly or entirely by hand. These objects may be functional or strictly decorative, for example furniture, decorative art, sculpture, clothing, jewellery, food items, household items and tools and mechanisms such as the handmade clockwork movement of a watchmaker. Artisans practice a craft and may through experience and aptitude reach the expressive levels of an artist.

The adjective "artisanal" is often used in describing hand-processing in contrast to an industrial process, such as in the phrase artisanal mining. Thus, "artisanal" is sometimes used in marketing and advertising as a buzz word to describe or imply some relation with the crafting of handmade food products, such as bread, beverages or cheese. Many of these have traditionally been handmade, rural or pastoral goods but are also now commonly made on a larger scale with automated mechanization in factories and other industrial areas.

Artisans were the dominant producers of consumer products before the Industrial Revolution.

In ancient Greece, artisans were drawn to agoras and often built workshops nearby.

**Medieval Artisans :-** During the Middle Ages, the term "artisan" was applied to those who made things or provided services. It did not apply to unskilled manual labourers. Artisans were divided into two distinct groups: those who operated their own businesses and those who did not. Those who owned their businesses were called masters, while the latter were the journeymen and apprentices. One misunderstanding many people have about this social group is that they picture them as "workers" in the modern sense: employed by someone. The most influential group among the artisans were the masters, the business owners. The owners enjoyed a higher social status in their communities.

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# Bio - Diversity of Climbers in flora of Harda district, Madhya Pradesh

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**Abstract :-** Harda district is located in south western part of Madhya Pradesh; with highly rich floristic biodiversity of plant. Thirty percent of its geographical area constitutes forest and covered by Satpura hill ranges, Malwa plateau and Narmada basin. Climbing floral diversity of higher plants was undertaken in the Harda district of Madhya Pradesh during 2011-2016. The tribal of this area includes Korkus, Takur, Gound, Gujar, Vishwakarma, Jat, Bhil and Bhilala. 44.26 percent population belongs to tribal communities. The present study highlights the prevalence of climbers in the floristic composition of the area and also recorded the uses of some of the climbers by the ethnic groups of the area. A total of 64 species, 45 genera and 10 families along with their ability recorded from the area and out of these 51 species are found to be used by the local ethnic communities of area and13 species are economically important. Ipomoea is the largest genera with 7 species and Dioscorea is second largest genera with 5 species. Five largest family with number of species are as fallowed Leguminosae (28) Convolvulaceae (11) Dioscoreaceae (5) Malpighiaceae (4) Vitaceae (4).

**Keywords :-** Harda, biodiversity, Narmada River, Satpura ranges, Malwa plateau.

**Introduction :-** Harda district is situated in the eastern part of Madhya Pradesh. Harda has been declared as a separate district by Government of Madhya Pradesh on $6^{th}$ July, 1998. Earlier it was a part of Hoshangabad district. It lies in 21˚ 53` to 22˚36` longitude and 76˚47` to 77˚20`latitude. Total area of the district is 3,334 Km2. of which forest covers 780.92 Sq. Km. It is bounded by Satpura ranges in the north and southern part of the district is covered by Satpura and extension of Malwa plateau. Population of the Harda district is 570465. The study area is mainly drained by Narmada River and its tributaries are Ganjal, Anjal, Sukni, Midkul, Dedra Machak, Syani, and Kalimachak rivers. The normal rainfall of Harda district is 1124.2 mm. The normal annual mean maximum temperature 32.8˚C and minimum temperature is 19.8˚C.

**Material and methods :-** Intensive floristic survey has been carried out in different seasons from 2011 to 2016 by well planned schedule, covering various vegetation types, altitudinal ranges, wastelands, and weeds of cultivated fields, road side, river banks, streams beds and all other conceivable ecological niches. For plant collection and preservation of voucher specimens standard methodology has been followed (Jain and Rao, 1977). Voucher specimen were collected in polybag and identified in the laboratory with the help of flora (Hooker, 1892-1897; Cook,1903; Gamble et al., 1915; Haines,1921-1924; Verma et.al.,1994; Mudgal et. al., 1997) and other available literature were also consulted for identification of plants. Photographs have been taken using digital camera. Recent up-to-date nomenclature of ICBN was followed. For changed name of families or botanical names latest classification of APG-III has been followed. Herbarium specimens were deposited in PMB Gujarati Science College, Indore.

**Result and discussion :-** The climbing plants are part of Indian flora. Climbers are classified into root climbers, hook climbers tendril climber, leaf or stem climbers or twinners. Human beings are directly or indirectly used it as economic and medicinal both. Thus the people depend on climbers for several purposes e.g. NTFP, medicine, food, etc. In different part of India studies on diversity of climbers were undertaken by a number of workers (Gentry, 1991, Ghosh and Mukherjee, 2006; Bandopadhya and Mukherjee, 2010; Jangid and Sharma, 2011) and opined that climbers form the main components of ecosystem. However, no attempt has been made as such to study the diversity of climbing species in Harda district of Madhya Pradesh, India.

The present study highlights the prevalence of climbers in the floristic composition of the Harda district of M.P. Thirty percent of its geographical area constitutes forest and covered by Satpura hill ranges, Malwa plateau and Narmada basin. Climbing floral diversity of higher plants was undertaken in the Harda district of Madhya Pradesh during 2011-2016. The tribal of this area includes Korkus, Takur, Gound, Gujar, Vishwakarma, Jat, Bhil and Bhilala. 44.26 percent population belongs to tribal communities. A total of 64 species, 45 genera and 10 families (**Table-1**) along with their ability recorded from the area and out of these 51 species are found to be used by the local ethnic communities of area and 13 species are economically important. Ipomoea is the largest genera with 7 species and Dioscorea is second largest genera with 5 species. Five largest family with number of species are as fallowed Leguminosae (28) Convolvulaceae (11) Dioscoreaceae (5) Malpighiaceae (4) Vitaceae (4).

**Conclusion** :- In the flora of Harda district of Madhya Pradesh A total of 64 species, 45 genera and 10 families along with their ability recorded from the area and out of these 51 species are found to be used by the local ethnic communities of area and13 species is economically important. On this topic it is the pioneer research article. Some species are restricted in some particular areas due to favorable micro-climate. But some species are distributed throughout whole area. The adaptation capacity of these species is better than other four spices. But more research is needed on the ecological and economical aspect of view.

**Acknowledgement :-** I would like to express my boundless and great respect to my supervisor Dr. Sudip Ray Department of Botany, P.M.B. Gujarati Science College Indore for his guidance during this entire study. I also thank Dr. J. S. Sikka, Head, Department of Botany for their kind cooperation and valuable suggestions. My sincere thanks are due to forest officials for their co-operation and allowing me to carry out plant exploration work in Harda forest division. I extend my profound thanks to Dr. V.B. Diwanjee Ex-Head, Department of Botany, Holkar Science College, Indore; Dr. B. K. Shukla Senior Scientist, Botanical Survey of India, Allahabad and Dr. S. R. Yadav, Shivaji University, Kolhapur, Maharashtra, for their help in identifying some plant specimens.

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# An Analytical Study of Institutional Finance and Entrepreneurial Development

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**Abstract :-** The success of entrepreneurial development depends upon the sources of finance. There are various financial institutions providing the vital inputs like finance and development assistance. Financial assistances have been provided by various institutions for the efficient utilization of land, labour, machinery and raw materials. Only the adequacy of financial helps and entrepreneurial stewardship can bring together land, labour machinery, and raw materials judiciously, to produce goods. The government of India and the state governments have set up a host of institutions to meet the financial requirements of entrepreneurs to setup MSMEs and business to their own and there by becoming self-employed, employer and contribute to the country's GDP along with adequate employment generation. This study is fully related with descriptive method. Both primary and secondary data has been collected for this study. Simple random and purpose sampling method has been used for the collection of data. This study is attempted to an economic analysis of institutional finance and entrepreneurial development of Bangalore city.

**Key words :-** Finance, MSME, Employment and entrepreneur.

**Introduction :-** In India, majority of population has been depending on agriculture for their livelihood, for that it is based an agrarian economy. Nowadays in India the agriculture sector has been facing problem with excessive dependency. Hence, the alternative of agriculture could have the same problem significantly. Reducing the burden in investing agriculture, Micro, Small and Medium Enterprises (MSME) are the right and immediate choice to investing it. The government of India is getting more focused on MSMEs "(earlier it was recognized as Small Scale Industries (SSIs) and Small and Medium Enterprises (SMEs))". Productive employment and raising Gross Domestic Product are the main strategies for achieving the inclusive growth. Increasing production may raise the magnitude of GDP although there is no guarantee of employment generation as known as job less growth. Reforming Economic development and sustainability in employment generation have equal importance in India. But there is a contradiction between the concept of reforms and sustainability. By the way of reforming can increase economic development but the fluctuations are not being predicted. Same time sustainability assures the lift for today's generation as well as future generation. The government of India have taken several strategic steps to ensure both the development of economic as well as sustainability.

**Need for Entrepreneurship Development :-** In developing countries like India, with their planning experience some interesting conclusions can be drawn, most of the countries are irrespective of nature of planning they pursued, poverty alleviation, plan have been failed to realize the expectation in development, reducing imbalances and employment generation. The two major problems is faced by developing countries like India are mass poverty and wide-spread chronic unemployment among all problems. India invested to create the fifty million job opportunities in its tenth five year plan. The MSMEs could solve the problem with low amount of capital and labour intensity in better way. This assists the entrepreneurs are capable to provide more employment for job-less youth and increase the earning and decrease the poverty. Hence developing entrepreneurship is most significant for employment generation and poverty alleviation. The entrepreneurs perform with such responsibilities as producers, employees, innovators, risk takers, market makers, decision makers and the pioneer of economic development. So that the respective government has the responsibility to promote the entrepreneurial skills to create employments, decrease poverty, raise the industrial and economic development, and reduce the regional imbalances and to utilize the resources resourcefully.

**Need for Finance to Entrepreneurship Development :-** Finance is the source which is the blood of organization and most important feature of entrepreneur's development. Entrepreneurship is not the quality, it is also needs to be identified and development needs suitable finance. Entry with adequate and timely finance creates competitiveness and prerequisite for the enhancement of MSMEs. Access to finance by MSMEs has major problems due to a combination of factors:

- Weaknesses in the legal framework for loan recovery, bankruptcy, and contract enforcement, together with inefficiencies in the court system-with the latter largely accounting for interstate variations in the time and cost of loan recovery and bankruptcy.
- Absence of reliable credit information on MSMEs.
- Lack of sufficient market credibility in the MSME Sector.

**Review of literature :-**

**Dinesh Awasthi 2004** in his article on "Labour Process and Productivity in Micro and Small Enterprises: The Indian Experience opined that micro and small enterprises (MSEs) have emerged as an important segment, providing resilience to the economy during the extended industrial recession and increased competition in the post liberalization period. MSMEs assist the new entrepreneurs to enter in market and start new business in market environment and also it also reduces the rate of unemployment in the country. MSMEs are fully concentrated factor with differed size, spatial concentration, commodity composition and productivity. The study is revealed that MSMEs is doing a typical role to increase the institutional finance and entrepreneurial development with increasing the production of industrial outputs.

**Statement of the Problem :-** Entrepreneurs are getting motivated by the government policies, financial institutions and environment. No studies have not attempted unique theories for the entry, survive, success and failure of entrepreneurs. So there are more opportunities for new study. Likewise there are not studies is attempted on the efficient utilization of institutional finance for the development entrepreneurs. Hence this study is attempted to analysis economic situation of institutional finance and entrepreneurial development with the special reference in Bangalore city.

**Objectives of the Study :-**

1. To study the institutional finance to entrepreneurship development in India.
2. To examine the relationship between factors of entrepreneurial development and demographic variables.
3. To identify the motivating factors of entrepreneurship development.
4. To find and suggests the causes and consequences of start-up business to entrepreneurs.

**Hypotheses :-**

H1 = There is no relationship among entrepreneurs based on the educational qualification of the respondents

H2 = There is no relationship among entrepreneurs based on the gender of the respondents

H3 = There is no relationship among entrepreneurs based on nature of business of the respondents.

**Methodology :-** In this study the research has been used descriptive, analytical and comparative methods. For making comprehensive and scientific the methodology has been developed for this study.

**Data :-** Both primary and secondary data has been collected for this study. The secondary data has been collected from annual survey of industries, ministry of statistics and programme implementation, Government of India, retrieved from RBI website during 2018, Government documents, documents of the financial institutions, world bank's case studies, working papers of staff, economic survey, plan documents of Karnataka, world development report, budget documents, reports, journals, etc.

**Collection of Primary Data :-** Primary data has been collected by the using of structured questionnaire with survey method. With the help of two point and five point scale purposive and random sampling method has been used with structured questionnaire.

**Analysis and discussion :-**

**Table 1**

**Comparison among Entrepreneurs based on educational qualficaion**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Profit | Between Groups | 3.170 | 1 | 3.170 | 7.395 | .024 |
| | Within Groups | 72.303 | 148 | .489 | | |
| Profit per labour | Between Groups | .855 | 1 | .855 | 1.653 | .201 |
| | Within Groups | 76.585 | 148 | .517 | | |
| Profit as % of investment | Between Groups | 2.866 | 1 | 2.866 | 6.032 | .015 |
| | Within Groups | 70.308 | 148 | .475 | | |
| Profit as % of TC | Between Groups | 4.948 | 1 | 4.948 | 8.887 | .003 |
| | Within Groups | 82.392 | 148 | .557 | | |
| Profit as % of TR | Between Groups | .503 | 1 | .503 | 1.034 | .311 |
| | Within Groups | 72.037 | 148 | .487 | | |

In above table one way ANOVA tool has been used to analyse the relationship between Entrepreneurs based on educational qualification of the respondents. The one group of entrepreneurs having educational qualification has significant relationship with the other group of entrepreneurs in terms of making profit, profit as percentage of investment and profit as percentage of total cost. At the same time profit per labour and profit as percentage of total revenue is not statistically significant with the educational qualification of the respondents.

**Table 2**

**Comparison among Entrepreneurs based on Gender**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Profit | Between Groups | 1.748 | 4 | .437 | .884 | .476 |
| | Within Groups | 71.725 | 145 | .495 | | |
| Profit per labour | Between Groups | 1.821 | 4 | .455 | .873 | .482 |
| | Within Groups | 75.619 | 145 | .522 | | |
| Profit as % of | Between Groups | 5.887 | 4 | 2.472 | 3.960 | .032 |

| | | | | | | |
|---|---|---|---|---|---|---|
| investment | Within Groups | 71.286 | 145 | .492 | | |
| Profit as % of TC | Between Groups | 6.411 | 4 | .853 | 4.473 | .013 |
| | Within Groups | 83.929 | 145 | .579 | | |
| Profit as % of TR | Between Groups | 4.320 | 4 | 3.080 | 4.296 | .026 |
| | Within Groups | 68.220 | 145 | .470 | | |

It is found from the above table that the factors of profit as percentage of investment, profit as percentage of total cost and profits as percentage of total revenue is statistically significant at 0.05 significant level with gender as well as the factors of making profit and profit per labour is not statistically significant with gender at 0.05 significant level respectively.

**Table 3**

**Comparison among Entrepreneurs based on nature of business**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Profit | Between Groups | 2.206 | 1 | 2.206 | 4.582 | .034 |
| | Within Groups | 71.267 | 148 | .482 | | |
| Profit per labour | Between Groups | 2.332 | 1 | .332 | 3.637 | .026 |
| | Within Groups | 77.108 | 148 | .521 | | |
| Profit as % of investment | Between Groups | 2.807 | 1 | 1.807 | 3.747 | .045 |
| | Within Groups | 71.367 | 148 | .482 | | |
| Profit as % of TC | Between Groups | .483 | 1 | .483 | .822 | .366 |
| | Within Groups | 86.857 | 148 | .587 | | |
| Profit as % of TR | Between Groups | 2.447 | 1 | 1.447 | 4.013 | .047 |
| | Within Groups | 71.093 | 148 | .480 | | |

In above table one way ANOVA tool has been sued to analyse the relationship between entrepreneurs based on nature of business. For that the factors of making profit (.034), profit per labour (.026), profit as percentage of investment (.045) and profit as percentage of total revenue (.047) is statistically significant with nature of business of the respondents at 0.05 significant level. The remaining factor of profit as percentage of total cost (.366) is not statistically significant with nature of business of the respondents at 0.05 significant level respectively.

**Suggestions :-** Institutional finance and entrepreneurship development has a stable long-run relationship, hence it expects specified finance for the institution support for entrepreneur development. The study is identified that family background, government incentives, religion and bank credit doing a major motivating factor for creation of enterprise. For that government grant necessary actions and programmes to encourage new entrepreneurs by allotting suitable finance with adequate government incentives. Institutional finance and entrepreneurship development has been interlinked with training. Hence the study suggested expanding and extending the training programmes to new young entrepreneurs in order to make them capable of availing institutional finance and to become efficient entrepreneurs. Institutional finance support will reduce the rate of unemployment of youths, make them educated, efficient and successful entrepreneur. Thought it is found from this study making youth educated to becoming entrepreneur has more formalities, need of securities, documentation and other conditions of financial institutions. Hence reducing formalities and conditions by the financial institutions create the new plat form to enter as entrepreneur to reduce the unemployment. Therefore, financial institutions may consider, the micro and service enterprises on priority while, sanction and granting finance.

**Conclusion :-** The study examined the relationship between institutional finance and entrepreneurship development. There has been long-run stable relationship between institutional finance and entrepreneurship development. Institutional finance significantly caused the entrepreneurial development. The first generation entrepreneurs, those availed the institutional credit have been considerably succeeded as efficient entrepreneurs. Knowing the facts government of India has been implemented various programmes and schemes to strengthen the linkages between institutional finance and entrepreneurship development by improving the efficiency of institutional finance. Therefore, the study strongly proved the role of institutional finance in entrepreneurship development.

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# Role of NGOs in Rural Development

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**Introduction :-** Development is a subject of intense interest for social scientists in all the countries, developed or developing. Development has been one of the most important concepts of our time, raising various questions about values, techniques and choices. The formation and implementation of national policies revolves round this central aspect of development of any country. In spite of the fact that the state is the prime mover of development in the developing countries and the development efforts are mostly state initiated, the administration in these countries are suffering from their own contradictions and the development process is largely thwarted. In a self-development participatory process of development the role of non-bureaucratic organization has consequently assume rising importance especially in creating awareness and developing real participation among the deprived sections of the rural population. In a changed (market economy) economic environment the state has also come forward to encourage voluntarism that makes development endogenous and springs from the heart of the people. Struggles for organizing the poor, conscientization and people's empowerment have become the key words for voluntary actions.

**Objectives :-** The objectives of study are based on

1. To study the Concept and Definition of Non-Governmental Organisation.
2. To study the Aims and Objectives of NGOs.
3. To study the Role of NGO's in rural development:

**Research Methodology :-** Secondary research tools have been used in this research Study. It has been used published books in respect of NGOs and rural development, articles published in the journals and various reports.

**Concept and Definition of Non-Governmental Organisation :-** Non-governmental organizations primarily focus on social issues and work towards the benefit of the society in general. A large number of such organizations function not only abroad but also in India and work towards various issues concerning the society and its people. These issues may be as varied as pollution and underprivileged children to old people and shelters for stray animals. NGOs include groups and institutions that are entirely or largely independent of government and that have primarily humanitarian or cooperative rather than commercial objectives. Most often, they are private agencies in industrial countries that support international development; indigenous groups organized regionally or nationally; and member groups in villages. NGOs include charitable and religious associations that mobilize private funds for development, distribute food and family planning services and promote community organization. They also include independent cooperatives, community associations, water-user societies, women's groups and pastoral associations. Citizen groups that raise awareness and influence policy are also NGOs. As regards the definition of the term "Non-Governmental Organisation', it is said that it is difficult to define and classify the term and the term 'NGO is not used consistently. As a result, there are many different classifications in use. One of the earliest mentions of the acronym 'NGO' was in 1945, when the UN was created. The UN, which is an intergovernmental organization, made it possible for certain approved specialized international non-state agencies or non-governmental organisations - to be awarded observer status at its assemblies and some of its meetings. Later the term became used more widely. Today, according to the UN, any kind of private organization that is independent from government control can be termed an "NGO", provided it is not-profit, non-criminal and not simply an opposition political party.

In India we have given more appropriate words like voluntary agencies, political groups, development agencies, social action groups, mass organisation, charitable organisations – in favour of a phrase which says nothing - that is, 'Non Governmental Organisations'. At one end of the spectrum are those involved in genuine service and development work -'voluntary' in spirit. At the other end are the organisations registered by the government to implement government programmes. In between there are a wide range of resource organisations, fronts for political groups, business oriented 'development shops', research institutions, project structures created by the corporate sector, 'charitable clinics' set up by doctors and medical investors, organisations set up by retired civil servants to channel development funds, community based construction organisations, schools- the list is endless. Legally all of them fall under same category because they have been registered under the Society's Registration Act or as 'Trusts'. Societies and trusts popularly referred to as NGOs. Small group working in a few villages and a large corporate entity working in several districts are all treated as non-governmental organisation. The former may have turnover of a few thousand rupees and the latter's budget may run into crores of rupees, with a professional staff. While specific networks and associations may distinguish between NGOs - legally they are bound by same Act. The term NGO is the most widely misunderstood jargon in development today; therefore, it is important to spell out what we mean by NGOs in a given context6. Although two definitions for voluntary organisation was found to be:

(i) A voluntary organization is a social service and developmental institution motivated to meet the needs of the most disadvantaged in society, either through direct services to the people or through facilitative/ indirect services to other voluntary organizations or Government, nonprofits making and not undertaken to be fully funded for its maintenance, directly or indirectly by the Government (drawn in the National Conference on the Role of Voluntary Organization in Health Care in India).

(ii) Voluntary Organizations are non-profit making agencies that are constitute with a vision by a group of likeminded people, committed for the uplift of the poor, marginalized, unprivileged, and underprivileged, downtrodden and the needy and they are closer and accessible to the target groups, flexible in administration, quicker in decision making, timely in action and facilitating the people towards self-reliance ensuring their fullest participation in the whole process of development.

**Aims and Objectives of NGOs :-** The objectives of NGOs reveal the range of their goals, ideals, programmes and activities. Regarding the aims and objectives, the NGOs are broad-based and each NGO combines more than one objective. These objectives cover a wide spectrum of subjects like socio-economic development, empowerment of women, development of rural folks, tribals, environmental protection, literacy, rehabilitations of the needy, awareness programmes, poverty alleviation, leadership training consumer protection, conscientisation and so on. The major objectives of NGOs are as follows:

1. Development of women and rural folks socially, economically, politically through income generating activities, education programmes, awareness camps, etc.
2. General socio-economic development of the people living in rural areas especially in down-trodden areas.
3. Encouraging the rural folks to participate actively in cultural activities, arts sports and science activities.
4. Development of the under-privileged sections of the society such as fishermen tribals, rural women etc.
5. Running educational programmes like formal education, non-formal education and adult education programmes to decrease illiteracy rate and to improve human resources for the development of a nation.
6. Protecting the environment, rehabilitating the deprived sections like the handicapped, mentally retarded and orphans.
7. Eradicating poverty through generation of employment opportunities, income

generating activities, providing skill based training, imparting new technology in agriculture etc.

8. Providing physical education, organizing competitions and giving training to the youth to participate actively in rural development activities.
9. Initiating self-employment ventures (for men and women) and organizing leadership/personality development programmes.
10. Propagating Gandhian ideology and literature, creating awareness and conducting de-addiction programmes.
11. Formation of self help groups and to provide financial assistance to the members of SHGs in order to empower them economically.
12. Doing research and surveys, working for social justice and offering legal advice to the rural and urban people who are in need of justice.
13. Organizing mother and child care programmes and value based education sessions to decrease, child deaths, malnutrition of women at the time of pregnancy and children and improving health, hygiene and sanitation in slum areas.
14. Protecting the interests of consumers and working for prohibition and assisting in housing.

**Goals of NGOs :-** In essence, the goals of NGOs in Rural Development are:

a. to help the people help themselves in their endeavours to progress;
b. to promote the growth of inherent potentials among people;
c. to initiate a process of participatory development;
d. to bring about social justice for the poor and create awareness about their rights and duties;
e. to promote growth in social, political and economic aspects of life in rural areas and
f. to devise policies through networking with national and international agencies for sustainable development and facilitate the practice of the same.

**Role of NGO's in Rural Development :-** As economic reform and liberalization saw the Government vacating several areas to let private sector entrepreneurship flourish and contribute to the high growth rate of the economy in recent years, a similar paradigm shift is needed to transform NGOs from their dependence on aid and grants from within and outside for transforming the rural scenario in the country. This is sought to be achieved for the NGOs through engaging them in micro-finance, micro insurance, and micro-entrepreneurship activities for the overall development of the rural areas and to promote the welfare of the people of rural India.

As NGOs get finance generated through their own activities. Their credibility vastly improves and their service to rural people gets reinforced. CNRI is an apex body with over 2,000 member NGOs engaged in multifarious activities ranging from self-help group formation, income generation, marketing, and agency work for insurance companies for life and non-life products and for banks and financial institutions to environment protection, watershed management, handicrafts, textiles, traditional medicinal plants and HR development. It is completing one year of its existence. To mark the celebration of one year of its service to NGOs, CNRI is hosting a three-day national meet - `Advantage Rural India' – from April 17.

The meet will feature sessions on NGO/SHG products, finance and marketing,rural connectivity, energy needs and new technologies, employment opportunities for rural youth, role of NGOs in the field of rural education, experience sharing with the performing NGOs in the field of organic farming, value-added agriculture, food processing, animal husbandry, environment, forests and natural resource management. The Union Minister for Rural Development, Dr. Raghuvansh Prasad Singh, will inaugurate the meet; the Union Home Minister, Mr. Shirvraj Patil, will address the participants. An assessment of the Role of NGO's in Rural Development: The NGOs have taking active participation in rural development. The rural poor and socially depressed classes are mainly depending upon the operations of NGOs. No particular job is particularly meant for the NGOs. Thus, there is a huge competition among the NGOs to extend the services for the benefit of the poor. At the same time we should not forget the mushrooming of the NGOs for their welfare. The following are the important activities should take up for the development of the poor.

**1. Agricultural related programs :-** Numerous activities can be undertaken under agriculture sector. The jobs/projects like distributing planting materials, cattle, poultry, minor irrigation, free medical care for cattle's, safe drinking water for animals etc.

**2. Health programmes for human and non-human beings :-** The works like pit drainage, housing, creation of smokeless environment, good drinking water for animals and human beings, regular health checkup camps etc. will improve the health conditions of the human and non-human beings.

**3. Community development programs :-** The community development programs like adoption of villages for development, moral support during flood and famine period, supply of food and drinking water during flood,common well, training programs for the rural youths, housing projects, repair and renovation of houses etc will satisfy the basic necessities. The important program like training programs for the rural poor will hold the youths from rural exodus. Even this type of training programs may also be extended for the rural women, so that we can expect selfsustenance among this community.

**4. Human Resource Development programs :-** The personality development programs, skill development programs, educational programs, integrated development projects etc will enable the rural poor to earn bread and butter.

**5. Trade and industrial promotion :-** The important problem in the present context is availability of the market for the products of rural enterprises. Therefore, an NGO has a direct link with the government for marketing of the goods. Apart from this, NGO can also go for training the rural youths in fabrication works, wood works, beedi rolling, agarbathi manufacturing, printing press etc.

**6. Government support :-** The government (central, state or local) support at all level is inevitable for rural development. NGOs alone cannot do miracles overnight. Therefore, the government should watch and ward the working of NGOs at phase wise manner. Thus, the fund or whatever may be directly should move to beneficiaries. The NGOs should accountable for the funds.

**Problems of NGOs :-** One of the major problems that faces NGOs is lack of resources, both financial and human. Since most of the activities under taken by them are in the nature of extension work, they cannot become self supporting. They are dependent for funds on the government, whose procedures are often slow and timeconsuming, on foreign donor agencies and industries whose grants may not be available on regular basis. Often, voluntary agencies do not have information about the government resources earmarked for the development of the area in which they operate, nor about the methods and procedures to be adopted to avail themselves of these resources. It is, therefore, not unusual to come across a situation where, on the one hand, the voluntary agency complains of lack of funds and, on the other, the government provisions lapse for lack of suitable projects to utilise them.

NGOs have also weaknesses that include (a) limited financial and management expertise, (b) limited institutional capacity, (c) low levels of self-sustainability, (d) lack of inter-organizational coordination, (e) small scale interventions, and (f) lack of understanding of the broader socioeconomic context. Professionals from rural development, management, medicine, and allied disciplines dominate some NGOs. These professionals have desired knowledge and skills, but their attitudes towards grassroots are not unquestionable. They have deadened the activist edge of NGOs and made the NGOs cold, calculating, and 'business-like' in approach. Some other NGOs gather funds to implement projects beyond their capacity. Being close to the corridors of power and pampering the officialdom for pushing files, making deals, and failing to achieve project objectives in the field, these NGOs are near moral bankruptcy.

**Conclusion :-** In this way the NGO's can bring the awareness among the poor rural people. It is now the need of the society as well as the nation to make these rural area and people competent to be aware about their fundamental rights. NGO's are the only organizations that could make the rural area developed. Therefore the NGOs concerned have done some justice albeit to a limited extend to the rural poor in general and rural women in particular with their limited resources where the state fails to do with huge resources at its disposal, both administrative and functional. The state has now recognized the role of the NGOs as supplementary agencies to assist the state in its development efforts.

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# Tribal Development In India : The Critical Analysis

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**Abstract :-** Tribal means native people Many social scientists have said that tribal. Tribes are all over the world. Aboriginal tribes are large in these continents, Asia Africa America. Tribal people live in all the states of India. There are tribes of the total population 8.61 % in India. Being a native, he lived a very prosperous life. Living in close proximity to nature makes their lives happier. But the foreign invasions have adversely affected the lives of the tribesmen and in the present case the tribal people are living in a very miserable state. Efforts are being made from all levels in all countries for the welfare and development of the tribal's in the mainstream of the society. Efforts are being made from all levels in all countries for the welfare and development of the tribal's in the mainstream of the society. In the same way, many efforts are made at various levels for the development of tribal's in India His move is to list the Scheduled Tribes in Article 342 (i) of the Constitution of India, which are included in the Fifth Schedule of the Constitution. Guidelines for the development of tribal's by the state Development Schedule for the Scheduled Castes Commission Independent Division Five Year plans.This research article outlines the issues that need to be studied in order to identify the obstacles that result in the change in the condition of the tribal's due to the efforts made by the tribal people at various levels.

**Keyword :-** **T**ribal, Indian Constitutional provisions, Fifth Year Plans.

**Introduction :-** The aboriginal inhabitants the tribal's of our country have been living an eco-friendly life. Basically, the term 'Scheduled tribe is an administrative and constitutional concept. The Constitution of India has provided many privileges and welfare development programmes to the scheduled tribes in India. After post-independence period, "members of the Constituent Assembly while framing the Indian Constitution made a Critical review of such Privileges and formulated prescriptive benefit for the tribal peoples". According to the Indian Constitution there have certain provision to notify as Scheduled areas. India has completed about six decades of economic planning. India's experience with economic planning is a unique one as she has been practicing economic planning within the frame work of a democratic mixed economy. In this type of system, as already seen, planning is confronted with manifold strains and stresses. India too had its share of these strains. Another feature of India's scene is the diversity and heterogeneity of this country, which presents special challenges for tribal development.

**Objectives :-**

1. To study the provisions for the development of tribal's in the Indian Constitution.
2. To study the programs implemented for the development of tribal's through the Fifth Year Plans.

**Research Methodology :-** Secondary research tools have been used in this research Study. It has been used published books in respect of tribal development, five year plan and Indian Constitution, articles published in the journals and various reports.

**Constitutional Provisions for the Scheduled Tribes (ST) :-** Following are some of the articles of Indian Constitution, through which safeguards are provided for Scheduled tribes people -

**Article 15(4)-** Nothing in this article or in clause (2) or article 29 shall prevent the State from making any special provision for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Tribes.

**Article 16(4A)** - Nothing in this article shall prevent the State from making any provision for reservation in matters of promotion to any class or classes of posts in the services under the State in favor of the Scheduled Tribes which, in the opinion of the State, are not adequately represented in the services under the State.

**Article 19(5)** – The rights given to all Indian citizens by articles 19(1)(d) and 19(1)(e) - 'to move freely throughout the territory of India' and 'to reside and settle in any part of the territory of India', respectively, will not harm the interest of scheduled tribes.

**Article 46 -** The State shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.

**Article 164(1)** - In the States of Bihar, Madhya Pradesh and Orissa, Along with chief minister and other ministers, there shall be a Minister in-charge of 'tribal welfare', who may in addition be in-charge of the 'welfare of the Scheduled Castes and backward classes' or any other work.

**Article 243D** – This article assures the reservation of seats in Panchayats, both for men and women of scheduled tribes and also assures the seats of chairpersons in the Panchayats, according to their population in the constituencies. The actual number of seats is to be provided by the state govt by a law, but the percentage should approximate the population of these caste groups in the respective constituencies.

**Article 243T -** This article makes the similar provision of seats for ST men and women, in the Municipalities.

**Article 244** - Assam, Meghalaya, Tripura and Mizoram are excluded from provisions of fifth schedule and the provisions of the sixth schedule are made applicable for the administration & control of them.

**Article 244(A)** – It makes provision for Formation of an autonomous State comprising certain tribal areas in Assam and creation of local Legislature or Council of Ministers or both.

**Article 275** – A provision is made for providing grants-in-aid, out of Consolidated Fund of India, each year for promoting the welfare of the Scheduled Tribes in the State or raising the level of administration of the Scheduled Areas.

**Article 330** – It makes provision for Reservation of seats for Scheduled Tribes in the House of the people, i. e. Loksabha. The seats are reserved as per the percentage of their population in the states and Union territories.

**Article 332** – It makes similar provision for ST people, in the Legislative Assemblies of the States.

**Article 334 -** Reservation of seats and special representation to cease after Seventy years.(As per constitutional amendment no. 96)

**Article 335-** The claims of the members of the Scheduled Tribes shall be taken into consideration, consistently with the maintenance of efficiency of administration, in the making of appointments to services and posts in connection with the affairs of the Union or of a State.

**Article 338** – It makes provision for National Commission for Scheduled Tribes.

**Article 339 -** Control of the Union over the administration of Scheduled Areas and the welfare of Scheduled Tribes.

**Article 341(1)** -The President may with respect to any State/Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the castes, races or tribes or parts of or groups within castes, races or tribes which shall for the purposes of this Constitution be deemed to be Scheduled Castes in relation to that State or Union territory, as the case may be.

**Article 341(2)** - Parliament may by law include in or exclude from the list of Scheduled Castes specified in a notification issued under clause (1) any caste, race or tribe or part of or group within any caste, race or tribe, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

**Article 342 -** similar provision as above, for Schedules Tribes.

**Tribal Development during Five Year Plan Periods in India :-** For promoting welfare of schedule tribes and for raising the level of administration of scheduled and tribal areas to the state level, Article 275 of the constitution provides for grants-in-aid from consolidated fund of India to states for implementation of developmental programmes. Obviously, special programme for Tribal development have been launched in our country for the well being of the

Tribal population from the very first Five Year Plan.

**Plan-wise Expenditure on Tribals in India (Rs.in Crores)**

| Sr. No. | Plan Period | Total Plan Outlay | Investment on Tribal Development | Percentage of the Total Investment on Tribal Development Programme | % of Tribal Population to Total Population |
|---|---|---|---|---|---|
| 1. | 1st Plan (1951-56) | 1,960 | 19.33 | 1.0 | 6.22 |
| 2. | 2nd Plan (1956-61) | 4,672 | 42.92 | 0.9 | 6.62 |
| 3. | 3rd Plan (1961-66) | 8,577 | 50.53 | 0.6 | 6.80 |
| 4. | 4th Plan (1969-74) | 15,902 | 75.00 | 0.5 | 6.90 |
| 5. | 5th Plan (1974-79) | 39,322 | 1,067.27 | 2.71 | 6.90 |
| 6. | 6th Plan (1980-85) | 97,500 | 5,535.50 | 2.467 | 7.80 |
| 7. | 7th Plan (1985-90) | 1,80,000 | 13,000.00 | 7.22 | 7.80 |
| 8. | 8th Plan (1992-97) | 4,95,669 | 36,740.00 | 7.41 | 8.08 |
| 9. | 9th Plan (1997-02) | 6,20,869 | 57,541.00 | 9.26 | 8.08 |
| 10. | 10th Plan (2002-07) | 6,54,251 | 63,450.00 | 9.69 | 8.2 |
| 11. | 11th Plan (2007-12) | 21,56,571 | 3633.00 | 0.9 | 8.2 |
| 12 | 12th Plan (2013-17) | 35,68,626 | - | - | 8.6 |

**Source: Figures compiled from different five year plan documents, Planning Commission.**

**Population figures compiled from Census of India, New Delhi from 1951 to 2011.**

**1. First Five Year Plan (1951-56) :-** During the First Five Year Plan, Government of India had laid the foundation stone for the socialistic pattern to society based on democratic form without caste, class and privilege. The objective was to bring about the overall change of the tribes and tribal areas through Community Development Programmes (CDP). This policy favoured the tribals to adopt them into modernization without sacrificing their own culture. Steps were also taken to meet the special needs of tribal people with respect to their culture, traditions, social and psychological problems. Voluntary organizations were also encouraged to work in tribal areas. Most of the welfare measures were humanitarian in content and meant to ameliorate indigenent condition of the tribal people through health and educational benefits. The development programmes of the State for tribal were broadly divided into four heads, viz. (a) Education and culture, (b) Development of Tribal Economy, (c) Communication and (d) Social Welfare like health, sanitation, housing etc.

**2. Second Five Year Plan (1956-61) :-** During this plan a massive programme of integrated development was initiated through the National Extension Blocks (NEB) in tribal areas, each covering an average population of 25,000. A number of special blocks known as Special Multipurpose Tribal Development Block (SMPT) were introduced. This programme covered nearly 71% of tribal areas.

**3. Third Five Year Plan (1961-66) :-** In this Plan various programmes were drawn up and were considered by the special working group in the light of the economic upliftment for rehabilitating the shifting cultivation. It recommended formation of multi-purpose cooperatives for meeting the credit and non-credit needs of the tribal agriculturists and artisans. It laid emphasis on programmes like land improvement, land reclamation, social conservation, minor irrigation, supply of improved seeds and manure, bullocks, provision of training facilities and demonstration, fisheries, poultry, sheep breeding, organization of training cum production centres and provision of assistance to village artisans. Education was given priority in tribal areas and stipends, scholarships and freeships were also provided. In the medical and health care programme, the working group suggested preventive measures for diseases, provision of itinerant medical units for the treatment of ill and establishment of maternity and child welfare centres.

**4. Fourth Five Year Plan (1969-74) :-** During this Plan, area approach Programmes were started. Under this programme the T.D. Blocks were grouped into one or more Tribal Development Areas where special personnel were appointed at the District or sub-divisional level to look after the tribal needs. Local institutions, specialists, non-official workers were allowed to take part in the preparation and execution of area development programmes. District level planning was given importance and experimental studies on growth centres for evolving strategy at the grass root level were taken up.

**5. Fifth Five Year Plan (1974-79)** :- The Fifth Five Year Plan is an important landmark in the development of tribal areas with the objects of doubling the income of state at current price for meeting the minimum consumption needs of the people and removal of regional imbalances. Although a number of plans were undertaken during the previous four Plans, it was realized that the programmes were unsatisfactory. So it was felt necessary that there should be a separate development approach to solve the problems of the tribals.

**6. Sixth Five Year Plan (1980-85) :-** The basic objective of the Sixth Five Year Plan was to bring the entire tribal population under suitable development programmes. The gap between level of development in the tribal areas and the surrounding areas was to be bridged by the end of VIth Plan. The broad approach to tribal development was not only to bring development to the tribal concentrated areas but also to revitalize the dispersed and primitive tribals.

**7. Seventh Five Year Plan (1985-90) :-** Social justice, equity, self-reliance, improved efficiency and productivity are guiding principles of the Seventh Five-Year Plan. During this Plan much attention has been laid on faster movement towards social justice and sharper focus on employment and poverty elimination. An intermediary formula between agriculture and shifting cultivation was also thought of for the tribal areas to restore ecology. A policy for the rehabilitation of displaced tribals of development project areas was undertaken.

**8. Eighth Five Year Plan (1992-97) :-** In order to intensify integrated efforts, vigorous programmes and schemes were outlined for tribal areas for the removal of development bottlenecks, elimination of exploitation, oppression, suppression of money-lending businessmen, non-payment of minimum wages and Right to collect minor forest produce (MFP) etc. during this Plan. A frontal attack on tribal poverty, illiteracy, ignorance and exploitation is considered through special component plan, TSP and other special schemes. Co-operatives are designed to render services in tribal areas mainly for marketing of SAP and MFP.

**9. Ninth Five Year Plan (1997-2002) :-** STs usually resides in remote and often inaccessible area with undulating terrain. Their land holding are fragmented and small. Irrigation facilities are poor. In view of this a commitment was made in the National Common Minimum Programme that the Government will launch a comprehensive national programme for minor irrigation for adivasi's and dalits. The minor irrigation schemes for land owned by STs under the assistance provided to states for bridging infrastructure gaps in tribal areas under Article 275(1) of the constitution of India.

**10. Tenth Five Year Plan (2002-2007) :-** The Tenth Five Year Plan is being prepared against a backdrop of high expectations arising from some aspects of the recent performance.GDP growth improved, literacy rate rised,population with poverty drastically declined.The tenth Plan provides an opportunity, at the start of the new millennium to build upon the gains of the past but also to address the weaknesses that have emerged.The tribal communities are vulnerable because they are poor, assetless, illiterate and unable to negotiate and cope with the process of integration with the main economy and society.The tribals are facing many unresolved issues like land alienation, indebtedness, rehabilitation and effective implementation of tribal plans.To tackle these various issues the tenth plan has formulated a comprehensive National Policy for empowering tribals.

**11. Eleventh Five Year Plan (2007-2012) :-** The Eleventh Plan's inclusive growth approach is synonymous with social justice as it primarily addresses the issues of exclusion, exploitation, marginalization, unrest and governance concerning tribals and tribal areas. STs Cut across various developmental sectors and are covered under the overall purview of the implementation of the tribal sub-plan (TSP). Social empowerment, especially through educational development recognising that educational development as an essential basis for social empowerment, various schemes extending incentives, financial assistance, coaching and hostel facilities are being implemented for the benefit of STs.

**Findings :-**

1. The tribal tribes are not getting education in their own dialect because of the language problems and lack of confidence in living in remote areas so they are far from the mainstream of development.
2. The schemes implemented for the community are not effective because they do not deal with local issues
3. Due to lack of awareness about the schemes implemented for tribal people, information about them is not available.
4. Officers and staff working in the tribal development administration have been depressed due to proper training.
5. Due to the depression of the tribal development administration, the funds available for the development of the tribal's are not fully and properly spent, hence the development of the tribal's has not been done properly.
6. The protective provision provided by the Indian Constitution for the tribal's is giving equality to the tribal people in all areas, thus increasing their education jobs.

**Conclusion :-** In conclusion, darkness continues to prevail in the arena of tribal policy in India. Protective laws are rarely implemented, budgetary measures like the TSP strategy have failed to achieve genuine financial devolution, and educational strategies have been assimilative and destructive of the moorings of tribal culture. Light at the end of the tunnel can be seen only in the form of a powerful and radical recent law that provides for self-governance by tribal communities. However, so far, the state has forgotten or subverted the interpretation of its own laws. The perils of tribal identity and survival remain as real as ever.

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# Role of Sublinear CDDM Regime in Current Injection and Thermal Noise in Solid State Research and technology

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**Abstract :-** The thermal noise source is present in all the part of the complete current-voltage characterstics of the insulators operating under different trap configuration and SCDM regime. The Salami method is applied in the complete span of the current-voltage characterstic to obtain the thermal noise in each and every part of the insulator. In this method, the entire insulator is divided into small slices. The noise source is present in each and every part of the insulator. The total summation of all the noise sources gives the complete thermal noise characterstic which is corresponding to the different current-voltage regimes.

The general equations for the current flow, Poisson's law, sublinear carrier density dependent mobility, trapping states are used to obtain the anode voltage applied across the insulator. The open circuited noise e.m.f. of a small section of the insulator is derived in terms of the spectral intensity of voltage fluctuations across the insulator in the small frequency interval. Such thermal noise study in the planer current flow in the insulator with different trap configuration under SCDM regime are obtained with the help of the results of the current injection portion of the problem. The physical parameters of the used insulating material and sublinear carrier density dependent mobility affect the complete thermal noise characterstic of the device.

**Index Terms :-** Current Voltage Characteristic, SCDM**,** Trapping States, Thermal noise and Current Carriers.

**Introduction** :- The space-charge-limited current flow mechanism in insulator is of great interest due to the recent research programmes opening the new promising directions in the research field of solid state electronics. A sufficient amount of research work is available in literature for the background of the subject matter. The sufficient number of the trapping states are present in the forbidden gap of the insulators. It plays important role in the study of space charge effects on insulating materials operating under different carrier mobilities and current flow geometries

The electrical behavior of single injection current flow in insulators depends greatly on the carrier density of free current carriers in solids. The important and vital role of insulators in electronics is to fabricate the electrical devices derived from the insulator. The important informations are obtained due to the interaction of the current carriers with the presence of trapping states and thermal free carriers in the insulators.

The current injection in insulators is made in a planner structure to obtain the current flow in a complete current-voltage characteristic. The modified structure seems to be different in the presence of different physical parameters. The emphasis in the present scientific investigation is to obtain the scientific informations for the transition of current flow from ohmic to pure space-charge-limited current flow in low mobility insulators. The results will be used to investigate the complete thermal noise characteristics in the full span of the current-voltage characteristic of the insulator operating under SCDM regime. It is expected to obtain the new results from the current injection and thermal noise studies.

**Space Charge Limited Current Flow in Insulator**

**1 General equations** :- The space-charge-limited single injection current has been mainly discussed in the literature for one dimensional planner geometry. In most of the single injection, the diffusion current is neglected in simplified theories. In the region of metal-insulator contact, the energy band theory for an insulator describes that a reservoir of free electrons is obtained at ohmic contact will inject current carriers into the bulk of the insulator.

The general equations characterizing the problem of current injection in insulator with traps are the current flow and Poisson's law as given below:

$J = e\mu nE = \text{Constant}$ …… 1. 1

$\left(\frac{\epsilon}{e}\right)\frac{dE}{dx} = (n-n_0) + (n_t-n_{t,0})$, ……(1.2)

Where J is the current density, E is the electric field intensity, e is the magnitude of electronic charge, μ is the mobility of the current carriers, ϵ is the static dielectric constant of the insulator, n and $n_0$ are the concentration of the free carriers and its thermal equilibrium values, and $n_t$ and $n_{t,0}$ are the concentrations of the trapped carriers and their thermal equilibrium values trapped carriers and their thermal equilibrium values respectively.

The equations of state giving the relation between free electron concentration and the trapped electrons concentration is needed to obtain the current-voltage characteristic of the device. For insulator, it is assumed that the non degeneracy of the electrons is occurring in the conduction band even under current injection. Then the free electron concentration n(x) is related with the Fermi Dirac occupation function F(x) as

$n(x)=N_c \exp\{[F(x)-E_c]/kT\}$, ………(1.3)

$N_0$ is the affective density states [96] om the conduction band at the lattice temperature T.

A single set of traps of concentration $N_t$ at energy level $E_t$ is given by the relations.

$$N_t(x) = N_t \left\{ \left[ 1+\exp \frac{Et(x) - F(x)}{kT} \right]^{-1} = n(x)\, N_t\, [n(x)+N]^{-1} \right\}$$ ……………(1.4)

With

$N=N_c \exp\{[E_t(x)-E_c(x)]/kT\}$,

Which gives the important relation in between the trap concentration and free carriers concentration.

In order obtain the space-charge-limited current in an insulator, the boundary condition for ohmic contact is taken at the cathode interface as

$E(0)=0$ at $x=0$, ……………. (1.5)

The general Eqs. (1.1)-(1.4) along with boundary condition (1.5) yield the simplified theory for space-charge-limited current in single injection in an insulator.

**1.2 Current flow equations :-** The moving charged particles in an electric current are called charge carriers. In metals, one or more electrons from each atom are loosely bound to the atom, and can move freely about within the metal. These conduction electrons are the charge carriers in metal conductors. Ohm's law states that the current through a conductor between two points is directly proportional to the potential difference across the two points. Introducing the constant of proportionality, the resistance, one arrives at the usual mathematical equation that describes this relationship:

$I=V/R$

Where I is the current through the conductor in units of amperes, V is the potential difference measured across the conductor in units of volts, and R is the resistance of the conductor in units of ohms. More specifically, Ohm's law states that the R in this relation is constant, independent of the current. Ohm's law is an empirical relation which accurately describes the conductivity of the vast majority of electrically conductive materials over many orders of magnitude of current. However some materials do not obey Ohm's law, these are called non-ohmic.

In physics, the term Ohm's law is also used to refer to various generalizations of the law; for example the vector form of the law used in electromagnetics and material science:

$J=\sigma E$

Where J is the current density at a given location in a resistive material, E is the electric field at that location, and σ (sigma) is a material-dependent parameter called the conductivity. This reformulation of Ohm's law is due to Gustav Kirchhoff.

Ohm's law, in the form above, is an extremely useful equation in the field of electrical/electronic engineering because it describes how voltage, current and resistance are interrelated on a "macroscopic" level, that is, commonly, as circuit elements in an electrical circuit. Physicists who study the electrical properties of matter at the microscopic level use a closely related and more general vector equation, sometimes also referred to as Ohm's law, having variables that are closely related to the V, I, and R scalar variables of Ohm's law, but which are each functions of position within the conductor. Physicists often use this continuum form of Ohm's Law: $E= \rho J$

where "E" is the electric field vector with units of volts per meter (analogous to "V" of Ohm's law which has units of volts), "J" is the current density vector with units of amperes per unit area (analogous to "I" of Ohm's law which has units of amperes), and "ρ" (Greek "rho") is the resistivity with units of ohm·meters (analogous to "R" of Ohm's law which has units of ohms). The above equation is sometimes written as $J = \sigma E$ where "σ" (Greek "sigma") is the conductivity which is the reciprocal of ρ.

Current flowing through a uniform cylindrical conductor (such as a round wire) with a uniform field applied.

The voltage between two points is defined as:

$\Delta V=\int E.dl$

With dl the element of path along the integration of electric field vector E. If the applied E field is uniform and oriented along the length of the conductor as shown in the figure, then defining the voltage V in the usual convention of being opposite in direction to the field (see figure), and with the understanding that the voltage V is measured differentially across the length of the conductor allowing us to drop the Δ symbol, the above vector equation reduces to the scalar equation:

$V = El$ or $E = \frac{V}{l}$

Since the E field is uniform in the direction of wire length, for a conductor having uniformly consistent resistivity ρ, the current density J will also be uniform in any cross-sectional area and oriented in the direction of wire length, so we may write:

$J=\frac{I}{a}$

Substituting the above 2 results (for E and J respectively):

$\frac{V}{l} = \frac{I}{a}\rho$ or $V = I\rho\frac{l}{a}$

Where l is the length of the conductor in SI units of meters, ais the cross-sectional area (for a round wire a = πr2 if r is radius) in units of meters squared, and ρ is the resistivity in units of ohm·meters.

**1.3 Poisson's equations :-** The Poisson equation, the continuity equations, the drift and diffusion current equations are considered the basic semiconductor equations. They are used to solve for the electrical performance of the electronic devices upon applying stimuli on them. This stimulus is in form of voltages or photons or thermal energy. This means by using these equations we can calculate the electrical performance of the devices and derive I-V relations for them. So, they form the theoretical basis for analyzing and interpreting the measured performance of such devices. They can also be used to predict the performance of new device structure without going to the very costly experimental work, and therefore they make great saving in effort and cot. By facilitating the mathematical analysis they can be used to get the optimum parameters of the device structure.

These equations are then a very powerful theoretical analysis tool.

Their physical significance is lying in:

- The equations themselves are a sort of a suitable mathematical formulation of the basic physical laws. The physical laws themselves are experimental laws describing the behavior of the material on different Stimuli like force and energy.

- These equations in their differential form describe the local microscopic behavior of the material. The Poisson equation expresses the local change of the electric field due to the volumetric charge density in a location xyz .in the material. The continuity equations express the conservation of electrons and holes in the location xyz. The currents of the electrons and holes are either driven by an electric field in case of the drift current or by a concentration gradient in case of diffusion current.

Solving these equations in predetermined macroscopic device region with the relevant boundary conditions gives us the potential distribution, the electron distribution and the hole distribution. In this way we can get the electron current and the hole current at any proper cross section.

These equations can be solved analytically and get a closed form solutions. An example is the very famous Shockley pn junction diode equation and the famous Shockley theory for transistors. In many cases however, one has to solve these equations numerically. There exists powerful Device simulators that serve as virtual device factory.

**1. 4 Trapping States :-** The electrical and optional properties of the insulator are very much affected by the impurities and defect states present inside the sample. Informations regarding the nature of trapping states may be obtained from the use of these properties. Such studies are very important because the flow of current carriers in the conduction band of insulator is dominated by the frequent collisions with thermal vibrations of insulator. The space-charge-limited current flow is influenced by trapping the current carriers. The study of space-charge-limited currents may give useful informations about the concentration, location in energy in the forbidden gap of the insulator and capture cross-section of the trapping states.

The traps are usually distributed throughout the forbidden band of the insulator. The injected current carriers are immobilized by the traps. There is a time constant of each trapping level which depends on the depth of the level from the conduction band edge. It is expected that the current carriers which are trapped deeply have to make several attempts to comeback into the conduction band of insulator. Therefore, it is obvious that most of the injected current carriers are trapped in the time average. The form and magnitude of the space-charge-limited single injection current are greatly affected by the trapping states. It is observed that these trapping levels interfere drastically with the passage of injected current flow. The capture of the current carriers is stable at sufficient low temperatures.

**1. 5 Sublinear carrier mobility equations :-** The current injection in insulator with various trap configurations is well known from several decades. In such current injection theories, the mobility plays an important role in describing the space-charge-limited current. The current injection at low fields is mainly investigated in the earlier development of the field, where mobility is constant throughout the insulator. The effect of non constant mobility on the current-voltage characteristic of the space-charge-limited single injection solid state diodes is described to obtain a new fruitful field for further development in solid state electronics.

In low mobility insulators, the mobility of current carriers is very much depending on the scattering mechanism. In such insulators, some trapping sites are permanently occupied by the current carriers so that the trapping sites are no longer affected to delay the moving current carriers. It is observed that the average mobility of current carriers is varying with the concentration of carriers. The direct dependence of mobility on carrier concentration is given by

$$\mu = hn(x) \qquad 1.\ 5.$$

Where h is the proportionality constant.

**Regional Approximation Method** :- The regional approximation method is extensively used in the single injection theories for space-charge-limited current flow in insulators. The method is based on the simple, observation of the problem. For example a simple case of perfect trap free insulator containing significant density of thermally generated free carriers may be taken into consideration. In this problem, the total space-charge-limited current flow is the additive contribution of the two types of current carriers, (a) the injected current carriers $n_i$ and (b) thermal free carriers $n_0$. The equation for current flow is given by

$$J = e\mu nE, \text{ with } \quad n = n_0 + n_i$$

where $\mu$ is the mobility of current carriers.

At appropriate injection level of current, the injected current carriers concentration $n_i$ is monotonically decreasing with distance from cathode inside the insulator.

**Noise Sources, Characterization and Measurement in Insulator :-** The most important sources of noise in solid-state devices are thermal noise, shot noise, generation-recombination (g-r) noise, and flicker noise. Moreover, for semiconductor material one encounters noise due to the generation and recombination of carriers. It shows up as fluctuations in the resistance of the sample that can be detected, in turn, by applying a voltage to the sample and measuring the fluctuating current. For simple cases, the noise can be described by one fluctuating number of carriers; either electrons or holes. This is true for the noise due to traps, deep-lying donors or acceptors, Shockley-Read-Hall centers when there is a predominant lifetime.

There are several sources of noise observed in solid state devices as given below:

a) **Thermal Noise** : It is caused by the random collisions of current carriers with the lattice which is generally occurring in the condition of thermal equilibrium.
b) **Shot Noise :** This source of noise is generated by the random emission of current carriers from the electrodes.
c) **1/f Noise :** It is the source of noise which is characterizing by the frequency dependence. It is also called as flicker noise.

The spontaneous fluctuation in the current or voltage in any solid state device is called as noise whose study is important due to the following reasons:

I. The study of noise is basic to understand the atomistic character of conduction mechanism of solid state devices.
II. The understanding in sublinear single injection devices has an important significance because its general behavior is also valid for other solid state devices.
III. The solid state devices are generally used to measure small physical parameters which are very much affected by the noise presence in the device.
IV. Such studies are important to improve the sensitivity and accuracy of the solid state devices.

**Thermal Noise in Insulator :-** The single injection current in insulator is limited by the space-charge present inside the sample. The current carriers are scattered at lattice imperfections present inside the solid. The scattering process generates the thermal noise in the device. This is the main source of noise present in the single injection solid state devices.

Van der Ziel has given very simple method of the calculation of thermal noise. The solid state device is divided into small slabs. The noise voltage across each slab is generated due to the noise source present in them. The sum of these small noise voltages gives the total thermal noise across the diode.

**Conclusion :-** The present studies are expected to provide the important results for the thermal noise aspects in terms of the physical parameters of the insulating material. The presence of space charge in the planner current flow in insulator suppressed greatly the thermal noise with subsequent and sufficient influence on the complete thermal noise characterstic.

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# Growth Performance and Changing Direction of Indian International Trade Experience after Liberalization

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**Abstract :-** The present study is framed to analysis the growth performance, structural changes and paradigm shift in direction of India's international trade since 1991. Under the study we explored the degree of concentration and diversification of Indian international trade. Furthermore, the study has been identified overall growth rate of foreign trade was marginally declined since 2008-09. However, the diversification of import and export was continuously increased but at marginal declining rate. Although in case of imports particularly during 2003 to 2007, India's import was highly concentrated with a few countries owing to gulf issue and disturbance in global market that led to sudden cut off from major trading countries.

**Key Words :-** Growth performance, International trade, Liberalization and India.

**Introduction :-** The position of any country is evaluated by its economic strength which depends on several aspects and one of the significant aspects is the foreign trade which represents economic progress and prosperity of any nation. However, foreign trade of any country is highly integrated and inter-dependent due to liberalization and regional linkages. The present study has been focused on India's international trade and the pattern of India's foreign trade has been significantly changed after the introduction of liberalization in the country. This sector has enormous literature where significant contribution come from Misra, Jena & Shil (2011), they evaluated India's foreign trade in terms of volume, composition and direction particularly post liberalization where they suggest improvement of foreign trade of India. Yadav (2012), elaborate regional patterns of inflows & outflows of trade and it also included changing composition and direction of trade and suggested specialization of production and expansion of consumption. Similar study was propounded by Singh (2014) additionally it shows improvement of exports and imports but the growth rate of imports was higher than that of exports. Besides that Jadhav & Satpute (2014), Kumar & Sood (2016) & Kavita kumara Sahu (2017) examined India's foreign trade pre & post liberalization in India and they found that import growth rate is more than the exports in all years. The main objective of the study is to examine the growth performance of Indian international trade furthermore, the study has been identified the degree and changing direction of Indian international trade after liberalization.

**Data and methodology :-** The study based on secondary sources of data. The data has been collected from sources CMIE (Centre for Monitoring Indian economy Pvt. Ltd) and under the study tabular and graphical representation tools have been used. The study period has been taken from 1991/92 to 2018/19. More specific, under the present study, composition and trends of growth rate in Indian international trade has been estimated. Moreover, moving (decade ending) compound growth rate was estimated with the following exponential model.

$$Y = ab^t$$

$$\text{Log } y = \log a + t \log b$$

$$CGR = (\text{Antilog } b-1) * 100$$

Where,

t = time period in year

Y= Value of Indian Export and Import

a& b = Regression parameter &

CGR = Compound Growth Rate

**Entropy index :-** To estimate the degree of diversification of Indian trade the Entropy index has been constructed in the study. The entropy index is a direct measure of diversification, mostly used in agriculture (Singh et. al. 2013; Singh et. al. 2016) having a logarithmic character. The index increases with an increase of diversification of an activity and it approaches zero when the activity is specialized. The index value entropy index is lied between 0 (complete specialization) and infinity (complete diversification). The base chosen for taking logarithms and the number of countries determines the upper limit of the Entropy Index. The upper value of the index can exceed one, when the number of total activity (here countries) is higher than the value of logarithm's base (i.e. 10 in general), and it is less than one when the number of activities is lower than the base of logarithm. So, the modified Entropy index is used to overcome the limitations of the Entropy index by using a variable base of logarithm instead of a fixed base of logarithm (as suggested by Singh et. al. 2013). After the modification the value of MEI lies between zero (complete specialization) to one (perfect diversification). The computational process as below

$$\mathbf{MEI_{it}} = -\sum_{\mathbf{i=0}}^{\mathbf{n}} \mathbf{P_{it}} \times \mathbf{log_n}(\mathbf{1/P_{it}})$$

Where,

$MEI_{ij}$= Modified entropy index for Import and export for the $i^{th}$ country at $t^{th}$ time,

Pit = share in import/ export of $i^{th}$ country at $t^{th}$ time,

**Results and discussion :-** With the beginning of 1991, the Government of India introduced a series of reforms under liberalization when trade transformed which remained largely unchanged until the 1990's. However, India's exports were less diversified but afterwards India's direction of trade has shown steady trends with higher volume. As revealed from table 1. During phase I (1990/1991 to 2000/2001) the impact of trade reforms is apparent through changing structure of India's foreign trade in terms of trend and diversity of market and products. In this present study India's export share in percent by country analysis as well as analysis of direction. As a result of various reforms, the share of exports to USA shot up and turned into a largest export destination with 16.4 percent, followed by Japan with 9.2 percent, Germany 7.1 percent, UK 6.4 percent and UAE stood at 4.1 percent, however, some destinations were negligible during I phase of study mainly Vietnam, turkey, china, Nepal and Indonesia.

The data reveals that India's export share was concentrated Organization for Economic Co-Operation and Development (OECD) particularly due to EU, Japan, USA. On the contrary, in case of Eastern Europe with showing down of exports to Russia, while the share of developing countries in Africa and Asia, remained negligible whereas, Middle East Asian countries were nominal. Later on, in II phase of study 2000/01 to 2010/11, the contribution of USA has been increased which stood at 21.0 percent in 2000/01. However, a sharp decline has been noted in Japan which stood at 4.0 percent subsequently the percent share of Germany went down reached at 4.3 percent and similar trend followed by UK at 5.2 percent. The major reason of declining share of japan was Indian goods have not been able to compete in Japan's market. The share of India in total Japanese global trade was 0.7 percent and 20th among Japan's trading partner[9]. However, the bilateral trade had been affect by global circumstances mainly Gulf Crisis owing to shipment to Iraq and Kuwait were a major market which declined. Germany was the largest trading partners of India for trade investment and technology in EU and 11th largest trading partner globally.

[9]Mohammoadbadaralam: relation between India and japan in the new millennium, world affair Jan-Mar, 2004 vol. 8, No.1 p. no. 109.

**Table 1: Changing share in Indian Export among top 20 countries between 1991-91 and 2018-19**

| Country | India Export Share (%) by country | | | |
|---|---|---|---|---|
| | 1991-92 | 2000-01 | 2010-11 | 2018-19 |
| USA | 16.4 | 21.0 | 10.1 | 15.9 |
| UAE | 4.1 | 5.9 | 13.5 | 9.1 |
| China | 0.3 | 1.9 | 6.2 | 5.1 |
| Hong Kong | 3.4 | 6.0 | 4.1 | 3.9 |
| Singapore | 2.2 | 2.0 | 3.9 | 3.5 |
| UK | 6.4 | 5.2 | 2.9 | 2.8 |
| Bangladesh | 1.8 | 2.0 | 1.3 | 2.8 |
| Germany | 7.1 | 4.3 | 2.7 | 2.7 |
| Netherlands | 2.1 | 2.0 | 3.1 | 2.7 |
| Nepal | 0.4 | 0.3 | 0.9 | 2.4 |
| Belgium | 3.7 | 3.3 | 2.3 | 2.0 |
| Vietnam | 0.1 | 0.5 | 1.1 | 2.0 |
| Malaysia | 1.1 | 1.4 | 1.5 | 2.0 |
| Italy | 3.2 | 2.9 | 1.8 | 1.7 |
| Saudi Arabia | 2.0 | 1.8 | 1.9 | 1.7 |
| Turkey | 0.3 | 0.7 | 1.1 | 1.6 |
| Indonesia | 0.8 | 0.9 | 2.3 | 1.6 |
| France | 2.4 | 2.3 | 2.1 | 1.6 |
| Japan | 9.2 | 4.0 | 2.0 | 1.5 |
| Sri Lanka | 1.0 | 1.4 | 1.4 | 1.4 |
| Others | 25.4 | 21.7 | 22.8 | 26.4 |
| **India's total Export to World (Rs. Crore)** | **440418** | **2013565** | **11429219** | **23077262** |

**Source: author's estimation**

Indian exporting items in Germany are cotton and textiles products leather and its products, chemicals and pharmaceuticals, metal products and automobiles components. However, due to global financial crisis was felt on total trade as it declined and the share of Germany in India's total trade was declined marginally particularly in terms of exports. It is noticeable that India's top exporting items of minerals fuels and gems and jewelry rank down in exports to Germany. On the other side, UK's trade with India has more diversified mainly focused on consumer goods for exports and has witnessed constant decline, in the form of apparels and clothing accessories. It is followed by machinery, natural pearls and precious pearls stones and others. However, vehicles, footwear, pharmaceuticals, iron and steel articles are the top product, but the impact of the slowdown in developed countries like UK is being felt declined. USA India's export grew by more than 21 percent from the beginning of the study where India enjoys the trade surplus with USA. India has significant in terms of exports in all commodities increased with in the period from 2001/02 to 2010/11 but due to crisis it declined at 10.1 percent in 2010/11 however, India is improving terms of exports to the world but the issue of Indo-USA trade pattern is not showing the positive trends but India tries to pacify Indian economy on account of India's export to USA where India dealt in engineering goods, gems and jewelry that was continuously decreased but again increased got momentum and exports of gems and jewelry raised at the end of the period of study. In addition, readymade garments, pharmaceuticals, metals are constant increased but textiles shown the decreasing trends in total percentage share of exports of India to USA and technology commodities are in the best position in the export to USA. On the other side, China's share in India's export has been increased from 0.3 percent in 1991/92 to

1.9 percent in 2000/01 because both the countries have witnessed transition in economic policies during decades. India found China more attractive due to it's a high growth. However, the growth momentum of the Indian economy was slow in comparison to China but both countries revived themselves from global recession of 2008, during 2010/11 resultant, sharp increased has been evident in the percentage share of China in total exports of India stood at 6.2 percent in 2010/11. In addition, Hong Kong emerged as a significant contributor in India's economy growth, Hong Kong acted as "Gateway to China" for the world and due to rapid growth of India and China bilateral trade, Hong Kong presented a great opportunity as a "Gateway to India" for the investors and beneficiaries which led to increase the share from 3.4 percent in 1991/92 to 6.0 percent in 2000/01. By late 2008, it was evident that financial crisis had hit Asia and Pacific which led to export fell sharply and contracted Gross Domestic Product of the Asia pacific economies where growth prospect has shown significant decline in 2009/10. As a consequence, Hong Kong stood at 4.1 percent, Japan fell down from 4.0 percent to 2.0 percent in 2010/11 but the Singapore export share was substantial during 1991 to 2000 i.e. 2.2 percent in 1991/92 to 2.0 percent 2000/01, but it increased in the next decade which marked at 3.9 percent in 2010/11. Trade relation between India and Singapore has been expanded at significant pace since liberalization in the early 1990s however, growth in bilateral trade moderated sharply particularly in 1997/98 which remained low till 2001/02 but sudden growth has been registered which jumped the trade in 2001/02 at 4637.1 crore to 27461.6 crore in 2006/07 where, major exporting items were petroleum where Singapore emerged as India's second largest export market after UAE apart from that Gems and jewelry, machinery, transport equipment, electronic goods and non-ferrous metals are leading exporting products and one of the major reason for boosting bilateral relation was adoption of Look East Policy. Moreover, while India's exporting trade with Singapore is in medium term when it compared with China and UAE. The growth of Indian exports in the UAE was 4.1 percent in 1991/92, strong economic relation between two nations has emerged at fabulous rate, UAE provide enormous opportunities to India for cooperation in energy, trade, investment and migration etc but UAE has focused by India due to growth of non-oil trade with it. India's export share of UAE increased that reached at 5.9 percent in 2000/01 and 13.5 percent in 2010/11.

**Table 2: Changing share in Indian Import among top 20 countries between 1991-91 and 2018-19**

| Country | India Import Share (%) by country | | | |
|---|---|---|---|---|
| | 1991-92 | 2000-01 | 2010-11 | 2018-19 |
| China | 0.1 | 3.0 | 11.8 | 13.7 |
| USA | 9.6 | 5.7 | 5.4 | 6.9 |
| UAE | 0.6 | 1.3 | 8.9 | 5.8 |
| Saudi Arabia | 1.2 | 1.2 | 5.5 | 5.5 |
| Iraq | 0.0 | 0.0 | 2.4 | 4.4 |
| Switzerland | 0.8 | 6.3 | 6.7 | 3.5 |
| Hong Kong | 0.5 | 1.7 | 2.5 | 3.5 |
| Korea Republic (South) | 1.6 | 1.8 | 2.8 | 3.3 |
| Singapore | 1.6 | 2.9 | 1.9 | 3.2 |
| Indonesia | 0.3 | 1.8 | 2.7 | 3.1 |
| Germany | 7.9 | 3.5 | 3.2 | 3.0 |
| Iran | 0.2 | 0.4 | 3.0 | 2.6 |
| Australia | 2.8 | 2.1 | 2.9 | 2.5 |
| Japan | 7.0 | 3.7 | 2.3 | 2.5 |
| Nigeria | 0.1 | 0.1 | 2.9 | 2.1 |

| | | | | |
|---|---|---|---|---|
| **Malaysia** | **1.2** | **2.3** | **1.8** | **2.1** |
| **Qatar** | **0.2** | **0.2** | **1.8** | **2.1** |
| **Belgium** | **7.1** | **5.7** | **2.3** | **2.0** |
| **UK** | **6.1** | **6.3** | **1.5** | **1.5** |
| **Thailand** | **0.2** | **0.6** | **1.2** | **1.4** |
| **Others** | **20.5** | **15.9** | **22.2** | **23.0** |
| **India's total Import from World (Rs. Crore)** | **47841** | **228307** | **1683467** | **3594675** |

**Source: author's estimation.**

This rising trend of this share was due to fall in UAE's trade ties with Japan in oil and petroleum product but it was not increased with same pace particularly in case of exports. During next phase of study period from 2010/11 to 2018/19 the significant changes has been shown in the trend of exports of India where India remained with developed countries like USA,UAE, Germany, France, Spain, Netherland ,Belgium, Italy and Saudi Arabia etc. among trading partners USA share of exports was increased significantly which stood at 15.9 percent in 2018/19 on account of the both nations have been pursuing strategic partnership since 2004 and 5$^{th}$ strategic dialogue session was organized in 2014 for developing economic and trade relations. Interestedly, India's trade figures has been shown significant less trade surplus with US as compared to US trade figures. However, Germany's share in exporting nation was constant at 2.7 percent where as significant divergent has been shown in the trend when India's export destination inclined to Nepal which reached at 2.4 percent, similarly Vietnam increased significantly from 1.1 percent in 2010/11 to 2.0 percent in 2018/19, Malaysia stood at 2.0 percent in 2018/19 and turkey contributed 1.6 percent in 2018/19 as against of 1.1 percent in 2010/11. On the other side, Japan, China and Hong Kong dropped down its share which stood at 1.5 percent, 5.1 percent and 3.9 percent in 2018/19 respectively.

Due to economic reforms which was initiated in 1991 was a huge task for moving towards open markets through removing several restrictions with the objective of enhancing efficiency of domestic industry, exports technology and food security. It is observed in the present study that India's international trade highly dependent on developed nations in 1991/92, the share of USA in total import was at 9.6 percent which followed by Germany 7.9 percent, Belgium 7.1 percent, Japan 7.0 percent and UK 6.1 percent particularly deal in petroleum product, capital goods, agriculture and allied product, major export related items, bulk imports and iron and steel. However, some countries had negligible contribution namely Iraq, Nigeria, Iran, Indonesia, UAE, Hong Kong, Qatar, Thailand and China. However, major reason of indo-Iraq economic relation was gulf crisis, when substantial volume of Iraqi oil was imported to India but via Soviet Union. Before the gulf war of 1991, Iraq had been one of the India's largest export markets but due to Iraq's isolation India's commercial and diplomatic relations was diminished. As a result, the imports from Iraq were totally cut off which remained till 2000.

As far as OPEC countries contribution was mainly came from UAE, Saudi Arabia, Iran and Qatar but imports from Indonesia started from 1991/92 which stood at 0.3 percent due to variation in international price of oil. Contrary, imports from China was low during this decade due to restrictions like obligation in FDI or limitations in joint ventures. But later on India's import from China was declined in 1996, since 1997, India's imports from China increased and that magnitude was continued that reached at 3.0 percent in 2000/01 due to high imports of lower priced capital goods such as turbines for electric utilities, which helped in infrastructure that had appeared as India's manufacturing revolution which was cheaper than those from Western or Japanese manufacturers that was one of the main reason of decline in imports from USA at 5.7 percent, Belgium 5.7 percent and a significant declined came in Japanese at 3.7 percent. However, certain increase has been shown in UK which stood at 6.3 percent whereas sudden swift occurred in Switzerland trend of import that reached at 6.3 percent due to strengthening the bilateral trade and investment flows. Hereunder, India imports machinery and equipment, precision instruments, pharmaceutical products dyed and chemicals, fertilizers watches etc and near about 90 percent of Indian imports from Switzerland and nuclear reactor provided for power generation. In addition, the ratio of imports from Thailand has been increased since 1993, India's 'Look East Policy' and Thailand's 'look West Policy' since 1996 are strongly contributing in consolidated bilateral relations. However, Thailand considered India as 'Gateway to South Asia' resultant, Thai goods have benefited from tax reduction under ASEAN-India FTA. Moreover Early Harvest Scheme (EHS) since 2004, led to phenomenal growth in both the countries trade. Besides that, Iraq was suffered isolation via US Sanction on Iraq during two decades, but India tied with Iraq and they developed bilateral trade relation with in oil for food programme. Later on, after the formation of new government in Iraq in 2005, that had grown steadily mainly due to increasing crude oil imports besides that India imports commodities like raw wool and sulphar from Iraq. Consequently, the percentage reached at 2.4 percent in 2010/11.

Furthermore, Due to diversification India had increase contribution of China in imports to 11.8 percent. In 2003, Bangkok agreement was signed by two countries for initiating open border trade via the Silk Route. According to the WTO commitments they are taking part in a multilateral trade system in contemporary global economic scenario but it was more favorable for China. The majority of the share in imports is held by mechanical appliances and organic chemicals and photo marginal agricultural products. Besides that share of Japan in India's imports declined reached at 2.3 percent in 2010/11 consequently Japan stepped down from 10th to 16th position in last 5 years.[10] And import from Japan were general machinery constituting 31 percent of total imports in 2010, followed by metal products particularly iron and steel accounting for 23 percent, electrical machinery at 17 percent, chemical products at 10 percent and transportation machinery 8.5 percent.

Further, there has been a substantial rise in India's trade with UAE particularly during 5 years from 2004/05 to 2008/09, where imports composition were pearls, precious/ semi precious stones, gold, pulp and waste paper, metalifer ore and metals scrap and organic/ inorganic chemicals fabrics and made ups, marine products, machinery and instruments and plastic products. There is a high degree of trade and economic complementarily and interdependence between India and UAE simultaneously the trend remained intensify during study period and have possibility of close linkages in bilateral and diplomatic term. In addition, due to Look East Policy and Gulf Cooperation Council countries Saudi Arabia 5.5 percent, Qatar 1.8 percent had significant contribution in importing commodities further improvement has been reflected in the year of 2008/09. When UAE replaced USA as the largest importer and it was reached at 8.9 percent in 2010/11 consequently USA went down at reached at 5.4 percent in 2010/11. Besides that tremendous increase has been shown in the share of Switzerland 6.7 percent and Korea 2.8 percent in 2010/11 whereas, UK & Belgium dropped their share in imports which stood at 1.5 percent and 2.3 percent respectively. Furthermore, in 2013, China overtook UAE to become India's biggest trading partner and the trade figures has tremendous jump in imports. However, China share in India's total trade stood at around 11 percent during 2016. Whereas, its share in India's overall imports from China at 16 percent at same duration and it marked at 13.7 percent share in 2018/19, through capital goods and the share of intermediate goods and raw material fell and marginal reliability of agriculture and allied product on China. Apart from it, USA has been shown a significant increased that reached at 6.9 percent in 2018/19 and the top import categories were precious metal and stone, pharmaceuticals, machinery minerals fuels and vehicles.

[10] India- Japan trade and investment relations and their future prospect; dr. Mathew joesph& dr. subhasisbera professor fore school of management.

Iraq also has phenomenal increase in imports in India thereby stand at 2nd largest supplier of crude to India after Saudi Arabia and Iran in 2012. Indo- Iraq bilateral trade has accelerated gradually due to energy resources requirement of India that remained top largest supplier of crude oil in 2016, Iraq supplied 37.81 million tonnes crude to India and largest supplier of crude to India in the first half of 2017 apart from crude non-oil import commodities mainly raw wool and sulphar from Iraq resultant in 2018/19 it registered at 4.4 percent.

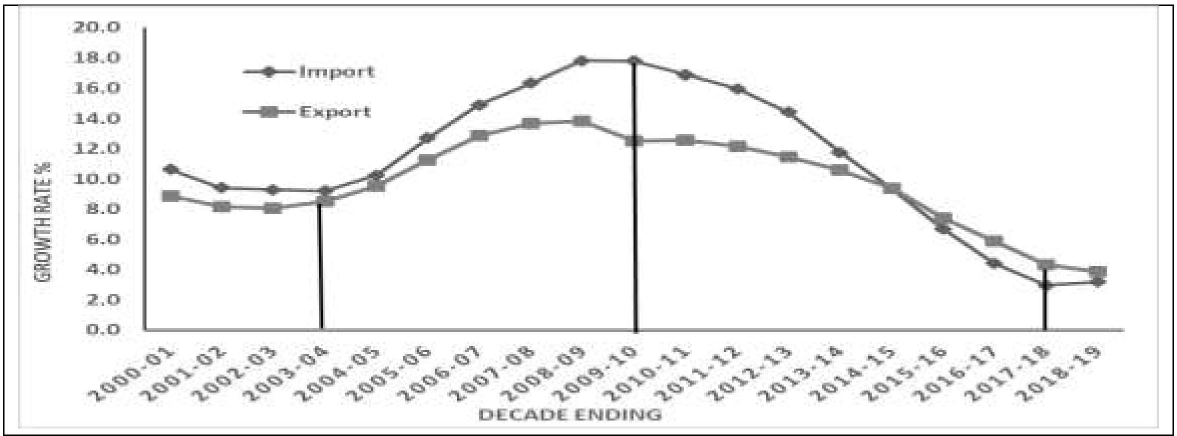


**Fig 1: India's Import export growth trends between 1991-92 and 2018-19 (Decade ending)**

In the above figure, we analyzed the growth trend of India's international trade particularly after liberalization and it is bifurcated into four phases where under phase I (1991/92 to 2003/04) growth trend reflected declining trend, where growth of import and export of India was declined but at marginal rate i.e. import at 9.2 percent& export at 8.5 percent. Later on, after 2003/04, phase II has been started that was termed as recovery phase resultant growth trend was increased sharply that led to boom period during decade ending it remained till 2008/09 where import touched at 17.8 percent & exports marked at 13.8 percent. However, from 2009/10 recession phase which is phase III has been initiated which continued till 2017/18 hereunder, import stood at 3.0 percent & export at 4.3 percent but eventually it would stable in 2018/19 in case of imports that was 3.2 percent but export was still at declining stage but at marginal rate stood 3.8 percent subsequently that is considered as IV phase of the study.

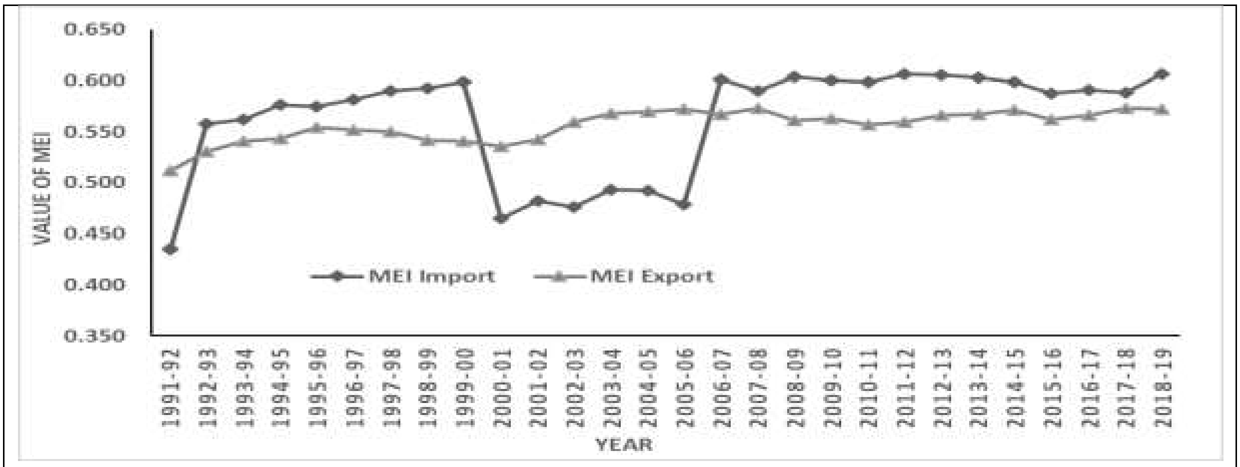


**Fig 2: Modified Entropy Index trends of Indian Import and Export between 1991-92 and 2018-19**

These indices based on countries for imports and exports of India. Figure-2 shows Modified Entropy Index of Indian import and export between 1991/92 & 2018/19. It reflected that export diversification during I phase (1991/92 to 2000/01) varies from 0.512 to 0.536 indicating increasing diversification in trading partners for exporting particularly till 1996/97 later on it was declining and reached at 0.536 in 2000/01 due to inclined towards OECD countries, less focused on Eastern Europe and developing countries of Africa and Asia and Middle East Asian countries were negligible. In the II phase (2000/01 to 2010/11) value varies between 0.536 to 0.557, depicted that export diversification was increased to many nations till 2007/08, later on, declined because India's largest trading partners affected by global crisis particularly OECD & EU, However, in the III phase (2010/11 to 2018/19) constant increase has been shown from 0.557 to 0.572, India has been highly diversified and India improved its terms of trade with USA and highly focused on Asian and neighboring countries where China and Hong Kong having phenomenal contribution, although these countries little bit moderated due to Asia Pacific shocks that promoted India to diversified its trade towards developing nations and Middle East nations.

On the other side, imports has been reflected under I phase (1991/92 to 2000/01) of study highly focused on a few nations for importing commodities particularly USA, Germany, Japan, Belgium & UK. According to MEI diversification varies from 0.435 to 0.465 where in 1991/92, highly focused on OECD & EU. However, the major reason of that diversity was Gulf crisis that substantially cut off the trade with India. Owing to that contribution of OPEC countries were marginalized whereas, India's focus was less towards developing nations particularly China and Thailand. However, in II phase (2000/01 to 2010/11) of the study diversification of MEI was varies from 0.465 to 0.598, where sudden downfall has been occurred in 2000/01, that stood 0.465 as compared to previous fiscal when it was at 0.598 in 1999/00 and the import trade of India was concentrated with a few trading partners which led to drive India towards non-traditional trading partner countries. There was noticeable change occurred in India's importing sources where, developed economies shares has been declined during 2000/01 to 2005/06, South East, Europe and CIS countries contribution were even insignificant. Besides that share of USA and Japan has been declined, however, in respect of developing nations sudden spurt has been occurred Eastern Southern and South East Asian, Asian countries and import from Africa were also increased significantly. Where MEI 2000/01 to 2005/06 that varied between 0.465 to 0.478 later on, from 2006/07 onwards due to global integration Indian economy correlated with growth movement of world economy with emerging and developing countries along with developed economies, later on import was highly concentrated with OPEC countries due to demand for crude oil that affected by high international prices during 2007/08. In 2008/09, India inclined to Asian countries as well. However, in 2009/10 imports affected by global recession and due to fall in growth of petroleum and lubricant (POL) imports on account of low demand for industrial activity. However, diversification was high during 2011/12 to 2013/14 i.e. 0.606 to 0.603 respectively. Afterwards from 2014/15 divergence was lesser than the previous years. The sources of import was highly focused on china, followed by USA, UAE, Saudi Arabia, Iraq, East Asia and CIA countries.

**Conclusion :-** The present study has been reflected the growth performance of India's international trade during post liberalization period and examine changing direction of foreign trade during study period. Under I phase, the import and export was highly concentrated to OECD countries particularly USA, Germany, UK, Belgium and Japan and Middle East and Developing Countries were at negligible stage whereas, in case of imports from Iraq was totally cut off due to Gulf crisis and contribution of OPEC countries were low. However, in the II and III phase of India's trade have moved to developing countries particularly Africa and Asia and Middle East Asia countries contribution registered progressive, although USA stood at top position but significant contribution came from Hong Kong, China and Switzerland. During 2010/11 to 2018/19 exports from USA, UAE and China secured as a major trading partner whereas, in imports China, USA, UAE, Saudi Arabia, Iraq and Switzerland were termed as major trading partners that reflected structural shift in trading pattern of India that is moving from traditional to non-traditional trading partner.

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# Effect of Yoga in Quality of Life

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**Abstract** :- In healthy body a healthy mind, this proverb is very common in present scenario. it is used since ancient time when our Rishi muni's life were based on yoga,pranayam and dhyan. Mahashi Patanjali a great saint of ancient time systemized all yoga practices with the advent of this yoga sutras ,in that time many saints were practice yoga for their mental as well as physical growth. In present scenario yoga become part of our life again and it is used in medication also. Yoga, pranayam, Dhayan, meditation we can expand our life spanned quality of life. In this modern world, people have lots of work, tension and bad habits; few minutes of yoga can change your life. Yoga develop self- confidence with additional positive side effect .it also develop spiritual sense of mind .spirituality also teaches to learn how to lead without expectations and hurting others. This paper presents the views on effect of yoga in our life and how yoga can improve our quality of life.

**Introduction** :- Yoga originated in ancient India; on that time it becomes a part of Indian philosophy and Vedas. In India yoga also become a part of Upanishads .All four Vedas give different yoga sutras. The Vedas provides the spiritual core and philosophical foundation for the future development of yoga and medidation.We find the first use and definition of the word 'yoga' in Rig Veda. Sam Veda becomes a part of 'purely devotional' and it is a kind of spiritual yoga. Dhyan and devotional songs become the part of Atharva Veda .Yoga, In ancient India means union with the divine, spiritual philosophy of Vedas "they are: Nayaya(logic),Vaiseshika( analysis of the universe),Samkhya(Classification of the universe)Yoga (union with the divine) Mimansha (inquiry in to the soul).All these philosophical system draw the importance and influence in Indian thought and many of the practices continue today in the form of yoga. In present scenario yoga become the part of the Indian life as well as the life of all over the world. Regular practice of Dhyan, Pranayam and yoga can change life style and develop physical and medical health. At present yoga recovers many kind of mental as well s physical health, yoga also a part of develop medical technology where some asanas, dhyan, meditation helps patients.

**Objectives :-** The objective of this study is to identify the role of yoga and meditation in day to day life.

1. To examine the effect of yoga in all phases of life.
2. To examine the effect of yoga in mental as well as physical health.
3. To find out the solution from yoga in different diseases and problem of life.

**Methodology :-** To understand the nature and the effect of yoga in present scenario, the methodological approach of the research is qualitative and the main sources and technique based on collection of data and analyse .Content analysis taken from literature review of the research papers on yoga, meditation, spiritual thoughts and the contents of this paper are taken from different conferences, research journals, foreign journals etc. for contents we use secondary sources.

**Results And Discussion :-** After the completion of the paper and research we reach in this point that in most important to add yoga in our daily life routine for physical as well as mental health because yoga is a best therapy to reduce our suffering.

**Effect of Yoga in Physical Health :-** A Continuous yoga practice develops positivity and strength of body. Through yoga physical fitness and function of body can develop. Self-Stream and self confidence give positive approach to mind and body. When people have physically healthy and fit their social competence and involvement also improve. There is different kind of physical problem and diseases that can be remove or give positive approach with the help of yoga.

A) **Cardiovascular Problem :-** In present scenario cardiovascular problem is very common in young and adult people. But with the continuous practice of yoga we can reduce the risk of cardiovascular problems. Even after By-Pass surgery or any other surgery of heart doctors advise yoga and exercise.

B) **Blood Pressure and Pulmonary Function** :- Many research and papers indicates that continuous yoga practice effects on lungs function. In healthy volunteers and patients with chronic Bronchitis and Asthama 1., Brething exercise and yoga practice improve pulmonary function and blood pressure, where some yoga exercise and asanas improve the blood flow and decries the problem of high and low blood pressure.

C) **Yoga and metabolism of body :-** Yoga also improves metabolism system of body and reduces the risk of sugar in body. Continuous practice of yoga can improve the body functions and oxygen level of body. Healthy digestive system reduces the risk of different kind of diseases.

D) **Female health and yoga** :- Yoga helps to balance the hormonal disorder in women's body. It also help to reduce the stress level in pregnancy, with the help of yoga women can take beneficial effects on Menopausal symptoms'. Yoga helps in, Child birth and after the birth of a child it improve the physical as well as mental health of a women.

E) **Pain and Yoga :-** Yoga also helps to reduce the body pain in all stages of life. In this modern world there are different types of yoga treatment that can reduce Headache or Migraine, Cervical Pain etc. Posture of the body can also improve through regular practice.

F) **Vision and speaking Disorder :-** Many researches give evidence that through regular yoga practice we can develop our vision and can constant our eye site or spectacle number. Yoga also helps in speaking disorder, continuous practice can improve the speaking quality of human beings.

**Effect of Yoga in Mental Health :-** In human body mental health is more important than physical health because through mental power we can improve our physical health, according to many scientific research it is proofed that yoga is very beneficial in mental health. There are numerous benefits of Yoga; it focuses on natural tendency towards health and self healing. These are some common mental health issues affected by yoga

A) **Stress and Tension** :- Continuous yoga practice help manage stress, which is very common in present scenario. Stress gives birth to many disorder and diseases in the body like sleeping sickness, infertility problem, head etc. Yoga can manage the stress and tension through regular meditation and breathing exercise. Yoga has often been Perceval as a method of stress management tool that can assist in alleviating depression and anxiety disorders.

B) **Self Realization and Spiritual Thinking :-** Yoga and meditation develop spiritual thinking and vision of a person. Self realization can also develop through meditation. It also gives peace of mind and soul and help to purify body and heart.

C) **Positive Approach** :- Yoga develops inner peace of mind. Yoga develops positive vision towards life. It give activeness to body and soul. Being active keeps you aware of the things happening around you and also helps you to complete your work more effectively and quickly.

D) **Power to concentrate** :- Yoga also develops concentration of mind, because it heals your body calm and relaxes. Meditations develop concentration. Students and learners can develop sharp memory through regular yoga practice and meditation.

E) **Promotes Strength and Develop Stamina** :- Yoga increase blood circulation and muscle relaxation which promotes strength of body and mind that strength develop stamina of the body. That stamina can help to reduce the negativity of mind.

**Conclusion :-** Yoga is a gift of our fore fathers .In present scenario it helps to live long and healthy life. Continuous yoga practice can improve the quality of life. Yoga is above then all religion caste and creed, it is a way of living that aims towards a healthy mind in healthy body. Yoga develops mental, physical as well as spiritual side of human being. The art of practicing yoga helps in controlling an individual's body and soul. It brings together physical and mental disciplines to achieve a peaceful body and mind. It also helps to manage stress and anxiety and keeps you relaxing.

**Recommendations** :- This study would recommend following measure in order to improve the quality of life.

- 30 minutes meditation is good for mental as well as spiritual health.
- Exercise daily according to your dr. advice
- 30 min walk can also help for good health
- Eat healthy.
- Drink 3-6 litter water per day.
- Join a yoga camp where it is possible.
- Exercise correctly under expert supervision.
- Sleep 6-8 hours daily

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# Preliminary study of Climbing angiospermic flora of village Sulibardi district Dhar, M.P

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**Abstract :-** An extensive and intensive plant survey of village Sulibardi district Dhar, Madhya Pradesh was carried out. Dhar district is situated in the South-western part of Madhya Pradesh with highly rich floristic biodiversity of plant. The total area of district is 8153 sq. km. of which forest encompasses 1370 sq. km. covering 15.79 percent of its geographical area and covered by Vindhyan scab, Malwa plateau and Narmada basin. Climbing floral diversity of higher plants was undertaken in the village Sulibardi of district Dhar of Madhya Pradesh during 2018-2019.The tribal of this area includes Bhil, Bhilala, Barela and Pateliya are the major tribes inhabiting the area. The present study highlights the prevalence of climbers in the floristic composition of the area and also recorded the uses of some of the climbers by the ethnic groups of the area. Preliminary study of climbing angiospermic flora of village Sulibardi shows rich plant diversity in respect to 8 families and 26 genera and 36 species along with their ability recorded from the area.

**Keywords :-** Dhar,Biodiversity, Narmada River, Malwa plateau, Vindhyan scab.

**Introduction :-** The climbing habit is a key innovation in angiosperm evolution, climbing plant taxa have greater species richness than their non-climbing sister groups. It is considered that highly diversified clades should show increased among-population (Cristian et.al.2013). Angiosperms, with 300,000 species, appear to be the most successful and dominant group of land plants and have undergone an outstanding diversification compared to other plant groups (Stebbins 1981, Crane et al. 1995, Magallon & Castillo 2009).The evolution of a climbing habit has taken place independently in more than 130 plant families (Gentry 1991) and it seems to be a key innovation (Hunter 1998) in angiosperms: climbing plant taxa have greater species richness than their non-climbing sister groups (Gianoli 2004). A similar result was found for epiphytism: epiphytic genera were significantly richer in species than terrestrial genera, both for orchids and non-orchids (Gravendeel et al. 2004). Which features of the climbing habit, measurable at an ecological timescale, may eventually promote plant diversification. In contrast with either erect or prostrate species, which occupy a relatively narrow range of the light gradient, climbers, may use a very broad range of light availability through both climbing and creeping individuals. With the occupation of such an expanded ecological niche –ranging from forest floor to understory to forest canopy– a greater exposure to different pollinators, fruit/seed dispersers, and herbivores would be granted and hence ecological specialization might be favored (Gianoli 2004).This is somewhat analogous to the prevailing explanation for the outstanding diversification of Angiosperms (Crepet & Niklas 2009).

**Study area :-** In the state Madhya Pradesh, dhar district is one of the most important district having 8 subdivisions (tehsils) namely Dhar, Dharampuri, Sardarpur, Manawar, Badnawar, Gandhwani, Kukshi and Dahi, 7 tehsils, and 425 villages in Dhar block, sulibardi is one of them. The sulibardi village near about 15 km away from Dhar district and the study area is 60 hectares selected in the village where is compartment is RF157 and beat -Thawali. (**Fig.1**). Dhar district lies between the latitude of 22º 00’ to 23º 10’ North and longitude of 74º 28’ to 75º 42 East and covers an area of 8153 sq. km. of which forest occupies 1370 sq. km. The Vindhya Range runs east and west through the district. The northern part of the district lies on the Malwa plateau. The northwestern portion of the district lies in the watershed of the Mahi River and its tributaries, while the northeastern part of the district lies in the watershed of the Chambal River, which drains into the Ganges via the Yamuna River. The portion of the district south of the ridge of the Vindhyas lies in the watershed of the Narmada River, which forms the southern boundary of th e district. According to census 2011 Dhar has a population of 5,78,423 peoples. Highest temperature ranges from 26.5ºC to 40.10ºC and Average Minimum temperature varies from 9.7 ºC -24.2 ºC and normal rainf all is 833.61 mm.

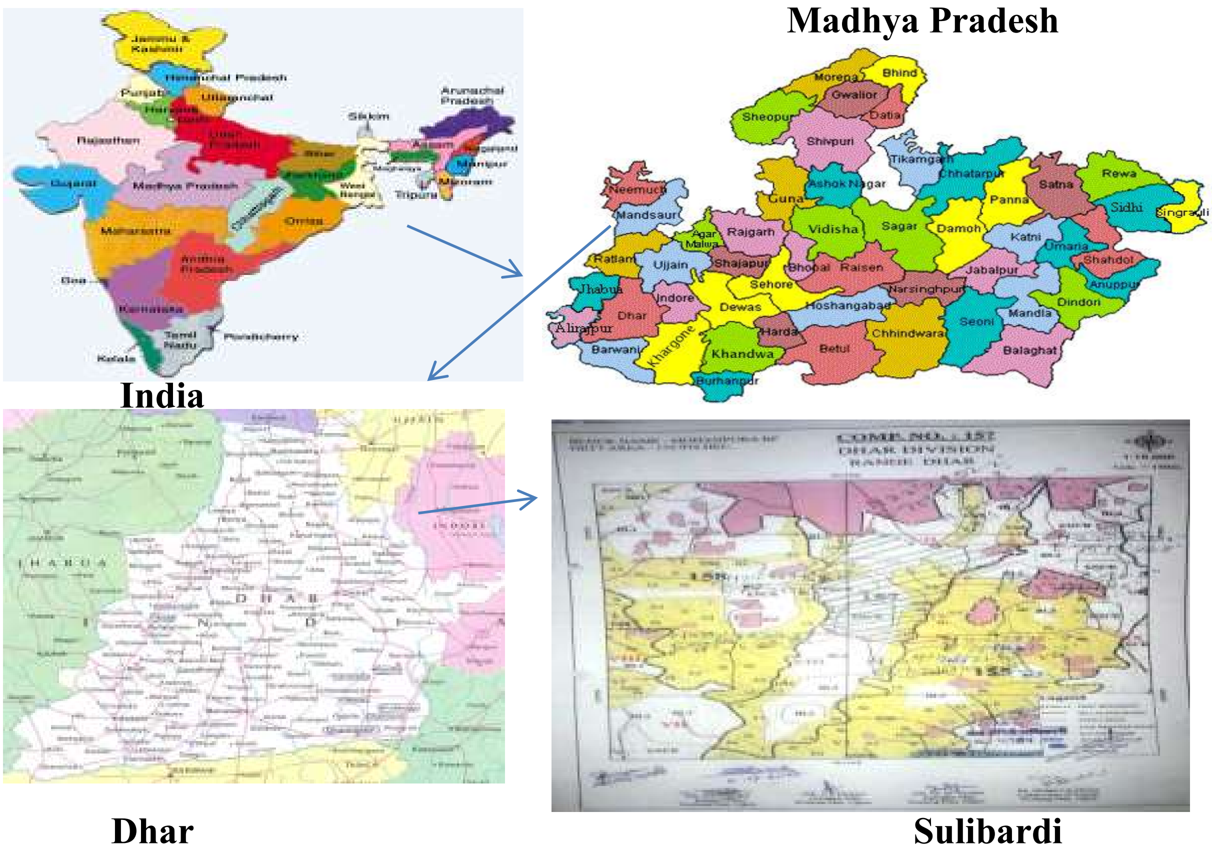


**Fig.1: Maps of study area**

**Methodology :-** Intensive floristic survey has been carried out in different seasons from 2018 to 2019 by well planned schedule, covering various vegetation types, altitudinal ranges, wastelands, and weeds of cultivated fields, road side, river banks, streams beds and all other conceivable ecological niches.

Plant material was collected after random walks along paths and across the forest interior. To avoid sampling a single genotype more than once because of vegetative reproduction, all sampled conspecific individuals were at least 10 m apart. Sample size ranged from five to 16 individuals per species. For plant collection and preservation of voucher specimens standard methodology has been followed (Jain and Rao, 1977). Voucher specimen were collected in polybag and identified in the laboratory with the help of flora (Hooker, 1892-1897; Cook,1903; Gamble et al., 1915; Haines,1921-1924; Khanna et.al.,2001;Verma et.al.,1994; Mudgal et. al., 1997) and other available literature were also consulted for identification of plants. Photographs have been taken using digital camera. Recent up-to-date nomenclature of ICBN was followed. For changed name of families or botanical names latest classification of APG-III has been followed. Herbarium specimens were deposited in forest division office Dhar, M.P. India.

**Results and discussion :-** The climbing plants are part of Indian flora. Climbers are classified into root climbers, hook climbers tendril climber, leaf or stem climbers or twinners. Human beings are directly or indirectly used it as economic and medicinal both. Thus the people depend on climbers for several purposes e.g. NTFP, medicine, food, etc. In different part of India studies on diversity of climbers were undertaken by a number of workers (Gentry, 1991, Ghosh and Mukherjee, 2006; Bandopadhya and Mukherjee, 2010; Jangid and Sharma, 2011) and opined that climbers form the main components of ecosystem. However, no attempt has been made as such to study the diversity of climbing species in Dhar district of Madhya Pradesh, India. Preliminary study of climbing angiospermic flora of village Sulibardi shows rich plant diversity in respect to 8 families and 26 genera and 36 species (**Fig.3**). The 35 study species are the most common climbers in the forest fragment and are listed in **Table 1.** Taxonomic treatments follow Bentham and Hooker (1862-1883) and the Angiosperm Phylogeny Group (Stevens 2011). Dominant families with no. of genera and species in the study area are shown in **Table 2 & Fig.2** and Threatened plants of the study area are shown in **Table 3** along with tier Status, reason, and conservation strategy. Population diversity of Climbing angiospermic flora of village Sulibardi district Dhar, M.P. is shown in **Table 4.**

**Conclusion :-** In the Climbing angiospermic flora of village Sulibardi, district Dhar, of Madhya Pradesh A total of 36 species, 26 genera and 8 families along with their ability recorded from the area and out of these 11 species are found to be Threatened plants in the study area which are used by the local ethnic communities of area and maximum species is economically important. On this topic it is the pioneer research article. Some species are restricted in some particular areas due to favorable micro-climate. But some species are distributed throughout whole area. The adaptation capacity of these species is better than other spices. But more research is needed on the ecological aspect of view.

**Field visit and specimen collection**

**Mounting & Preservation of plant**

**Herbarium preparation & labeling**

**Acknowledgement :-** I would like to express my boundless and great respect to forest officers for their kind cooperation and valuable suggestions.

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# Pest Scenario of Ethno – Agro Biodiversity Studies of Rice in Barwani (M.P.), INDIA

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**Abstract :-** Agro biodiversity occupies a unique place within biodiversity. Rice is one of the major cereal grain consumed more than half of the world's population. Traditionally, many varieties of rice are grown by the farmers of Western Madhya Pradesh maintaining a diverse gene pool. Farmers in the rural parts of the Western Madhya Pradesh region are still known to retain traditional rice varieties in their farming systems. A total of 13 rice landraces were collected from the study area retained by the farmers because of their dietary, cultural and social value. Traditional rice varieties represent important genetic reservoirs with valuable traits and there is an urgent need to provide proper incentives and encourage the farmers to cultivate rice landraces to help in the in situ conservation of this important gene pool.

**Key words** :- Agro biodiversity, Rice Landraces, cultural and social value.

**Introduction :-** Rice (Oryza sativa L.) is the most important staple food grain (Roy et al., 2013). India has the largest acreage under rice, about 44.6 m ha of land with a production of about 90 million ton. India ranked second in rice production **FAO,** (1997). India possesses largest biodiversity of scented and non-scented rice in the world (Roy et al., 2013). Rice has the largest germplasm collections in the world. This accessible collection of diverse cultivated varieties, landraces and related wild species has made great contributions to rice breeding and they played a very important role in the local food security and sustainable development of agriculture, in addition to their significance as genetic resource for rice genetic improvement. Though a large number of traditional rice is existed suiting agro-climatic conditions of Barwani district of Madhya Pradesh but its characterization is not sufficient. The goal of the present study was to characterize morphological characters of native traditional rice landraces of Barwani district of Madhya Pradesh.

**Methodology** :- Ethno botanical principles were followed for Traditional landraces collection of different crops grown by tribals of the Barwani district of Madhya Pradesh during 2013 - 2015. Extensive survey of the village was carried out during the study period for the occurrence and cultivation of traditional rice varieties. Periodic visits were made in the study site for information on the rice varieties and during the farming season daily visits were made to the study site to collect relevant data. The farmers cultivating traditional rice varieties were approached, and information on personal and location details was gathered after taking their Prior Informed Consent as per the CBD guidelines. The samples are given accession numbers and field notes recorded on farm itself. Identification is done by different floras (Hains, 1921-1924, Khanna et al., 2001, Mudgal et al., 1997, Singh et al., 2001, Verma et al., 1993) and available literatures. Details on each accession regarding their uses and special features were collected and documented along with seeds from the respective farmers. The grain samples are stored in polyethylene bags. The passport information of every collection was prepared. Herbarium specimens of landraces were prepared according to Jain and Rao (1976) and deposited in the Department of botany SBN PG Collage Barwani. Herbariums of inflorescence twig were prepared to record the agro-morphological differences among the landraces. Etymology characters where noted.

**Results and discussion :-** Rice is grown in many regions across India. For about 65% of the people living in India, rice is a staple food for them. A total of 13 rice landraces were collected from the study area retained by the farmers because of their dietary, cultural and social value **(table 1).** Rice is essential to life in India. It is a part of nearly every meal, and it is grown on the majority of the rural farms. The landraces maintained by farmers are endowed with tremendous genetic variability, as they are not subjected to subtle selection over a long period of time. This aids in the adaptation of landraces to wide agro-ecological conditions. This rich variability of complex quantitative traits with respect to maturity, growing adaptation and with respect to their physicochemical and organoleptic properties still remains unexploited.

Land-races are also important genetic resources for resistance to pests and diseases; they provide "adaptability genes" for specific environmental conditions. Incorporation of adaptability genes from landraces could ensure optimum grain yield for the region. Agro-morphological characterization of germplasm accessions is fundamental criteria in order to provide information of plants Diversity studies in rice was done on improved and ancestral rice varieties using morphological characters and on Asian wild cultivated indigenous rice. Agro-morphological traits, both qualitative and quantitative have been commonly and traditionally used to estimate relationships between genotypes.

**Conclusion :-** Traditional rice varieties represent important genetic reservoirs with valuable traits and there is an urgent need to provide proper incentives and encourage the farmers to cultivate rice landraces to help in the in situ conservation of this important gene pool. The present investigators obtained information about food resources, and result is being presented in the research paper. Utilization of plant resources needs the survey and exploration of factual data. Resources of food are always in great demand all over the world. Assessment of the Food wealth and the resulting inventory of plant resources of potentially economic value would not only help plant based industries but also encourage rural people to utilize the food products in the Barwani district of Madhya Pradesh, India.

**Acknowledgement :-** We are very much thankful to Principal PMB Gujarati science college, Indore for providing research and library facilities. The help and co-operation during plant survey rendered by informants, guide, and local people of Barwani district of Madhya Pradesh, India is highly acknowledged.

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**Table-1 Agro-morphological characterization of different landraces of rice**

| S. No. | Local Name | Locality | maturity period | Height (cm) | No. of Tiller/ Plant | Leaf L/W | Flag leaf L×W | Flag leaf attitude | Ligule Shape |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Dhawli shav | Merkhedi | 4 | 109 | 7 | 42×1.5 | 35×1 | Semi erect | 2 cleft |
| 2. | Dholashakala | Mogrikheda | 4 | 104 | 1,2 | 37×2 | 37×2 | Semi erect | 2 cleft |
| 3. | Nanli shavi | Bandhara | 3.5 | 102 | 3 ,4 | 43×1.3 | 33×1 | Erect | 2 cleft |
| 4. | Badi shav | Lalwaniya | 4.5 | 114 | 3,4 | 56×1.6 | 50×1.3 | Erect | 2 cleft |
| 5. | Navay shav | Takali | 2.5 | 76 | 1,2 | 33×1.5 | 30×0.8 | Erect | 2 cleft |
| 6. | Rajmali shav | Rajmali | 3.5 | 99 | 5,6 | 36×1.2 | 34×1 | Semi erect | 2 cleft |
| 7. | Pani shav | Khadkiwan | 4 | 144 | 5,6 | 38×1.5 | 35×1.5 | Semi erect | 2 cleft |
| 8. | Niva sakla shav | Niwali | 4 | 109 | 1,2 | 34×1.5 | 31×1.5 | Erect | 2 cleft |
| 9. | Talavi Shav | Jamniya | 5 | 117 | 10 | 71×1.5 | 65×1.5 | Semi erect | 2 cleft |
| 10. | Kali Much Shav | Talav | 5 | 112 | 3 | 76×1.5 | 66×1.5 | Semi erect | 2 cleft |
| 11. | Shav | Chatli | 4 | 63 | 2,3 | 12×0.8 | 10×0.7 | Erect | 1cleft |
| 12. | Chuodas Shav | Diwani | 3.5 | 97 | 7 | 23×0.8 | 23×0.8 | Erect | 2 cleft |
| 13. | Chaddi shav | Chaddad | 5 | 143 | 12 | 64×2 | 63×2 | Erect | 2 cleft |

# Rays of Hope : Necessity and Impact of Women Empowerment

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**Abstract :-** In spite of women contribution in all spheres of life and they enjoy a unique position in every society and country of the world, but they suffer in silence and belong to a class which is in a disadvantaged position on account of several barriers and impediments. India, being a country of paradoxes, is no exception. Here too, women, a personification of Shakti, once given a dignified status, are in need of empowerment. Women's empowerment in legal, social, political and economic requires to be enhanced. However, empowerment and equality are based on the gender sensitivity of society towards their problems. Women Empowerment is one of the most prominent and burning topic in socio-economic and political environment for the decades. The present paper explores the questions to Women Right why there is need for Women Empowerment .The Objective of the paper is to evolve impact and necessity of Women Empowerment.

**Keywords** :- Women Rights, Women Empowerment, Gender Sensitivity, Impact, Necessity.

**Introduction :-**The term "Women Empowerment" meaning to empowering women with surpassing education, better employment, decision making , and superior health in view of an indistinguishable and so just society. Women empowerment is an undertaking to forge the women financially liberate, educative and more progressive, savoring a superior social status. Women since ages have been wrestling to be socially and professionally recognized as correspondent to all men. There are myriad of incidents in a woman's personal and professional life, where her own abilities are enfeeble against that of a man's having an untoward impact on her over all personality and hampering her over growth.

Women Empowerment is empowering the women to take their own decisions for their personal development as well as social development. Empowering women is to make them independent in all aspects from the mind, thoughts, rights, decisions and social or family limitations. It is said that women are the backbone of any society, so we should develop them from the beginning. But the question arises: Are women become really strong? And | long term struggle has ended? Many programmes have been implemented and run by the government such as International Women's Day, Mother's Day etc. in order to bring awareness in the society about the true rights and value of the woman in the development of the nation. Women need to be progressed in the numbers of the sphere. The real meaning of the women empowerment is to make them well educated and leave them free so that they can become capable to take their own decisions in any field. Women in India are always subjected to the owner killing, ill-treated, victim of violence, etc. It is the responsibility of| every male to take care of the women as they play a very important role in the betterment of society and the world. It is nicely said"Once a woman is on the move, the whole family moves, then the village moves, at last the nation also moves."[1]

The most famous saying said by **the Pandit Jawaharlal Nehru is "To awaken the people, it is the women who must be awakened. Once she is on the move, the family moves, the village moves, the nation moves".** In India, to empower the women, first it needs to kill all the demons killing women's rights and values in the society such as dowry system, illiteracy, sexual harassment, inequality, female infanticide and domestic violence against women, rape, prostitution, illegal trafficking and other issues. Gender discrimination in the nation brings cultural, social, economic and educational differences which push country back. The most effective remedy to kill such devils is making women empowered by ensuring the Right to

Equality mentioned in the Constitution of India.According to the provisions of the Constitution of India, it is a legal point to grant equality to women in the society in all spheres just like male. The Department of Women and Child Development functions well in this field for the proper development of the women and child in India. Women are given a top place in India from the ancient time however they were not given empowerment to participate in all areas. They need to be strong, aware and alert every moment for their growth and development. Empowering women is the main motto of the development department because an empowered mother with child makes the bright future of any nation.[2]

**According to the United Nations, women‘s empowerment mainly has five components:**

- Generating women‘s sense of self-worth
- Women‘s right to have and to determine their choices
- Women‘s right to have access to equal opportunities and all kinds of resources;
- Women‘s right to have the power to regulate and control their own lives, within and outside the home; and
- Women‘s ability to contribute in creating a more just social and economic order

Thus, women empowerment is nothing but recognition of women‘s basic human rights and creating an environment where they are treated as equals to men

What are the three essential factors for empowerment?

The essential factors for empowerment are:

(1**) Education** :- Education gives one the ability to think wisely and take thoughtful decisions. This is one of the most important factors for empowerment.

(2) **Gender Discrimination** :- A society which discriminates between the 2 genders can never be empowered. One must treat both men and women as equals.

(3) **Discrimination :-** based on caste, creed, religion etc[3]

**Women's empowerment: the 3 dimensions :-** It is thus extremely important to address the specific hurdles faced by women in becoming empowered, especially so as to encourage women's equal participation in society. There are many aspects to empowerment, all of which are interlinked:

- Economic empowerment.
- Social empowerment.
- Political empowerment.

The woman in our country has always been accorded the status not only equal but above men. Women enjoyed a better position in the Rig-Vedic period which deteriorated in the Vedic civilization. Vedic civilization onwards, women were denied the right to education, right to widow remarriage, right to inheritance and ownership of property.

Social evils like child marriage and dowry system worsen the situations more for women. During the Gupta period, the status of women deteriorated extremely and institutions like dowry and Sati Pratha became more prominent. The condition of Women in Indian society was worsening during the medieval period. At this point of time child-marriage, sati, female infanticide was practiced largely.

To some extent it is observed that our country witnessed improvements in the status of Women after the arrival of British. There were many women reformers who worked for the betterment and upliftment of their other female counterparts.

During the British Raj, many social reformers such as Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, and Jyotirao Phule started agitations for the empowerment of women and as a result of their efforts Sati was finally abolished and the Widow Remarriage Act was formulated.

**The Universal Declaration of Fundamental Human Rights** asserts that all sexes should enjoy equal rights. This is reinforced by the Indian Constitution and the various pro-women legislation passed in this country. However, both from the ground reality and the type and number of cases that reach the courts, one finds that women are not treated as equal partners in all areas of planning and developmental activities in the country[3]

**Constitution of India and Women Empowerment :-** India's Constitution makers and our founding fathers were very determined to provide equal rights to both women and men. The Constitution of India is one of the finest equality documents in the world. It provides provisions to secure equality in general and gender equality in particular. Various articles in the Constitution safeguard women's rights by putting them at par with men socially, politically and economically. The Preamble, the Fundamental Rights,Directive Principles of State Policy,Fundamental Duties and other constitutional provisions provide several general and special safeguards to secure women's human rights.

**Preamble** :- The Preamble to the Constitution of India assures justice, social, economic and political; equality of status and opportunity and dignity to the individual. Thus it treats both men and women equal Fundamental Rights:The policy of women empowerment is well entrenched in the Fundamental Rights enshrined in our Constitution.

**For instance** :- Article 14ensures to women the right to equality

Article 15(1) specifically prohibits discrimination on the basis of sex.

Article 15(3) empowers the State to take affirmative actions in favour of women

Article 16provides for equality of opportunity for all citizens in matters relating to employment or appointment to any office.These rights being fundamental rights are justiciable in court and the Government is obliged to follow the same.Directive Principles of State Policy:Directive principles of State Policy also contains important provisions regarding women empowerment and it is the duty of the government to apply these principleswhile making laws or formulating any policy. Though these are not justiciable in the Court but these are essential for governance nonetheless. Some of them are

Article 39 (a) provides that the State to direct its policy towards securing for men and womenequally the right to an adequate means of livelihood

Article 39 (d) mandates equal pay for equal work for both men and women. Article 42provides that the State to make provision for securing just and humane conditions of work and for maternity relief.

**Fundamental Duties** :- Fundamental duties are enshrined in Part IV-A of the Constitution and are positive duties for the people of India to follow. It also contains a duty related to women's rights

Article 51 (A) (e) expects from the citizen of the country to promote harmony and the spirit of common brotherhood amongst all the people of India and to renounce practices derogatory to the dignity of women.

**Other Constitutional Provisions** :- Through 73rd and 74th Constitutional Amendment of 1993, a very important political right has been given to women which is a landmark in the direction of women empowerment in India. With this amendment women were given 33.33 percent reservation in seats at different levels of elections in local governance i.e. at Panchayat, Block and Municipality elections. Thus it can be seen that these Constitutional provisions are very empowering for women and the State is duty bound to apply these principles in taking policy decisions as well as in enacting laws Government Policies and Schemes for Women Empowerment9Whatever improvement and empowerment women have received is especially due to their own efforts and struggle, though governmental schemes are also there to help them in their endeavor. In the year 2001, the Government of India launched a National Policy for Empowerment of Women.[4]

In India there are numerous laws aimed at empowerment of women in the areas of personal, labour, service and criminal and social, economic matters for instances

1. **Indian Penal Code, 1860. Code of Criminal Procedure, 1973, Hindu Adoption Maintenance Act, 1956, Hindu Succession Act, 1956, The Hindu Minority and Guardianship Act, 1956 : Section 6of the Act provides for mother as a natural guardian for minors below 5 years. The Hindu Marriage Act, 1955. The Dowry Prohibition Act, 1961:**Under the provisions of this

Act demand of dowry either before marriage, during marriage and or after the marriage is an offence.

**The Muslim Women (Protection of Right on Divorce) Act, 1986** : Under the provisions of the Act provides for maintenance of women by the relatives after the iddat period.

**The Factories Act, 1948** : The provisions of this Act provides for health, safety, welfare, andworking hours for women labourer working in factories.[5]

**Why there is a need for Women Empowerment :-** Now the question arise why there is a need for Women Empowerment.

**The questions are** :- Patriarchy is a social system in which males hold primary power and predominate in roles of political leadership, moral authority, social privilege and control of the property.

Generally historical evidence shows that Indian society is a Patriarchal because of this nature Indian Society is oppressing women from years. Although after many measures and initiatives taken by women associations and organizations, government etc.The condition and status of women is somehow improving in our society but it is still not up to the mark. They still face gender inequalities and many other atrocities, social evils whose scale differs for different class and region of people, such oppression, suppression and depression against women led the reason why there is a dire need for women empowerment. There is no single oppression faced by women in our country but there is an endless list to it Starting from their birth to death there are thousands of atrocities faced by women even now. First of all, they are not even allowed to take birth, thanks to various pre-natal determination techniques. And if somehow they take birth then they are killed by their very own family members. Don't be shocked to listen to that as it is not something that took place in past times only but it still happens in India even after so many laws and legislation against it!

If they are allowed to live after their birth then also they have to face gender inequalities and they have to survive through it because that is what our patriarchal institutions teach us. They think why to educate a girl when she is supposed to do household chores only after marriage. The story does not end here because after marriage also a women's life is no simpler.

She faces domestic violence for various nonsensical reasons like dowry. To eliminate all these evils from our society and to make our society a better place to live for both men and women, women empowerment is necessary because unless and until a place is not safe for all the members of society it can't be a better place.

Women empowerment helps women to look upon their lives as a confident being. It encourages women to stand and fight for their rights and live a worthy life. There is not a radical but a little bit of change in the mindset of people that are allowing women to walk on the pathway of development. Women are leaving no stones unturned to prove themselves to the world and despite many hurdles, they turn out to achieve respectable and notable positions necessity of Women's Empowerment

**Need of an hour : Necessity of Women Empowerment**

- Injustice and gender bias and inequalities cannot be removed without women empowerment.
- Women cannot enjoy security and protection in life if they are not empowered.
- It also provides them with a safe working environment
- Empowerment acts as a powerful tool against exploitation and harassment faced by women
- It provides legal protection for women
- Women cannot develop their own identity if they are not empowered.
- Women constitute a vast chunk of the world's population. So if they aren't employed the global economy will be adversely affected.

- Women need to be provided equal opportunities for work to produce a just and progressive society.

The principle of gender discrimination and equality is already engraved in the Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles of State Policy. To safeguard the rights and legal entitlements of women the National Commission for Women was set up by an Act of Parliament in 1990.

To uplift the status of women, the government of India has adopted and ratified different schemes and programs and international conventions and human rights instruments to secure equal rights for them **'There is no tool for development more effective than the empowerment of women."—Kofi Annan**

Women need to be given equal opportunities for education and employment without any form of discrimination, there is a dire need for the elimination of the male superiority and patriarchal mindset.

Merely arming women with legal and constitutional rights will be simply inadequate unless and until there does not come an attitudinal change in society towards women.[6]

**Rays of Hope : Impact of Women Empowerment** :- They are able to lead their lives with dignity and freedom which lead to their self- esteem and self –confidence and it gives them a distinct identity of their own. Women empowerment makes a women financially independent and respectable position in society.

Being an empowered they play an important role in the meaningful contributions at every aspects and well beings of society.

**Conclusion :-** Thus road map for women empowerment is there but still we have miles to go on this path of empowerment. We hope that in coming year's ahead women empowerment will prove its worth. Women are an integral part of a society. They play an important role in determining the destiny of a nation.

**It has been rightly said by Swami Vivekanand, "The Best thermometer to the progress of nation is its treatment of women".** Therefore, due recognition becomes all the more important. Every person should come forward to ensure equal status for women in all spheres of life, if we want to bring about women empowerment in the true sense women need to be given equal opportunities for education and employment without any form of discrimination, there is a dire need for the elimination of the male superiority, attitudinal change in society towards women. And patriarchal mindset.

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# Policies for Financial Inclusion such as Jan Dhan Yojana and PM Mudra Yojana

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**ABSTRACT :-** Time to time Indian Government consistently make its efforts towards inclusion of rural customer (investor) in organised financial system. This might not only provide handsome amount of cash flow to boost Indian economy but it could also help the government to facilitate rural development through offering various services like Gas subsides etc. Thus, nomenclature of financial inclusion various due different ruling party, but the primary objective remains the same i.e. to flourish the bottom of the pyramid of financial market. The current states elucidates that Present Government up to some extent turnout to be successful by opening around 12.54 crore new bank account (upto November 2014) through new form financial inclusion Pradhan Mantri Jan Dhan Yojana (PMJDY) But it has been observed that still the largest part of the rural market in untouched and not explored fully. This paper is an attempt to study about the awareness of financial inclusion schemes among rural customer.

For the sustainable development of the Indian economy, the Government of India launches Pradhan Mantri Jan Dhan Yojana (PMJDY) on 28th August 2014. Financial inclusion is an innovative idea which empowers the alternative techniques to encourage the banking tradition and act as an enabler in reducing the poverty. A total of 18.28 crores accounts have been opened in rural areas by Public sector bank by 7th Feb 2018 , Thus 31.07 crores accounts have been opened in rural and urban areas. An amount of Rs. 74534.79 crores was in accounts which were opened under PMJDY. We can say that PMJDY schemes are playing a significant role in creating a universal platform for financial services for every citizen in India.

Financial inclusion is about ensuring a bank accounts to every individuals and also providing various facilities like credit, deposit, payment, transfer of funds, insurance and so on. PMJDY scheme ensures that all adult population is to have a bank account. After implementing PMJDY scheme, there is felt need to develop the innovative financial products and services in India through the introduction of new and dynamic agencies. This would help in expanding the financial inclusion across the country, especially credit facility and other related products. In this direction, Pradhan Mantri MUDRA Yojana (PMMY) was introduced in the year 2015. Government of India has set up Micro Units Development and Refinance Agency Ltd. (MUDRA). It is accountable for refinancing and developing all types of small business activities i.e. micro-enterprises sector by providing support to the financial institutions. One of the initiatives taken by Government of India (GOI) is Pradhan Mantri Mudra Yojana (PMMY) which plays an important role in achieving the success of financial inclusion. The idea behind the scheme is to provide the credit requirement to small business upto 10 lakh. In this paper the researcher has made an attempt to analyzed financial performance of Pradhan Mantri Jan Dhan Yojana (PMJDY) and Pradhan Mantri Mudra Yojana (PMMY).

**Keywords :-** Financial inclusion, PMJDY, PMMY.

**Introduction :-** Financial inclusion is about ensuring a bank accounts to every individual and also providing various facilities like credit, deposit, payment, transfer of funds, insurance and so on. PMJDY schemes ensures that all adult population is to have a bank account. Pradhan Mantri Jan Dhan Yojana (PMJDY) National mission for Financial inclusion is based on “Sab ka Sath, Sab ka Vikas” i.e. incusive growth to ensure access to financial services, namely, banking/saving and deposit accounts, credit, insurance, pension is an affordable manner, launched by Prime Minister Narendra Modi on 28th August 2014. The launch of this scheme was announced at the historic Red Ford on the occasion of India's Independance Day. Jan Dhan Yojana roughly translates in to English as "People wealth Scheme". The name "Jan Dhan" was chosen through as online competition on the My Govt. Platform and got more than 6000 suggestions from peoples. The Slogon for the mission is "Mera Khata Bhagya Vidhaata" which when translated into English means "My Bank account the creator of the Good fortune. Government of India has been introduced a number of financial inclusion initiatives such as Pradhan Mantri Jan Dhan Yojana (PMJDY), Pradhan Mantri Mudra Yojana (PMMY), Pradhan Mantri Jeewan Jyoti Beema Yojana (PMJJBY), Atal Pension Yojana (APY), Pradhan Mantri Suraksha Beema Yojana (PMSBY) etc. For the small businessman, weaker section, low income groups and micro enterprises. PMMY was introduced by Hon'ble PM Shri Narendra Modi on 8th April 2015 along with the introduction of MUDRA bank. It is also known as the Mudra loan scheme. This scheme is available from all bank branches across the country.

**Review of Literature :-**

Mehar L (2014) has showed that the financial inclusion in India has increased in the last few years with new innovations like mobile banking, ultra small branches etc.

Verma S. (2015) has explained that the design of MUDRA scheme will not only caters to the financial problems of MSMEs but also give moral support to a lot of young population to become an entrepreneur balasubramanian (2015) has focused on importance of financial literacy focusing on saving habit among poor. He has build decision tree model indicated that the number of earning members, family size, average monthly income and nature of employment are the deterministic independent variables which influence the regular saving behaviour of the poor.

Mol S. TP (2014) has clarified that there are some issues like money related Illiteracy, absence of mindfulness and client securing is high. Reserve Bank of India has started different activities to improved money related consideration. Information and communication technology offers the opportunities enhancement of financial inclusion

**Research Methodology :-**

**Rational and objective for study :-** Financial inclusion is initiated by RBI in year 2005 and new Government has actively resumed it in August 2014. In literature review we found that many researchers has evaluated financial inclusion schemes and its support from private players but awareness related studies are not done rigorously. All the objectives and features of new financial inclusion scheme PMJDY and PMMY are striking compare to old scheme of swabhimaan, but unless and until the end users would not be aware and educated about all these schemes of financial inclusion the could not contribute effectively. Thus, in this regard we have determined following objectives for the paper.

1. To analysed new financial inclusion the Bank Category wise performances of PMJDY scheme over the last 2 years.
2. To analysed the State – wise, Regional wise, Category-wise performances of PMMY scheme over the last 2 years and awareness about financial inclusion.

**Research Design :-** The research is purely based on Secondary data. The researcher has made an attempt to analyze the performance of PMJDY and PMMY schemes over the last 2 year on different parameters. The secondary data for the study was gathered from sources like Annual Report of PMJDY & PMMY, Website, Journals and newpapers.

**Data Analysis and Discussions :-**

**Pradhan Mantri Jan Dhan Yojana (PMJDY)** :– Financial inclusion is a creative idea which empowers the elective procedures to promote the banking, habits and acts as an enabler in reducing the poverty. The launch of Pradhan Mantri Jan Dhan Yojana (PMJDY) by Government of India is toward that path. The scheme is not just limited to opening a bank account but additionally has different advantages with it viz. Zero balance bank account with Rupay debit card, not with standing accidental insurance cover of Rs. 1 lakh, those who open accounts by 26 january, 2015 over and above the Rs 1 lakh accidental cover, they will be given life insurance cover of Rs. 30000, etc. According to GOI, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) payments are to be done into the accounts of the MGNREGA labourers in rural areas held either in Banks/Post offices (unless exempted). The target of PMJPY schemes is to guarantee that no household is left without a bank account. There are total 9.98 crore accounts of the MGNREGA worker in Bank/Post offices out of this, there are 3.66 crore accounts in post offices and 0.75 crore in co-operatives. The overdraft allowed of Rs. 5000 under Pradhan Mantri Jan Dhan Yojana (PMJDY).

**Pradhan Mantri Mudra Yojana (PMMY)** :– PMMY was announced by the Hon'ble Prime Minister Shri Narendra Modi on 8th April 2015 alongside the reporting of MUDRA bank. Government of India has set up Micro Units Development and Refinance Agency Ltd (MUDRA). PMMY is another financial inclusion initiative of Government of India which aims not only on funding the unfunded but also aims to increase the funding gap to micro enterprises. GOI makes guidelines, rules and regulations related to PMMY, for all banks and MFIs. MUDRA is non banking finance institution for supporting the Micro enterprises segment in the country. It provide support to the banks and all MFIs for micro enterprises having loan necessity upto 10 lakhs Any Indian Citizen who has a wage producing plan from small business exercises in enhancing, assembling and preparing and whose advance pre requisite is under Rs. 10 lakh can approach advances under PMMY. Loan rate is regulated by Reserve Bank of India (RBI) time to time. Non Corporate Small Business Sector (NCSBS) occupied with benefit division, miniaturized scale fabricating division, natural products and vegetable distributing, support and repairing, handiworks and working nourishment administration and so on are benefited under the plan MUDRA bank has divided borrowed into three categories such as :-

Shishu : Shelters loans up to Rs. 50000/-

Kishor : Shelters loans above Rs. 50000/- to up to Rs. 5 lakh

Tarun : Shelters loans above Rs. 5 lakh to up to Rs. 10 lakh

MUDRA has been fundamentally shaped as a completely claimed back up for Small Industries Development Bank of India (SIDBI) with 100 % capital being committed by it. The approved capital of MUDRA is 1000 crores and paid up capital is 750 crores.

**Process made under PMJDY :-** Table 1 reported the status of accounts opened under PMJDY. In rural areas (7,17,89,697) accounts opened by Public sector banks, RRB's and Private sector banks were 5,33,00,249, 1,84,89,448 and 32,26,397 respectively. However, in urban areas (4,84,45,109) accounts opened by public sector banks, RRB's and private sector banks were 4,51,47,276, 32,97,833 and 20,12,086, respectively. Thus the total accounts opened in the rural and urban are by public sector banks, RRB and private sector banks were 9,84,47,525 , 2,17,87,281 and 52,38,483, respectively. The grant total of opened accounts was 12,02,34,806.

Table 1: Status of PMJDY (Accounts opened as on 31.01.2015)

Bank Category wise report

| | Public Sector Banks | RRB | Private Sector Banks | Total |
|---|---|---|---|---|
| Rural | 5,33,00249 | 1,84,89,448 | 32,26,397 | 7,17,89,697 |
| Urban | 4,51,47,276 | 32,97,833 | 20,12,086 | 4,84,45,109 |
| Total | 9,84,47,525 | 2,17,87,281 | 52,38,483 | 12,02,34,806 |

Souce : http://www.pmjdj.gov.in/account

Table 2 reported the status of accounts opened under PMJDY. In rural/semi urban areas 22.20 crore accounts opened by public sector banks, RRB's and private sector banks were 16.26, 5.24 and 0.70 crore respectively. However, in urban metro centres 15.63 crore accounts opened by public sector banks, RRB and private sector banks were 13.87, 1.20 and 0.56 crore respectively. Thus the total accounts opened in the rural/semi urban and urban metro centres are by public sector banks, RRB and private sector banks were 30.13, 6.44 and 1.23 crore respectively. The grand total of opened accounts was 37.83 crore.

Table : 2 Status of PMJDY (Accounts opened as on 01.01.2020)

Bank Category wise report

(All figures in crore)

| | Public Sector Banks | RRB | Private Sector Banks | Total |
|---|---|---|---|---|
| Rural/Semi Urban | 16.26 | 5.24 | 0.70 | 22.20 |
| Urban | 13.87 | 1.20 | 0.56 | 15.63 |
| Total | 30.13 | 6.44 | 1.26 | 37.83 |

Souce : http://www.pmjdj.gov.in/account

**Analysis of MUDRA scheme :-**

**(A) State-wise performance analysis :-** Based on the agency network and potential to lend the targets were further distributed state-wise by the respective agencies. The state level performance was monitored by State Level Bankers Committee (SLBC). Tamilnadu topped with Rs. 25331.68 crore sanctioned amount. From 2016-17, 40 % growth was recorded in Tamilnadu state. Karnataka was the second amongst all states with Rs. 23009.73 crore sanctioned amount. Only 28 % growth was recorded in Karnataka state. Maharashtra stood at third rank with Rs. 22751.4 crore of sanctioned amount. Maximum 46% growth was recorded in Gujarat and Odisha state. Top 10 states have contributed 71% of total sanctioned amount in financial year 2017-18. Bihar and Gujarat failed to achieve the targeted amount but still secure rant in top 10 states. Performance of top 10 states with comparative position in targeted and sanctioned amount are given below. (Table 3)

**Table 3: Performance of Top 10 States**

| **State** | **2017-18** | | | **2016-17** | | | **Growth** |
|---|---|---|---|---|---|---|---|
| | **Rank** | **(Rs. In Crore)** | | **Rank** | **(Rs. In Crore)** | | |
| | | **Targeted** | **Sanctioned** | | **Targeted** | **Sanctioned** | **Percentage** |
| Tamilnadu | 1 | 23083.75 | 25331.68 | 1 | 20117.1 | 18052.68 | 40% |
| Karnataka | 2 | 22049.76 | 23009.73 | 2 | 18388.68 | 18002.55 | 28% |
| Maharashtra | 3 | 22242.92 | 22751.4 | 3 | 20159.08 | 17286.66 | 32% |
| Uttar Pradesh | 4 | 21592.85 | 22077.89 | 5 | 16636.78 | 15282.61 | 44% |
| West Bengal | 5 | 18871.92 | 20552.19 | 4 | 10157.42 | 15695.01 | 31% |
| Bihar | 6 | 17190.56 | 15919.4 | 6 | 10657.51 | 12190.6 | 31% |
| Madhya Pradesh | 7 | 14672.07 | 14886.15 | 7 | 10442.56 | 10506.45 | 42% |
| Rajasthan | 8 | 11815.11 | 13862.55 | 8 | 7086.9 | 9024.71 | 54% |
| Gujarat | 9 | 11505.73 | 11386.52 | 10 | 8066.52 | 7781.94 | 46% |
| Odisha | 10 | 11290.08 | 11558.91 | 9 | 6980.72 | 7891.34 | 46% |

Source :(MUDRA: Annual Report, 2017-18), (MUDRA: Annual Report, 2016-17)

**(B) Regional wise Performance analysis :-** The targets were classified into five regions based on distribution of Mudra loan sanctioned and geographical parameters. In terms of number of loan account, North-East and East region were secured top position, with nearly 35% of the total number of loans sanctioned. But, loan amount was around 26% only, which is comparatively lower than 30% of southern region. In Western region, share number of accounts and sanctioned amount is lowest in all region. In terms of sanctioned amount, 179% growth was recorded in North-East region. In F.Y. 2016-17, total sanctioned amount was Rs. 180528.55 crore, whereas in F.Y. 2017-18, it goes to Rs. 253677.09 with 40.51%.

**Table 4: Region wise analysis of PMMY**

| **Region** | **2017-18** | | **2016-17** | | **Growth** |
|---|---|---|---|---|---|
| | **No. Of A/C** | **Sanctioned Amt. (Rs. In Crore)** | **No. Of A/C** | **Sanctioned Amt. (Rs. In Crore)** | **Percentage** |
| **North** | 8464083 | 60535.36 | 6667731 | 41884.86 | 45% |
| **East** | 12764868 | 48744.33 | 12838524 | 43115.35 | 13% |

| | | | | | |
|---|---|---|---|---|---|
| **North-East** | 4395809 | 18553.8 | 1599339 | 6650.34 | 179% |
| **South** | 14464973 | 76259.92 | 11430144 | 52876.65 | 44% |
| **West** | 8040860 | 49583.68 | 7165309 | 36001.35 | 38% |

Source: (MUDRA: Annual Report, 2017-18), (MUDRA: Annual Report, 2016-17)

**(C) Category-wise Performance analysis :-** Based on the size of loans, MUDRA loan are extended in three categories namely, 'Shishu', 'Kishor' and 'Tarun'. 'Shishu' loans are up to Rs. 50000, 'Kishor' loan are range from Rs. 50000 to Rs. 500000 and Tarun category loan are from the range Rs. 500000 to Rs. 1000000. In terms of numbers of accounts, 'Shishu' loan had the maximum stake of 88.65% in all 3 categories of loan. In terms of sanctioned amount, 'Tarun' category loan at 24.02%, 'Kishor' category loan at 34.19% and 'Shishu' category loan was maximum at 41.78%. The share of 'Kishor' category loan accounts improved to 9.67% in F.Y. 2017-18 compared to 6.71% in F.Y. 2016-17. Share of 'Tarun' category loan also improved marginally. (Table 5)

Table 5: Category wise analysis of PMMY scheme

| Category | 2017-18 | | 2016-17 | |
|---|---|---|---|---|
| | No. Of Loan A/c | Sanctioned Amt. (Rs. In crore) | No. Of Loan A/c | Sanctioned Amt.(Rs.In crore) |
| **Shishu** | 42669795 | 106001.6 | 36497813 | 85100.74 |
| **Kishor** | 4653874 | 86732.15 | 2663502 | 53545.14 |
| **Tarun** | 806924 | 60943.36 | 539732 | 41882.66 |
| **Total** | 48130593 | 253677.11 | 39701047 | 180528.54 |

Source : (MUDRA: Annual Report, 2017-18), (MUDRA : Annual Report, 2016-17)

**Conclusion :-** In this study we have found that Government is consistently working through various schemes such as PMJDY and PMMY etc. PMJDY and PMMY are a great initiative taken by the GOI. They are partially inclusion plan PMJDY and PMMY compare to swabhimaan. But still government is not able to affect the awareness level of rural customer about financial inclusion schemes significantly. Financial inclusion will help the poor in bringing them to the main stream of growth and would also provide the financial institutions an opportunity to be partners in inclusive growth. Financial inclusion is the essence of sustainable economic growth and development in a nation like India. Inclusive growth winds up inconceivable with financial inclusion. Financial inclusion likewise shall for the economic development of the nation Overall, the PMJDY and PMMY are an ambitious financial inclusion plan. It perceives the because of dispatch of this plan, monetary consideration has expanded towards positive heading. So it can be say that if it is implemented properly, it may work as a game changing financial inclusion initiative of Government of India and may boost the Indian economy.

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# Water Resource Management

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Water resource management is the activity of planning, developing, distributing and managing the optimum use of water resources. It is a sub-set of water cycle management. Water is very essential for our survival. The field of water resources management will have to continue to adapt to the current and future issues facing the allocation of water. With the growing uncertainties of global climate change and the long term impacts of management actions,the decision-making will be even more difficult. It is likely that ongoing climate change will lead to situations that have not been encountered. As a result, alternative management strategies are sought for in order to avoid setbacks in the allocation of water resources.

Ideally, water resource management planning has regard to all the competing demands for water and seeks to allocate water on an equitable basis to satisfy all uses and demands. As with other resource management, this is rarely possible in practice.

One of the biggest concerns for our water-based resources in the future is the sustainability of the current and even future water resource allocation. [1] As water becomes more scarce, the importance of how it is managed grows vastly. Finding a balance between what is needed by humans and what is needed in the environment is an important step in the sustainability of water resources.

**Overview :-** Water is an essential resource for all life on the planet. Of the water resources on Earth only three percent of it is fresh and two-thirds of the freshwater is locked up in ice caps and glaciers. Of the remaining one percent, a fifth is in remote, inaccessible areas and much seasonal rainfall in monsoonal deluges and floods cannot easily be used. As time advances, water is becoming scarcer and having access to clean, safe, drinking water is limited among countries. At present only about 0.08 percent of all the world's fresh water[3] is exploited by mankind in ever increasing demand for sanitation, drinking, manufacturing, leisure and agriculture. Due to the small percentage of water remaining, optimizing the fresh water we have left from natural resources has been a continuous difficulty in several locations worldwide.

Much effort in water resource management is directed at optimizing the use of water and in minimizing the environmental impact of water use on the natural environment. The observation of water as an integral part of the ecosystem is based on integrated water resource management, where the quantity and quality of the ecosystem help to determine the nature of the natural resources.

As a limited resource, water supply sometimes supposes a challenge. This fact is assumed by the project DESAFIO (http://desafioglobal.org/) (the acronym for Democratisation of Water and Sanitation Governance by Means of Socio-Technical Innovations), which has been developed along 30 months and funded by the European Union's Seventh Framework Programme for research, technological development and demonstration. This project faced a difficult task for developing areas: eliminating structural social inequity in the access to indispensable water and public health services. The DESAFIO (http://desafioglobal.org/) engineers worked on a water treatment system run with solar power and filters which provides safe water to a very poor community in the state of Minas Gerais.[4]

Successful management of any resources requires accurate knowledge of the resource available, the uses to which it may be put, the competing demands for the resource, measures to and processes to evaluate the significance and worth of competing demands and mechanisms to translate policy decisions into actions on the ground.

For water as a resource, this is particularly difficult since sources of water can cross many national boundaries and the uses of water include many that are difficult to assign financial value to and may also be difficult to manage in conventional terms. Examples include rare species or ecosystems or the very long term value of ancient groundwater reserves.

**Agriculture :-** Agriculture is the largest user of the world's freshwater resources, consuming 70 percent.[5] As the world population rises it consumes more food (currently exceeding 6%, it is expected to reach 9% by 2050), the industries and urban development's expand, and the emerging biofuel crops trade also demands a share of freshwater resources, water scarcity is becoming an important issue. An assessment of water resource management in agriculture was conducted in 2007 by the International Water Management Institute in Sri Lanka to see if the world had sufficient water to provide food for its growing population or not . [6] It assessed the current availability of water for agriculture on a global scale and mapped out locations suffering from water scarcity. It found that a fifth of the world's Visualisation of the distribution (by volume) of water on Earth. Each tiny cube (such as the one representing biological water) corresponds to approximately 1,000 cubic kilometres (240 cu mi) of water, with a mass of approximately 1 trillion tonnes (2000 times that of the Great Pyramid of Giza or 5 times that of Lake Kariba, arguably the heaviest man-made object). The entire block comprises 1 million tiny cubes. [2] Agriculture people, more than 1.2 billion, live in areas of physical water scarcity, where there is not enough water to meet all their demands. A further 1.6 billion people live in areas experiencing economic water scarcity, where the lack of investment in water or insufficient human capacity make it impossible for authorities to satisfy the demand for water.

The report found that it would be possible to produce the food required in future, but that continuation of today's food production and environmental trends would lead to crises in many parts of the world. Regarding food production, the World Bank targets agricultural food production and water resource management as an increasingly global issue that is fostering an important and growing debate.[7] The authors of the book Out of Water: From abundance to Scarcity and How to Solve the World's Water Problems, which laid down a six-point plan for solving the world's water problems. These are: 1) Improve data related to water; 2) Treasure the environment; 3) Reform water governance; 4) Revitalize agricultural water use; 5) Manage urban and industrial demand; and 6) Empower the poor and women in water resource management. To avoid a global water crisis, farmers will have to strive to increase productivity to meet growing demands for food, while industry and cities find ways to use water more efficiently.[8]

**Managing water in urban setting :-** As the carrying capacity of the Earth increases greatly due to technological advances, urbanization in modern times occurs because of economic opportunity. This rapid urbanization happens worldwide but mostly in new rising economies and developing countries. Cities in Africa and Asia are growing fastest with 28 out of 39 megacities (a city or urban area with more than 10 million inhabitants) worldwide in these developing nations.[9] The number of megacities will continue to rise reaching approximately 50 in 2025. With developing economies water scarcity is a very common and very prevalent issue.[10] Global freshwater resources dwindle in the eastern hemisphere either than at the poles, and with the majority of urban development millions live with insufficient fresh water.[11] This is caused by polluted freshwater resources, overexploited groundwater resources, insufficient harvesting capacities in the surrounding rural areas, poorly constructed and maintained water supply systems, high amount of informal water use and insufficient technical and water management capacities.[12]

In the areas surrounding urban centres, agriculture must compete with industry and municipal users for safe water supplies, while traditional water sources are becoming polluted with urban runoff. As cities offer the best opportunities for selling produce, farmers often have no alternative to using polluted water to irrigate their crops. Depending on how developed a city's wastewater treatment is, there can be significant health hazards related to the use of this water. Wastewater from cities can contain a mixture of pollutants. There is usually wastewater from kitchens and toilets along with rainwater runoff. This means that the water usually contains excessive levels of nutrients and salts, as well as a wide range of pathogens. Heavy metals may also be present, along with traces of antibiotics and endocrine disruptors, such as oestrogens.

Developing world countries tend to have the lowest levels of wastewater treatment. Often, the water that farmers use for irrigating crops is contaminated with pathogens from sewage. The pathogens of most concern are bacteria, viruses and parasitic worms, which directly affect farmers' health and indirectly affect consumers if they eat the contaminated crops. Common illnesses include diarrhoea, which kills 1.1 million people annually and is the second most common cause of infant deaths. Many cholera outbreaks are also related to the reuse of poorly treated wastewater. Actions that reduce or remove contamination, therefore, have the potential to save a large number of lives and improve livelihoods. Scientists have been working to find ways to reduce contamination of food using a method called the 'multiple-barrier approach'.

This involves analysing the food production process from growing crops to selling them in markets and eating them, then considering where it might be possible to create a barrier against contamination. Barriers include: introducing safer irrigation practices; promoting on-farm wastewater treatment; taking actions that cause pathogens to die off; and effectively washing crops after harvest in markets and restaurants.[13]

**Urban Decision Support System (UDSS) :-** Urban Decision Support System (UDSS) – is a wireless device with a mobile app that uses sensors attached to water appliances in urban residences to collect data about water usage and is an example of data-driven urban water management. [14] The system was developed with a European Commission investment of 2.46 Million Euros [15] to improve the water consumption behaviour of households. Information about every mechanism – dishwashers, showers, washing machines, taps – is wirelessly recorded and sent to the UDSS App on the user's mobile device. The UDSS is then able to analyse and show homeowners which of their appliances are using the most water, and which behaviour or habits of the households are not encouraged in order to reduce the water usage, rather than simply giving a total usage figure for the whole property, which will allow people to manage their consumption more economically. The UDSS is based on university research in the field of Management Science, at Loughborough University School of Business and Economics, particularly Decision Support System in household water benchmarking, led by Dr Lili Yang (http://www.lboro.ac.uk/departments/sbe/ staff/ profiles/yanglili/yang-lili.html), (Reader)[16]

**See also :-**

# American Water Resources Association
# eWater
# Hydrological optimization
# Integrated urban water management
# Integrated water resources management
# List of water supply and sanitation by country
# Overdrafting P
# eak water
# WASH (Water, sanitation and hygiene)
# Water cycle management
# Water footprint
# Water management hierarchy
# Water politics
# Water resources law
# Water Resources Research
# Water scarcity

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# Impact of Gandhian Thoughts on Indian English Literature and its Relevance

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**Abstract :-** One of the most popularly discussed and yet many-a-time controversial figure of Indian politics is Mahatma Gandhi. There is hardly any area in the pre or post-independence era that he had left untrampelled for the sake of Indian development and independence. He has influenced every aspect of human consciousness and there is hardly any discipline that he has left uncommented. He is an immense source of writing himself and has influenced different disciplines and very many writers from different fields like history, politics, philosophy, literature, sociology and so on, have him as their central themes. While musing on different books on Gandhiji, especially the then Gandhian Indian English Literature, one can easily sense that the then time was grossly occupied by a 'Gandhian consciousness' socially, culturally and politically, especially during the anti-colonial period against the British. There are vicarious studies and research works that Mr. Gandhi has found and is still finding himself into; but reading some of the basic books and going through certain phenomenon, I personally feel that the relationship between Indian English Literature and Gandhiji is still left untold at certain historical, social and cultural ends and so I would like to make a modest attempt in re-inventing Gandhiji in the light of the then Indian English Literature and its impact. Gandhiji was so much part and form of any literary genre of that period that he made appearance in many dramas, novels, stories and in poems. Through this paper, it is my sincere attempt to focus relevance of Gandhi on Indian English Literature and highlight some of the chief exponents under his influence. For this purpose few works of Indian Writings in English are discussed.

**Keywords** :- anti-colonial, Gandhian consciousness.

"From my background, I gained my regulating Christian ideals. From Gandhi I learned my operational technique". – Martin Luther King (Norman; 1969 : 14)

If we try to look back the pages of world history, we may realize that the greatness of man must be measured not by the amount of adulation accorded him but by the impact of his life on others. When this yardstick applied to the people of India, Mahatma Gandhi's major place in history is instantly apparent. "When I think of Gandhi, I think of Jesus Christ. He lives his life; he speaks his word;he suffers, strives and will someday nobly die for his Kingdom upon earth." –John H.Holmes (Norman; 1969: 15)

It is well said that Man is mortal but his deed is immortal. No person can achieve a due respect from his Nation and from the world, unless he makes an extra-ordinary contribution for humanity. Mahatma Gandhi is among those great men who spent their lives for the sake of humanity. To know Mahatma Gandhi in few pages is like to judge the elephant, putting cloth on the eyes. Mr. M. K. Naik comments, "Indian Writing in English literature of the Gandhian age was inevitably influenced by these (the then political and social) epoch-making developments in Indian life." He explains that Indian Writing in English (Fiction) in fact "discovered some of its most compelling themes during the Gandhian era." This is a veritable truth and there rises no controversy about the countless eminent references to it. Before discussing the literary aspects of Indian English Literature, some basic principles of Mahatma Gandhi's life needs to be clarified. The intention is that the reader should be aware of some realistic approach to this subject.

Literature is not person oriented. 'Mahatma Gandhi' means not Indian English Literature but the principles which he followed in his life and then his disciples till now are following is the part of Indian English Literature. As a learner of Gandhian study, it is our basic requirement to know what is Gandhism? 'Gandhi' is a person and '-ism' is 'a belief'. In other words we can describe the term 'Gandhism' as - "The belief that Gandhi put in his life". More suitable illustration can be, "The Philosophy which Gandhi has given to the world." There were few principles which Gandhi followed all through his life : **Satya (Truth), Ahinsa (Non-violence), Vishvashanti (World peace), Asahayog (Non-cooperation)**. He weaved these principles and practically implemented them in his life. Once we are able to handle this philosophy, we can conquer the world without any bloodshed. It is a great miracle which this man has shown to the world. This Gandhian impact has a due relevance to Indian English Literature and the world literature as well. This paper is an attempt to focus on some of the chief exponents under Gandhian influence.

It is a very interesting fact that even Gandhiji was one of the supreme communicators who could bring ignorants out of doors; make illiterates sing one song, gather all women at a venue and make children chant his name as God, at his single call. That Gandhiji was a classic media-man, is proved by his journalistic activities and his use of journalistic writings throughout his life. He very aptly exploited the nationalist press, and his own journals, 'Young India', 'Navijivan', 'Indian Opinion' and 'Harijan', though were restricted to the literary urbans of India, yet he well knew the secret of reaching out to the hearts of the millions in the rural areas by means of 'Padayatra' or mass procession and motivating speech. He was much an advanced social worker and was well aware of the power of communication. He weighed and measured the Indian colonial situation and the existing psychological and physical state of Indians and thus concluded that the accurate means to reach them was by the folk media and group communication. He achieved identification with the masses through "Sadharanikaran" or simplification of his message, through common religious symbols, Vedas, myths, and of course making his life very simple to establish an easy identification. Whatever Gandhiji's influence may have been on political and economic spheres of the country, there is hardly any doubt that he has left a deep impression on our literature. He is a mine of themes for writers and commentators though he himself never worked on any literary topic or genre. Dramatic reconstructions of Gandhiji's life in film and fiction range from Richard Attenborough's academy award winning film, GANDHI, in 1982 to Indian English novels like Mulk Raj Anand, Raja Rao and R.K Narayan. Gandhiji gave new strength and new confidence to Indian languages that suffered contempt, neglect, indifference, and disgrace for a long time.

The writers working in different languages in those days either were mostly individuals who had come directly under Gandhiji's influence, many had even taken part in the freedom movements, or they were highly influenced by his ideals. Their writings were immensely burdened with Gandhian idealism, lifestyle, his teachings, and anti-colonial stands.Gandhiji was so much part and form of any literary genre of that period that he made appearance in many dramas, novels, stories and in poems. In most of the cases, the Gandhian writers, especially the novelists and short story writers, made Bapu an important, guest character or they made a local Gandhi replica and presented him in the light of Mahatma. P. Rama Moorthy in 'Gandhi's letters to the West' quotes: "For me there were only two God & Bapu, and now they have become one." Gandhiji had a multi-faceted personality. It would not be an exaggeration to say that he had performed many miracles during his life time and his message was a source of inspiration and strength to the people for all times.

Gandhiji was a psychologist in one sense and an idealist on the other as he could feel the pulse of India and its people on whom he could exert a tremendous influence and preach his Gandhian ideology. He realized that India being a religion-oriented country with a majority of half-literate and non literate population can only be motivated and mobilized through a traditional mode of communication. Gandhian philosophy was mainly based on traditional and labour oriented technologies. The folk or traditional arts of India have from the ancient times been used for moral, religious socio-political purposes. It is a classic communicative medium which appeals to the personal and emotional level of the people, avoiding any cross-cultural hurdles, expensive entertainment programmes and above all, the message is dispersed in a familiar format and content in local and colloquial dialects to a homogeneous group, surpassing all literacy and socio-economic barriers. Gandhiji though not in-person but in ideologies, teaching, views, had reached the stage and in hearts of people through various forms of Tamasha, Jatra, Keertan, Nautanki, Pala, Yakshagana, Ramlila, Raslila, Puppetry, and Street Theatre, to name a few folk forms, at all corners of rural and urban India and of course the literary artists and art directors were behind to provide a firm support in popularizing Gandhiji.

Major novelists and their novels where Gandhian thoughts have been highlighted are: Mulkraj Anand's Untouchable and Coolie, Raja Rao's Kanthapura, R. K. Narayan's Waiting for the Mahatma, Bhabani Bhattacharya's He Who Rides A Tiger, So Many Hungers, A Goddess Named Gold, Shadow From Laddakh, A Dream in Hawaii, Music for Mohini, Manohar Malgaonkar's Distant Drum, A Bend in the Ganges, Nayantara Sahgal's This Time of Morning, Situation in New Delhi, Storm in Chandigarh, and so many other novels and stories are based on Gandhian philosophy.

In order to understand the impact and relevance of Gandhian thoughts in Indian English literature a brief analysis of some of the works by Indian writers writing in English is necessary.

**Impact of Gandhian Ideals on :**

**R. K. Narayan's Waiting for the Mahatma** :- Waiting for the Mahatma, is a novel which has a theme of Indian independence. The protagonist of the novel is Sriram who is a young man living with his grandmother. Several times he was asked by his grandmother for his marriage but never showed any interest. Though he was a young man, was workless and homesick. Occasionally, he brought some vegetables from the market which grandmother told him. Once he was in the market and suddenly saw a huge crowd in the market. He was told that Mahatma Gandhi was coming in the town to deliver a speech to the people. Sriram attended the speech and it had become a turning point in his life. In the crowd he met a young girl Bharati who was then engaged with Mahatma Gandhi's Swaraj movement. Sriram also joined this movement and he became disciple of Mahatma. At the time of these activities he got deeply attached to Bharati and fell in love with her. Sriram proposed her but Bharati who was then under Gandhian influence answered Sriram that for her Indian Freedom is more important after that she is ready to tie up with him. Both Sriram and Bharati contributed for Indian Freedom Movement under the leadership of Mahatma Gandhi and finally India attained freedom. Mahatma who promised Bharati and Sriram that he will arrange their marriage ceremony was shot dead by an anti activist. Sorrowfully, Sriram and Bharati got married but they were then waiting for the Mahatma for blessing but he left them forever.

**Bhabani Bhattacharya's So Many Hungers! :**- So Many Hungers! Is a novel written by Bhabani Bhattacharya. It deals with hunger for freedom, food, power, sex, wealth and fame. Its central theme is The Quit India Movement of 1942. It also witnesses the Bengal famine of 1942 which is so horrible and harrowing. The novel has two plots. The first plot depicts the story of Samarendra Basu's family along with young Rahoul who is the central character. The second plot depicts the story of a peasant family along with the young girl Kajoli who is the major character. These two stories are linked by Desesh Basu (Devata) who is the grandfather of Rahoul. The novel depicts the extreme level of poverty caused by the famine. Kajoli tries to become a prostitute for the sake of money but she is saved from it. Finally, Devata projects the vision of Gandhi the Mahatma whereas Rahoul projects the vision of Gandhi the man.

**Bhabani Bhattacharya's Music for Mohini** :- Music for Mohini is another novel written by Bhabani Bhattacharya under the influence of Gandhism. The novel deals with political freedom. It also affirms that the social freedom is important for the real progress of the people because without attaining it political freedom is useless. Jaydev, the central character of the novel is dedicated to social freedom which is essential for India after she has achieved political freedom. He is a social reformer who wants to make his village Behula a good village society. He knows that it is not an easy task. He thought that his wife Mohini should teach the poor villagers. The novelist also gives a reference of Bengal famine of 1942. The famine affects the village Behula badly. The villagers are saved by the good deeds of Jaydev. Finally, Jaydev thought that the responsibility of the country should be taken by young generation. Jaydev's zest for development of his village is one aspect of Gandhian ideal.

**Nayantara Sahgal's Storm in Chandigarh :**- In her novel Storm in Chandigarh Nayantara Sahgal strongly depicted the underlying disgust at the insane violence erupting in Punjab. She was of the view that non violence is the only source to stop the bloodshed. It is a perfect solution for the peace and prosperity. These thoughts of Sahgal are the indication of her attachment to Gandhian cult in Storm in Chandigarh. She portrays the veteran Home Minister last surviving figure of Gandhian era, who realized wisely that he was an antique in the new crop of politicians breeding on mercenary power exerting chairs. The novelist defines Gandhism in these thought-provoking words. "Gandhian politics had meant open discussion, the open action. No stealth, no furtiveness and therefore, no shame. Every act proudly performed in the sunlight." Vishal Dubey, the protagonist mused over such thoughts and was happy to note that in spite of the darkness all around there were believers like his associates, in the cult of non-violence.

**Manohar Malgaonkar's A Bend in The Ganges :**- A Bend in the Ganges is an epic saga of the decade leading to partition and the forces which engineered its bloody consummation plunging modern India into its darkest hour; where over three million people died, over a million women were raped, abducted and mutilated, and several million rendered helpless refugees, left to fend for themselves in the quagmire of post partition existence teeming with poverty, disease and death. The opening chapter 'A ceremony of purification' describes burnings of Foreign clothes. Gandhi appears and the sky is rent with cries of 'Mahatma Gandhi Ki Jay'. In the last chapter too there is a burning but it is cities which are on fire, Hindus and Muslim killing each other, is this a ceremony of purification too? Manohar Malgaonkar in A Bend in the Ganges portrays Gandhi, as an upholder of Hindu Muslim unity, an apostle of non-violence.

Gandhiji insisted on high thinking and simple living which was highlighted by the literary English authors of the time, mainly Raja Rao, Mulk Raj Anand, R. K. Narayan, who in their novels and stories portrayed the real picture of the the-then society from various perspectives, thereby presenting the influence of Gandhi on Indian villages and towns, letting us a scope to probe how Gandhiji's ways of developmental communication created effects on human lives bringing a sea change in their thoughts, views and living. Almost all of their novels represent events which distinctly correspond to the examples of actual incidents and teachings that Gandhiji in real life encoded during his visits at various places. In Narayan's,The Vendor of Sweets, Jagan considers himself a staunch Satyagrahi, spins the charka regularly, and equates himself with achieving Nirvana, like the Buddha, by following the principles of Gandhism. Bakha in Anand's Untouchable, is introduced before Gandhism in the end, as redemption from the social evils of untouchability and casteism. After listening to the speech of Gandhiji as a counsel from God, Bakha's life becomes more tolerable from the next day. The crux of the morale or bottom spread of Gandhism, which the novels often portray by vicarious means and events are:

1. Unity among all religions especially Hindu-Muslim Unity.
2. People should not adhere to extremist means of protest.
3. Stop the evil practices of untouchability, casteism, enmity among classes, hatred, lying, swearing but spreading of brotherhood, love and unity among all races instead.
4. Stop consumption of tobacco, ganja-smoking, gambling, stop swearing, using slang, whoring, and beating the

womenfolk at home, sex-crimes and the like.

5. Boycotting foreign goods, educational, economic and legal institution.
6. Take up the initiative to spin, weave, cultivate, study, learn and teach, control sex, family planning, lead a simple living, self-sacrifice and self- purification.
7. People should be honest, progressive and self-confident about their country, resources and abilities.
8. Believe in the truth, face the truth and practice in life, realization of Swaraj, grace of God, strength of the united people when motivated towards one goal peacefully.

Thus, it can be concluded that Gandhian thoughts and philosophy have always inspired and influenced creative writers in literature and are relevant in the contemporary period. Gandhism is the need of every age. If the world is interested in its survival and development, then there should be peace. Gandhism basically believes in non-violence. It tries to give the prosperity to the individual and to the Nation. There was a real incident where a criminal named Laxman Bhole was put in front of the Judge and without any argument he accepted all his crimes. The Judge was shocked and summoned the punishment. Before that he asked the criminal how it was possible for him to be so sincere. The criminal answered him that in prison he read Gandhi's Autobiography the Story of My experiment With Truth. If a notorious person can change his life after reading a thoughtful autobiography, what more should be the power and relevance of Gandhian Philosophy?

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# An analytical study of Corporate Social Responsibility (CSR) in Economic and Social Development

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**Abstract :-** In present scenario corporate social responsibility is playing an important role in the field of social and economic development which is helping for the sustained economic development. CSR implies the manner by which business firms incorporates environmental, monetary and social worries into their way of life, values, procedure, basic leadership and activity in an adequate and synchronized manner, subsequently prompting better production of riches, better way of life, better practices in business association. In a period of globalization the job of corporate social duty has broadened definitely. The fundamental goal of this paper is to discover the rising job of corporate social obligation in reasonable economic development just as social advancement. The analysis of the paper recommend that corporate social duty is responsible for social and economic development provided the stakeholder show mutual trust respect for each other. The result of the paper whenever applied appropriately will help in expediting monetary flourishing supportable premise. The main objective of this research paper is to analyze the emerging role of corporate social responsibility in economic development as well as social development.

**Key Words :-** Corporate Social Responsibility, Globalization, Stake holders, Social and Economic Development.

**Introduction :-** Corporate social obligation, otherwise called corporate duty, corporate citizenship, dependable business, feasible capable business, or social corporate execution, can be characterized as Economic, Ethical, Legal, And Discretionary desires that society has of associations at a given point in time. The Economic obligations allude to society's desire that associations will create merchandise and ventures those are required and wanted by the clients and sell those administrations and products at a sensible cost. The Legal duties identify with desire that associations will follow laws set somewhere near the general public to oversee rivalry in commercial center. The Ethical duties worry to the cultural desires, similar to the desire that associations will lead their undertakings in reasonable and just manner. The ascent of the morals preparing inside the companies, some of it is required by the administration guideline, is a driver credited with changing the way of life and conduct of enterprises. At last, the Discretionary duties of the enterprises allude to society's desire, which associations are productive members of society.

**Objective of the Study :-**

1. To study about the importance and the key drivers of the corporate social responsibility influencing the social and economic growth and development.
2. To analyze the impact of the corporate social responsibility on social and economic development.

**Research Methodology :-** This paper depends on the Secondary information and various sources including books, magazines, periodicals papers .

**Key Drivers for CSR :-** The Key Drivers for Corporate Social Responsibility are as per the following:

• **Consumerism** : Consumers are getting increasingly mindful of social and ecological ramifications of their everyday buyer choices and furthermore are starting to settle on buying choices identified with their moral and natural concerns.

•**Building Trust** : There is expanding desire that organizations will be the more open, responsible and be set up to report freely on their presentation in the natural and social fields.

•**Increased Public Expectations of Business** : Globally organizations are relied upon to do significantly more than just give occupations and add to economy through work and assessments. As enterprises seek after development through globalization, they have experienced new difficulties that force breaking points to their development and potential benefits.

•**Employee Motivation** : Companies accept worker inspiration is the key driver with regards to social corporate duty.

•**Act and Regulation** - Governments set the plan for the social duty by the method for guideline and act that will enable a business to direct them capably.

•**Stakeholder Priorities** : Progressively, partnerships are inspired to turn out to be all the more socially dependable since their key partners anticipate that them should comprehend and address the network issues and social that is imperative to them.

**Importance of Corporate Social Responsibility :-** Corporates interface with society from multiple points of view. They put resources into offices, produce and sell products, employ individuals and subcontract or in-source numerous exercises. They likewise affect the earth by the idea of their exercises, by utilizing significant assets, or making results, which impact the physical condition. Their collaboration with society is through their representatives and the numerous aspects of society around them. The general public assumes a critical job in the accomplishment of any association. Thus, no association can make long haul progress without satisfying the duty towards the general public. Corporate Social Responsibility includes a dedication by an organization towards the manageable monetary advancement of the general public. It implies connecting straightforwardly with nearby networks, recognizing their fundamental needs, and coordinating their needs with business objectives and key expect. The administration sees CSR as the business commitment to the country's maintainable improvement objectives. Basically, it is about how business considers the monetary, social and ecological effect of the manner by which it works.

**According to the companies Act 2013 :-** CSR is not charity or mere donations. CSR is a way of conducting business, by which corporate entities visibly contribute to the social good. Socially responsible companies do not limit themselves to using resources to engage in activities that increase only their profits. They use CSR to integrate economic, environmental and social objectives with the company's operations and growth. CSR is said to increase reputation of a company's brand among its customers and society.

The **Companies Act, 2013** has formulated Section 135, **Companies (Corporate Social Responsibility) Rules, 2014** and Schedule VII which prescribes mandatory provisions for Companies to full fill their CSR.

**CSR Provisions :-** Every Company including its holding or subsidiary having:-

- Net worth of Rs. 500 Crore or more, or
- Turnover of Rs. 1000 crore or more, or
- Net Profit of Rs. 5 crore or more

**A foreign company having its branch office or project office in India, which fulfills the criteria specified above.**

However, if a company ceases to meet the above criteria for 3 consecutive financial years then it is not required to comply with CSR Provisions till such time it meets the specified criteria.

**CSR Committee :-** Every Company on which CSR is applicable is required to constitute a CSR Committee of the Board.

**CSR Policy** :- The CSR Policy of the company shall, inter-alia, include the following namely :-

- A list of CSR projects or programs which a company plans to undertake specifying modalities of execution of such project or programs and implementation schedules for the same

- Monitoring process of such projects or programs
- A clause specifying that the surplus arising out of the CSR projects or programs or activities shall not form part of the business profit of the company.

**Schedule 7** :- Activities which may be included by companies in their Corporate Social Responsibility Policies relating to:

- Eradicating hunger, poverty and malnutrition, promoting health care including preventive health care and sanitation including contribution to the Swach Bharat Kosh set-up by the Central Government for the promotion of sanitation and making available safe drinking water.
- Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects.
- Promoting gender equality, empowering women, setting up homes and hostels for women and orphans.
- Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agro forestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga.
- Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art.
- Training to promote rural sports, nationally recognised sports, Paralympics sports and olympic sports
- Contribution to the Prime Minister's national relief fund or any other fund set up by the central govt. for socio economic development and relief and welfare of the schedule caste, tribes, other backward classes, minorities and women;
- Providing funds to technology incubators located within academic institutions which are approved by the central govt.
- Rural and slum area development projects.

**CSR Performance by Companies :-** Corporate Social Responsibility (CSR) is a transformational practice by the business partnerships in India, commanded by the administration. As an activity towards the aggregate network prosperity, CSR is a positive advance towards upliftment of the society. The examination pursues environment, social and governance (ESG) structure to break down the corporate exhibition. Organizations are step by step fusing Sustainable Development Goals (SDGs) into their capable business actions. Tata Chemicals Ltd. has been positioned as the main organization third year straight for Sustainability and CSR practice in Responsible Business Ranking 2019, an examination led by Future scope. It best the rundown of top Indian organizations for CSR in 2019.

- **Tata Chemicals Ltd.** - Improving the personal satisfaction and encouraging manageable and coordinated advancement in the networks. To satisfy this Tata Chemicals built up Tata Chemicals Society for Rural Development (TCSRD) in 1980 as a general public and trust. Goodbye Chemicals spends INR 12 crores on CSR every year, and natural life preservation represents 30 percent of the financial limit of the TCSRD. The spend is circulated over the three places the organization has tasks — Mithapur in Gujarat, Haldia in West Bengal and Babrala, Uttar Pradesh.
- **Infosys Ltd.** - The company spent INR 342 crores as against its prescribed CSR expenditure of 340 crores (2% of the net profit of INR 17,018 Cr) towards various schemes of Corporate Social Responsibility. This year, the foundation's programmes extended to most of the states, with an emphasis on expanding reach to create deeper impact while ensuring focus on key area of development. The major works of the Foundation's works included the introduction of Aarohan Social Innovation Awards, restoration of water bodies in Karnataka, supporting the construction of a metro station in partnership with Bangalore Metro Rail Corporation Limited, enabling the pursuit of access and excellence in

sports through the GoSports Foundation, and relief efforts in Tamil Nadu, Karnataka and Kerala.

- **Bharat Petroleum Corporation Ltd.** - Bharat Petroleum Corporation Limited (BPCL) is a Government of India controlled Maharatna oil and gas organization headquartered in Mumbai. The CSR spending plan of INR 146.87 crores from the money related year 2017-18 was conveyed forward one year from now (FY 2018-19). Bharat Petroleum couldn't spend the whole sum and left INR 172.25 crores unspent during the year in light of the fact that most of its activities range between one to five years.Under the umbrella of "empowering quality instruction", the attention is on conferring all encompassing training, ideally through utilization of innovation separated from taking into account satisfactory infrastructural offices, access to training and improvement of instruction frameworks and support in undertakings of national significance like the Swachh Bharat Abhiyan.
- **Mahindra and Mahindra Ltd**. - The organization spent INR 93.50 crores on CSR activities during the budgetary year 2018-19, as indicated by the yearly report distributed by the organization. The organization spent INR 8.36 crore on Nanhi Kali program which gives instructive help to oppressed young ladies in India through an afterschool bolster program. M&M supported its twentieth Lifeline Express (emergency clinic on a train) in Arrah Bihar, through which therapeutic consideration, treatment, and careful intercession was given to 11,119 people. Mahindra Hariyali 0.95 million trees were planted to improve greenery.
- **ITC Ltd**. - ITC Ltd. is an Indian worldwide aggregate organization headquartered in Kolkata, West Bengal. The Company has spent more than the endorsed CSR spending plan in last three money related years. In FY 2018-19, ITC Limited spent INR 306.95 Crores. The Company collaborated with BAIF Development Research Foundation, Pratham Education Foundation, Ramakrishna Mission, Bandhan Konnagar, SEWA Bharat, Foundation for Ecological Security, ITC Sangeet Research Academy (ITC SRA), ITC Rural Development Trust and CII–ITC Center of Excellence for Sustainable Development to actualize CSR programs.
- **Ambuja Cement Ltd**. - ACF is useful crosswise over 12 states covering 22 areas in India and has prevailing with regards to realizing change in the lives of 1.5 million individuals. Ambuja Cement Foundation intends to spend Rs 125 crore, remembering Rs 40 crore for Rajasthan, towards corporate social obligation in the current financial. Pearl Tiwari, Director and CEO, ACF likewise educated that the yearly increment in the CSR spending plan was around 10-15 percent.
- **Tata Motors Ltd. -** Auto brand Tata Motors Limited went past consistence and spent INR 22 crores towards different plans of CSR. The CSR spend sum prohibits INR 2.99 crore gave to Tata Community Initiative Trust (TCIT) for fix of framework which was influenced during the flood in Kerala (August 2018), organization said in its Integrated Annual Report for the FY 2018-19.Health, Education Employability and Environment are significant region of works where the vast majority of CSR sum has been contributed.
- **Vedanta Ltd. -** Vedanta Limited on a combined premise spent INR 309 crores on social ventures and CSR (Corporate Social Responsibility) exercises. There are 10 expansive topical zones under which, it attempts network advancement ventures. The Nandghar Project is among the lead activities, which expects to re-assemble Anganwadis for guaranteeing the wellbeing and learning of kids in provincial territories, and furthermore for turning into a foundation of ladies' strengthening and skilling.
- **Hindalco Industries Ltd** - Hindalco Industries Limited is the metals lead organization of the Aditya Birla Group. Hindalco Industries went past consistence and spent INR 34.14 Cr, which is a higher figure than the endorsed INR 29.97 Cr. The Company bolsters instruction, medicinal services, feasible vocation, framework improvement and social reorganization under Corporate Social Responsibility (CSR) with 12 Lakh recipients in excess of 730 towns crosswise over 11 states In
- **Toyota Kirloskar Motor India** - As a socially dedicated corporate, Toyota Kirloskar Motor India has effectively contributed towards the "Swachh

Bharat Abhiyan". The organization has built in excess of 650 units of sanitation offices in 206 government schools crosswise over India, of which 125 units are situated in Varanasi, 426 units in Ramanagara area in Karnataka and 125 units in Vaishali in Bihar.

**These are the top companies which have incorporated CSR initiatives in their policies successfully and get ranking in 2019**
Source--thecsrjournal.in

**Suggestions :-** CSR certainly help in expediting the financial flourishing maintainable premise and in this way for the CSR and economical improvement, organizations must pursue:

1. More straightforward data offering to the different partners.
2. Incorporate CSR with the business technique and coordinate everything operational capacities.
3. Maintain Transparency with the clients.

**Conclusion :-** Corporate social duty (CSR) can be characterized as organization's commitment to seek after approaches and objectives that are to society's greatest advantage. The pragmatic requirement for CSR originates from evolving fortune, social desires, and globalization. Numerous organizations have earned advantages from taking part in the CSR exercises. It is dissected that the idea of CSR can't be disregarded by corporate firms. Organizations need to invest energy, endeavors and cash for CSR exercises by changing their work and surly add to the improvement of the general public and economy. These incorporate more grounded corporate picture, brand situating, piece of the overall industry and deals. It expanded their capacity to hold and pull in representatives.

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# Women Empowerment and Development in India

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**Introduction** :- If we want women in India to participate actively in our society then we must initiate it by spreading awareness among women themselves. We empower women's family, her locality and the whole country by empowering women. If we desire for overall development of our nation then we must encorporate measures for the upliftment of deprived and backward strata of our nation along with the factors who are actively involved in the ever-going process of development. The development program of United Nations states very clearly that their are certain groups of society that are involuntarily left out of the process because of their gender, descent, sexual orientation, physical or mental disabilities, and economically weak conditions. We see an outgrowth of disparity on global level because of these issues. We cannot achieve the goal of overall development and eradication of poverty unless we generate equal and adequate oportunity, unless the abled part of our society contributes, unless we do not involve all in decision making, unless we do not include the needy beneficiaries. The purpose of all-round development and inclusive society can only be achieved by the inclusion and integration of all the social strata into the social mainstream. There are a few schemes that have been implemented since 1990 to empower women and to free women of urban and rural background from the shackles and hardships of poverty, marginalization, and to lead them towards the development which is sustainable. These efforts also focus on getting rid off the gender bias against women. Women activists on global level have played and are playing a key role in empowerment of women, gender equality and justifiable development of women.

Women empowerment is such a process that offers women the right to choose; make choices for themselves. Giving women the right to make their own choices, to be able to influence decision making process for their own, to participate and develop women-centric discourse, and entrusting women with responsibility to work for themselves is the right thing to do. Women empowerment, in its all true sense, is only possible when women understand that it is there utmost need to have gender-bias-free empowerment process, and they need to strive to get the same. Society, in present time, needs to explore potential of women to its pinnacle in order to achieve their goals. Women need to be motivated and supported. Society needs to create an environment, and institutions working for women need to make effective policies to achieve their previously mentioned goals. According to the findings put forward by The World Bank in the year of 2014, the right to make choice, right to involve in the process of decision making that affect their life, participate in related discussions, express opinion, having say to a certain level in empowerment efforts, and having responsibility of empowering themselves is the real independence and empowerment.

Women Empowerment is a multifoliate, multi-coloured and multi-dimensional concept. Women empowerment is a process of having control or access to people, things, knowledge and economical assets. It also means being capable and free to express opinion on domestic as well as national issues; not only this but women should also have freedom to express themselves in their household, they should get just and equal treatment at work. Women have and are demolishing the thick yet brittle walls of gender bias in all the walks of life. Be it the field of technology, aero-space, sports, armed forces, etc. women are making remarkable development. Even the distinction between urban and rural women is blurring day by day, and today we see that every fifth woman in the world is an entrepreneur.

Today even government can be seen taking serious steps not only to protect girl child in their mothers' womb but also to keep work place safe and justifiable for women.

**Objectives of the Research Paper :-**

1. Making the concept of Women Empowerment clearer.
2. Studying the programs related to Women Empowerment.

**Research Hypothesis :-**

1. Efforts are being made by government to socialize women.
2. Progressive measures are being taken for safety of women.
3. Various programs and schemes are being deployed for development of women.

**Data Collection :-** Present research paper makes use of secondary sources as references.

**Definitions of Women Empowerment :-**

1. **World Bank :** Enabling individuals or groups to make their choices and the process to implement those preferences is empowerment.
2. **According to Kiran Devendra :** Female empowerment means that a woman is financially independent and self-sufficient. Woman should have a positive perspective about herself so that she could face any difficult situation, she could be capable of participating in the process of womens' development, she could participate in decision making process. Education plays an important and essential role in this empowerment process.
3. **According to Sharma Mukund** : The term empowerment refers to a range of activities from individual self assertion to collective resistance protest and mobilization that challenge basic power relations.

In short, Women Empowerment is such a process that will need women to have access and certain level of control over things, people, knowledge, money, and have a say in family, society and even in country.

**Nature of Women Empowerment** :- It is a great thing that today women have security even before their birth. Empowering women in the phase of gaining motherhood is a great thing. Central government's scheme like 'Pradhan Mantri Maatru Vandana Yojana' provides financial protection to women during their pregnancy and lactation period. Government has extended support by amending the 'Maternity Benefit' Act, women who have been employed have been given 6 weeks' paid maternity leave. Many women development schemes like these have been launched by the Government to enable women and they are reviewed as follows.

**1. Mahila Shakti Kendra (MSK) :-** With the aim of empowering women in the rural areas through social participation, a new scheme called 'Mahila Shakti Kendra' has been launched to support and give them full support. The 'Mahila Shakti Kendra' will be useful as a medium for empowering women in rural areas by training them and developing their new capacities. Along with this, the necessary support is being provided to facilitate access to health facilities, quality education, vocational guidance, employment opportunities, health and safety awareness, social security and education of digital transaction in selected districts and divisions of the country in order to realize their potential. The scheme is committed to play a vital role in the empowerment of rural women, especially women from 115 backward districts of the country.

**2. 'Deendayal Upadhyay Antyodaya' Scheme :-** This is a project designed to keep llivelihoods of rural women at the center. The main purpose of this program is to raise public awareness through the participation of rural women. It was decided that at least one female member of every poor family in the rural areas selected for this would be involved in the activities of Self-Help Groups within the stipulated timeframe. Special policies of the National Rural Employment Scheme were formulated so that the scheme could reach all the weaker sections of the society successfully and eradicate poverty and empower women in weaker sections. This will definitely raise the standard of living of women.

**3. Empowering elected women representatives (EWRS) :-** A large number of training programs were launched with the aim of empowering elected women representatives to help them carry out their responsibilities, to lead the village and make it easier for them to guide the village to a brighter future. Recent past experiences at village level have shown that the representation of the elected women requires the ability to take on new responsibilities, implement skills development programs, etc. Health education, livelihoods, male representatives are focused on development issues that are often neglected.

**4. Rashtriya Mahila Kosh (RMK) :-** The Rashtriya Mahila Kosh (RMK) provides a small amount of credit to the women earning in the informal sector without any surplus and no collateral to create income source. With the help of many organizations, small loans are given, helping to develop the industry, teaching the ways of running a thriving industry, and training for leadership qualities in self help groups.

**5. National Information Store for Women (NARI) :-** The government has created a portal called National Information Store to make it easier for citizens to get information about all the programs and schemes launched by the government to help women. All information regarding various schemes and programs related to women is updated from time to time on this portal.

**6. Beti Bachao Beti Padhav (BBBP) :-** The 'Beti Bachao Beti Padhav' campaign was initially launched to improve the declining female-to-male ratio. However, over time the scope of the scheme has expanded and the strict implementation of the Pre-natal and Pre-natal Diagnosis Restriction Act, the provisions for promoting girls' higher education, and Other important topics were included in the woman's life cycle, such as the debilitating factors. This scheme has started from 2015 and due to this, women are becoming more capable.

**7. Udyojika Vikas Karyakram :-** This program helps women stand on their feet. All these schemes, Pradhan Mantri Mudra Yojana, start-ups and women's self-help groups under the National Employment Mission, have helped women become financially independent and secure. The safety of women and the protection of them everywhere is very important for women empowerment. To help them, the number 181 telephone service, all help centers in one place and Panic Button facility have all accelerated women's empowerment.

**8. Mahila Police Swayamsevak (MPVS)** :- It is estimated that these women police volunteers will prove to be more effective alternatives to the local police. The women police volunteers have been appointed in all the states and union territories of the country to facilitate communication between the citizens and the police and help the afflicted women.

If there are incidents of domestic violence, child marriages, brutalities, and assaults on women in public places, these women police volunteers play important role in prohibiting the same from happening.

**9. Women's e-Haat** :- The Women's e-Haat has been launched to empower women in the business of shopping and to empower them financially. This is a new platform made available by the Government to women self help groups, NGOs, women who run the industry on a personal level for the sale of their products. So far 1450 people have visited this site. Women's self help groups, non-governmental organizations, industries, 1800 products and services are available for sale in the states of the country. During this six-month period, over Rs 20 lakh worth of transactions have been made by entrepreneurs, self help groups, non-government organizations.

**10. Pradhan Mantri Ujwala Yojana :-** The central government has launched this scheme to help the poor in Indian society. The government has launched a scheme to provide petroleum gas for cooking in the family of economically backward families. Financial empowerment and women's participation in financial transactions are very important factors. Also, through 'Sukanya Samriddhi Yojana', 'Pradhan Mantri Jan Dhan Yojana', it is possible to get banking services easily for non-bank citizens.

**11. Kaushalya Vikas :-** A large number of youths are trained in various industry related skills through skill development scheme to enhance the capacity of their female workers. So far, about half of the total students receiving the training certificate from this scheme are female trainees.

**12. Matru Sashaktikaran :-** In order to ensure that women do not have to leave their jobs for any reason, the government has amended the Maternity Benefit Act and provided 26-week paid leave to employed women. In addition, the budget for the Ministry of Women and Child Welfare has been increased by 20 per cent over 2018. 29.165 crore has been approved for the year 2019-20. From the perspective of women empowerment, the government has made important bold decisions. It certainly helps women to be able to.

**Conclusion :-** The above analysis shows that empowerment of Indian women will not be possible without the competent women in the family. Because more than half of the Indian population is women, without access to health, education and employment, they cannot progress on the path of development without taking care of their empowerment.

Without a well-planned effort for women's development, the country will not be a leader in progress, but it is hoped that the right direction of all the competent constituents of India will only lead to a new horizon through women empowerment welfare schemes and women empowerment.

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# Irrigation Status and Water Management with Special Reference to Andhra Pradesh

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**Abstract :-** Water is a finite resource and managing water in days of rapid socio-economic growth and change is challenging. Irrigation is science of artificial application of water to the land in order to fulfill the water requirements of the crops throughout the crop period. Irrigation potential of Andhra Pradesh is 103.11 lakh acres out of 199.04 lakh acres of cultivable area. In the present study the data was collected from secondary data referring Agriculture Dash Board-Government of Andhra Pradesh, AP Water Resource board, websites and research journals. Andhra Pradesh has one of the largest irrigated areas. With a gross irrigated area of 6.28 m. ha, the state accounts for nearly 7.3 per cent of the total irrigation in the country. Groundwater is the major source of irrigation in the state, with nearly 49 per cent of the net irrigation is from wells and tube wells. The rest of the irrigation is from sources such as canals, tanks and other sources. The major irrigation issues identified in the state are over exploitation of ground water resources, deteriorating groundwater quality and climate change. Management strategies proposed for these issues are finding alternate sources of water, repair, renovation, and restoration of water bodies, basin management, water efficient technological solutions, water conservation measures, water shed management, conjunctive use of surface and ground water, contingency crop planning for the project area, resilience and adaptation to climate change and enhanced co-ordination among agencies such as State Pollution Control Board, Industrial Development Corporation, State Finance Corporation, Irrigation Department, Panchayati raj Department, Ground Water Department, and some other non-Governmental Agencies. Major Medium Irrigation Projects working in Andhra Pradesh are 95 projects. Andhra Pradesh is undergoing a dramatic shift in the irrigational pattern moving from large scale surface to ground water irrigation. Different programmes and irrigation projects being taken up can improve the irrigation status inIndia.

**Keywords :-** Irrigation potential, water resource board, Andhra Pradesh, Irrigation project

**Introduction :-** Irrigation is the sector which touches rural livelihood in terms of increased output of agricultural production. Andhra Pradesh is one of the most important agrarian states in the country. Irrigated agriculture has been fundamental to state's economic development and poverty alleviation. The expansion of irrigation is widely believed to have played a major role in the region's rapid agricultural growth over the last three decades ensuring economic agricultural prosperity in the dry regime. Keeping in view of the importance of irrigation for transformation of the rural economy, successive Governments have focused irrigation facilities in the State. Water security is intimately tied with food security, livelihood, health, environment, economic development and overall well-being of the society. Water is a finite resource and managing water in days of rapid socio-economic growth and change is challenging. The water challenges for the state are, therefore, manifold – improving and safeguarding the existing drinking water supplies, managing water for irrigation, industry, power supply and environmental prevention of pollution.

The state of Andhra Pradesh is blessed with about 40 major and medium rivers out of which Godavari, Krishna Vamsadhara, Nagavali and Pennar are major interstate rivers contribute to the major chunk of the surface waters. The state has about 40000 minor irrigation sources spread over the thirteen districts. Cropping intensity increased from110percent in1960-61to123 per cent in 1999-2000. This is mainly due to the increase in area under irrigation. Primarily dependent on rainfall for irrigation the state exhibits spatial and temporal variations in the quantity of precipitation received from south west and north east monsoons. Such variation has its impact in the growth of irrigation over time and space.

- Geographical area of AP 402.70 lakh acres
- Total cultivable area 199.04 lakh acres
- Irrigation potential 103.11 lakh acres

**Materials and Methods :-** The state of Andhra Pradesh is divided into 13 administrative districts spread across two unofficial regions namely Coastal Andhra and Rayalaseema. Coastal Andhra is divided into 9 districts viz. Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam, SriPotti Sri Ramulu Nellore. Rayalaseema comprises 4 districts viz. Kurnool, Chittoor, Kadapa and Anantapur. The present study is primarily based on the information gathered from various sources that deal and dealt with the study in Andhra Pradesh. The data was collected from secondary data. The information relevant to the study has been taken from Agriculture dash board of Government of Andhra Pradesh, AP Water Resource Board, websites and research journals. The data pertaining to Irrigation status, issues in 13 districts of Andhra Pradesh is collected, then interpreted and management strategies were recommended for the irrigated issues existing in AndhraPradesh.

**Results and Discussion :-**

**The history of growth of irrigation in Andhra Pradesh :-** It can be classified into three distinct phases as follows

- Era of adaptive irrigation
- Era of canal construction
- Era of atomistic irrigation

**Era of adaptive irrigation :-** Since time immemorial until the early 1800s, farming communities adapted their agrarian lives to the hydrology of river basins.

**Era of canal construction :-** Around 1810, the British East India Company began changing this adaptive irrigation regime by undertaking gigantic projects that reconfigured river basins. Large canal projects were also undertaken in the south of India, particularly in Andhra Pradesh. The irrigation sector was principally dominated by major, medium and minor canal irrigation till1980s.

**Era of atomistic irrigation :-** The availability of small mechanical pumps and boring rigs provided a technological breakthrough in this era. With the fact that tanks and canal systems are unable to meet the growing demand of irrigation; 1990, saw a transformation from a centrally managed surface irrigation regime to distinct managed water scavenging irrigation regime particularly in the hard rock regions of Rayalaseema which are largely bypassed by the canal irrigation systems.

**Irrigational sources in Andhra Pradesh :-** Andhra Pradesh has one of the largest irrigated areas. With a gross irrigated area of 6.28m.ha,the state accounts for nearly 7.3 per cent of the total irrigation in the country. Groundwater is the major source of irrigation in the state, with nearly 49 per cent of the net irrigation is from wells and tube wells. The rest of the irrigation is from sources such as canals, tanks and other sources. The state is mostly underlain by hard rock aquifers, with very poor storage and yield potential. Most parts of the state do not provide a favorable environment for intensive use of groundwater resources. Yet, limited access to water from surface irrigation systems such as reservoir and canal-based systems and tanks, makes farmers resort to well irrigation through openwells.

**Table 1:** Irrigated area in Andhra Pradesh by different sources (2017-18)

| Sources | Gross area irrigated (lakh ha) | Net area irrigated (lakh ha) | Irrigation intensity |
|---|---|---|---|
| Tanks | 327 | 293 | 1.12 |
| Canals | 1882 | 1429 | 1.32 |

| | | | |
|---|---|---|---|
| Ground water | 1532 | 1080 | 1.42 |
| Other sources | 145 | 125 | 1.16 |
| Total | 3886 | 2927 | 1.33 |

**Source:** Agriculture dashboard, Govt. of Andhra Pradesh

**Issues and management of irrigation :-**

**Over exploitation of ground water resources :-** Rainfall within the state has remained the key determinant for both surface water and groundwater irrigation. Any change in the rainfall pattern therefore significantly influenced the overall irrigation efficiency of the state. Time and again literature on rainfall variability indicated increase in uncertainties, particularly, over the last 20 years. This in turn has resulted into drying up of tanks and emergence of rampant tube well as the most feasible and lucrative alternative. Such indiscriminate usage of ground water is more intense in drought affected districts of Rayalaseema which is largely bypassed by the canal irrigation systems. According to Department of Ground Water, Andhra Pradesh the state is classified into four categories as follows:

- Very High Usage districts comprising Anantapur
- High Usage Districts comprising of Kadapa, Chittore
- Moderate Usage districts comprising of Nellore, Kurnool and Prakasam.
- Low Usage districts comprising Srikakulam, Vizianagaram, Vishakhapatnam, West Godavari, East Godavari, Krishna and Guntur.

**Management** :-

**Use less water :-** As individuals, one of the things everyone can do to make a difference is to use less water for luxury purposes. Throughout countless neighborhoods, large amounts of water are used for swimming pools while water hoses are kept running to wash cars and for other miscellaneous reasons. To conserve water one should turn off the faucet and reduce the usage of washing machines, dishwashers and similar appliances. It is advised to save a massive amount of water by deciding not to use water for decorative and unnecessary reasons at home.

**Policies to be changed :-** There are many scientists, researchers, and sustainable companies believe that many of the policies should be changed with the consideration of saving groundwater in mind instead of treating it like an endless resource.

**Find alternate sources of water :-** One of the most effective ways to address the issue of groundwater depletion is to find alternative sources of water. Alternative water sources can be used to help replenish aquifers. Deriving water from other sources would also give aquifers time to refill instead of pumping too much water from them at once.

**Repair, renovation, and restoration :-** The Government of Andhra Pradesh have sanctioned an amount of Rs.91.45 Corers to take up Repair, Renovation, and Restoration for 342 water bodies for stabilization of total Ayacut 100832 acres in five Districts of Andhra Pradesh (Ananthapuram, Chittoor, Kadapa, Kurnool and Srikakulam).

**Basin management :-** Water resource development is to be planned in an integrated manner at the river basin level and effective basin wise programs have to be evolved considering the inter-relationships of soil conservation, afforestation, land development, controlled grazing etc. The development of forests in upland of the water basin where the slopes are high will help in minimizing the landslides, leading to lesser sediment transport. Environmental monitoring of the catchment area on continuous basis and soil conservation measures such as contour bundling, check dams, afforestation etc. to be practiced.

**Water efficient technological solutions :-** Drip irrigation is an effective tool for conserving water resources and studies have revealed significant water saving ranging between 40 and 70 per cent by drip irrigation compared with surface irrigation, with yield increases as high as 100 per cent in some crops in specific locations. In view of its higher water use efficiency, wider adaptability to diversity of soils, crops, climate etc., its wide scale applicability in the project site is highly recommended (Kumar et al., 2011).

**Water conservation measures :-** Various water conservation measures suggested for adaptation are as follows:

- Creation of low reservoirs for storing the water
- prevention of losses through seepage and leaks
- improving usage efficiency through better usage practices
- educating the users, and
- Recycling and reuse of waste water.

For example, the last of the above measures, i.e. there cycling of wastewater is currently being practiced in few industries, where the treated liquid effluent is used for gardening purposes. It not only reduces the load on the water resources but also gives indirect financial benefit for its usage instead of freshwater. In addition, the percolated water will improve the ground water resources.

**Deteriorating groundwater quality** :- The introduction of intensive irrigated agriculture particularly in the semi-arid areas of the state has resulted in the development of twin problems of waterlogging, soil salinization and seawater intrusion. This in turn has resulted into reduced crop yields, frequent crop failures, increase in costs of cultivation and reduced income of the small and marginal farmers. According to state Ground water department, totally 30 Mandals (East Godavari 10, Guntur 7 and Krishna 13) are categorized as poor quality areas and thereby unsuitable for irrigation purposes.

**Management** :-

**Increased participation of the public :-** The public can approach the State Pollution Control Boards or Local Administration for taking necessary action against the polluters in their locale. Few State Governments, such as Andhra Pradesh, are encouraging people to take part in developmental programs. Isolated cases are reported in literature that people have taken initiative on their own and successfully solved their drinking water problems after not getting much encouragement from the local Governments or administration. Such successful cases may induce inspiration among the public in other parts of the country. This will help in spreading mass awareness about significance on usage of water resources. It leads to pride and satisfaction for being part of the Governance and sharing the responsibilities.

**Climate change** :- Climate change with expected long term changes in rainfall patterns and shifting temperature zones are expected to have negative effects on irrigation.

**Water shed management as a climate proofing mechanism :-** Watershed management can be implemented as effective adaptive strategy to climate change. Several water harvesting structures like check dams, percolation tanks, farm ponds etc can be used as a mechanism to recharge ground water aquifer.

**Effective community mobilization and institution building :-** Perhaps the most critical aspect of any adaptation strategy is effective community mobilization and institution building at the grass root level. Community's ability to pool collective resources and facilitate the transfer of knowledge and technology may be the most effective mode to combat climate extremes. Since, climate change affects farmers collectively, it is thereby imperative to call for collective action as a possible solution to combat shocks. Several grass root institutions like water user associations, watershed committees, user groups, forest groups climate schools etc needs to be promoted in the project areas. There is a need to create awareness among the people by using mass media followed by individual contact method through trained extension agents. Dissemination of the understanding that faulty irrigation practices, in efficient water use can disturb the ecological balance and consequently, to climate change is necessary. Such an understanding would provide an opportunity to take resilience measures towards ecological redressed and willingness for benign action to minimize and mitigate the bad consequences of climate change.

Farmers innovativeness and adaptability need to be upheld through services supporting the agricultural sector like better access to credit for inputs, improvement of market chains, extension services, better access to information, etc.. Finally, negotiating and implementing some form of water entitlements within irrigation projects could help in devising community management strategies and be an option to achieve equity and sustainability of water allocation and help in mitigating shocks and negative externalities.

**Conjunctive use of surface and ground water :-** Conjunctive management of rain, surface water and groundwater is the big hitherto underexploited opportunity for supply-side management. The presence of canals, tanks and wells in the project areas such a management strategy can act as an effective climate proofing strategy.

**Contingency crop planning for the project area :-** In the context of current climate, as well as predicted increases in mean temperature and rainfall variability, adaptation and mitigation strategies are needed urgently for agricultural crops so that they are better adapted to biotic and abiotic stresses, leading to higher crop productivity. Use of alternative crops or cultivars adapted to the likely changes, alteration in the planting date, and management of plant spacing and input supply might help in reducing the adverse impact in most of the project villages.

Use of resource-conservation technologies and a shift from sole cropping to diversify farming system is highly recommended. Horticulture and agro-forestry need to be given more encouragement. Enabling policies on crop insurance, subsidies and pricing related to water and energy uses need to be strengthened at the earliest. Policies that would encourage farmers to enrich organic matter in the soil need emphasis. It is also necessary to develop a robust early warning system of spatial-temporal changes in weather as well as other environmental parameters. Contingency crop planning will require greater attention. Long-term strategic approaches to efficiently conserve and utilize rain water on the one hand and in-season tactical approaches to mitigate the adverse effects of weather aberrations on the other are also needed (Joshi and Kar, 2009).

**Resilience and adaptation to climate change :-** It is often implies improving or at least maintaining the natural resource base through technological innovations, institutions building and policy imperatives. Mitigation on the other hand is an approach to lower down climate change variables within permissible limits. Considering the fact that mitigation and adaptation/resilience are completely different approach to deal the same problem its integration is all the more important in irrigated agriculture. Such an integration of adaptation to mitigation empowers the adaptation framework within the national and international climate change framework. It helps to prioritize the fiscal allocation and institutional support towards agriculture. Effective integration of resilience, adaptation and mitigation strategy is required for irrigated agriculture. This is essentially to prioritize the fiscal and institutional policies for irrigational development and management of climate shocks.

**Enhanced co-ordination among agencies :-** The last, but not the least, of the strategies is the enhanced co-ordination among various Agencies such as State Pollution Control Board, Industrial Development Corporation, State Finance Corporation, Irrigation Department, Panchayati Raj Department, Ground Water Department, and some other non- Governmental Agencies etc. to name a few. In fact, this is also one of the major aspects pointed out by the UNICEF- WWF study. Even though the regulations are very strong, the lack of co-ordination among the concerned Agencies will not produce the result (at a faster rate) with the same effect. As a result, the estimates of the developmental project causeries so steeply that no more economically viable. In fact, there are a few instances reported, where the absence of the co-ordination of among above-mentioned Agencies led to alarming and severe economic problems. Therefore, the concerned Agencies should co-ordinate among themselves to see that the developmental projects/programs reach the public in time (Ramakrishna and Babu, 2014).

**Irrigation projects in Andhra Pradesh** :- Andhra Pradesh is a riverine state with 40 major, medium and minor rivers. Godavari, Krishna, Vamsadhara, Nagavali and Pennar are major interstate rivers.

**Table 2 :** Types of irrigation projects based on irrigated ayacut

| S. No. | Type of Irrigation project | Ayacut area covered |
|---|---|---|
| 1 | Major Irrigation Projects | Ayacut above 25000 Ac (10,000 ha.) |
| 2 | Medium irrigation projects | Ayacut above 5000 Ac up to 25000 Acres (10000ha.) |
| 3 | Minor irrigation projects | Ayacut up to 5000 Acres (2000 ha) |

**Source:** irrigationap.cgg.gov.in

**Major and medium irrigation projects :-** Major Medium Irrigation Projects in Andhra Pradesh are 95 projects.
(Source: India-Water Resources Information System Web Geographic Information System)

**Pattiseema project :-** The government had come up with the idea of building a lift irrigation scheme at Pattiseema village in Polavaram Mandal in West Godavari district in January 2015 to quickly get Godavari water to meet the irrigation needs of Krishna delta, which was started facing increased water shortage in recent times, as the main project was expected to take a longer time.

**Polavaram project :-** Polavaram Project is a multi- purpose irrigation project which has been accorded national project status by the union government. This dam across the Godavari River is under construction located in West Godavari District and East Godavari District in Andhra Pradesh state and its reservoir spreads in parts of Chhattisgarh and Odisha States also.

It is a National River-Linking Project, which works under the aegis of the Indian Ministry of Water Resources, was designed to overcome the deficit in water in the country. As a part of this plan, surplus water from the Himalayan Rivers is to be transferred to the peninsular rivers of India. This exercise, with a combined network of 30 river-links and a total length of14,900 kilometers(9,300mi) at an estimated cost of US$120 billion (in 1999), would be the largest ever infrastructure project in the world. In this project's case, the Godavari river basin is considered as a surplus one, while the Krishna River basin is considered to be a deficit one. Based on the estimated water requirements in 2025, the Study recommended that sizeable surplus water was to be transferred from the Godavari River basin to the Krishna River basin.

Ultimately the Polavaram right bank canal would be remodeled to enhance its capacity to 30,000 cusecs by raising its embankments for augmenting water transfer to meet shortages in the Krishna river basin and the needed environmental flows downstream of Prakasam barrage. A 25 MW hydropower station can be established utilizing Polavaram right bank canal water near Vijayawada city by transferring water via BudameruRiver and Eluru canal to Prakasam barrage pond.

**Veligonda project :-** Veligonda project is an under construction irrigation project located in Prakasam district in Andhra Pradesh, India. When completed, the project will provide irrigational facilities to 459,000 Acres and drinking water to 1.5 million people in 29 Mandals of fluorine and drought affected areas in Prakasam district, Nellore district and Kadapa district by diverting 43.5 TMC of floodwater of Krishna River from foreshore of Srisailam Reservoir near Kollamvagu and proposed to store in Nallamala sagar Reservoir. The water for the project is drawn through two 18.8 km long tunnels across Nallamala hills. The project has-been renamed to Poola Subbaiah irrigation project. The construction includes two parallel tunnels of 18.8 km with 9.2 m and 7 m internal diameter and 21.6 km Flood flow canal for the water transmission system linking with Srisailam Reservoir up to Guntur-Kurnool road. The project is being implemented by double shielded tunnel boring machine to make the tunnel without disturbing wildlife in the Nagarjunsagar-Srisailam Tiger Reserve.

**Veligallu dam reservoir project :-** It is an irrigation project across Papagni river near Galiveedu in Kadapa district of Andhra Pradesh, India. The project's goal is to allow for the irrigation of a total of 24000 acres (Galiveedu, Lakkireddypalli and Ramapuram Mandals of Rayachoti Taluk) in Rayachoti Taluk of Kadapa district and for drinking water provision for a population of 1 Lakh. The project's anticipated gross storage capacity is 4.64 Tmc ft.

**Table 3: Water saving and yield enhancing micro irrigation technologies**

| S. No. | Micro irrigation technology | Names of the crops for which technology can be used ideally | Nature of saving in applied water |
|---|---|---|---|
| 1 | Pressurized drip system (inline and online drippers, drip tape) | All fruit crops, cotton, castor, fennel, maize, coconut, arecanut, chilly, cauliflower, cabbage, ladies finger, tomatoes, gourds, mulberry, sugarcane, water melon, flowers. | Reduces non beneficial evaporation from the area not covered by canopy. Reduces deep percolation Water saving also comes from reduction in evaporation from fallow after harvest. Extent of water saving higher during initial stages of plant growth. Significant yield and quality improvement. |
| 2 | Overhead (movable) sprinklers (rain guns) | Pearl millet, sorghum, wheat, cumin, mustard, cow pea, chick pea, grasslands and pastures and tea estates | Reduces conveyance losses Improves distribution efficiency slightly Reduces deep percolation Marginal yield growth |
| 3 | Micro sprinklers | Potato, groundnut, garlic, onion, herbs and ornamentals | Reduces seepage, evaporation and losses in conveyance. Reduces deep percolation, over furrow irrigation and small border irrigation Yield growth and quality improvement significant |
| 4 | Plastic mulching | Potato, groundnut, cotton, castor, brinjal, chilly, cauliflower, cabbage, ladies finger, flowers, maize | Keeps complete check on the evaporation component Stops non-beneficial evaporation, kills weed and pests Extent of water saving higher over drip irrigation Faster germination and significant yield growth |
| 5 | Green houses | All horticultural and plantation crops | Reduces non beneficial evaporation Distribution uniformity is poor and depends on number of micronutrients on lateral |

**Source:** Dinesh Kumar M, Sivamohan MVK, Niranjan V and NitinBassi, 2011

**Table 4: Ayacut details under Minor Irrigation in 13 districts of Andhra Pradesh**

| S. No | District | Total Registered Ayacut in Acres | Ayacut Irrigated in Kharif 2014 | Gap Ayacut in Acres | Proposed Gap Ayacut to be Bridged during the year | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
| 1 | Srikakulam | 275386 | 234171 | 41215 | 8243 | 7240 | 7852 | 9050 | 8830 |
| 2 | Vizianagaram | 268319 | 237960 | 30359 | 6072 | 5872 | 5878 | 6050 | 6487 |
| 3 | Visakhapatnam | 230665 | 79933 | 150732 | 30146 | 28956 | 28952 | 31452 | 31226 |
| 4 | East Godavari | 130415 | 94632 | 35783 | 7157 | 6057 | 6952 | 6152 | 9465 |
| 5 | West Godavari | 112655 | 32113 | 80542 | 16108 | 14108 | 15252 | 15562 | 19512 |
| 6 | Krishna | 103693 | 38727 | 64966 | 12993 | 11956 | 11952 | 13052 | 15013 |
| 7 | Guntur | 31708 | 26010 | 5698 | 1140 | 1050 | 1120 | 1065 | 1323 |
| 8 | Prakasam | 140242 | 11567 | 128675 | 25735 | 24752 | 26900 | 25652 | 25636 |
| 9 | SPSR Nellore | 282852 | 136293 | 146559 | 29312 | 28952 | 28521 | 29985 | 29789 |
| 10 | YSR Kadapa | 107872 | 2000 | 105872 | 21174 | 22174 | 23568 | 21174 | 17782 |
| 11 | Kurnool | 80160 | 51265 | 28895 | 5779 | 5698 | 5258 | 5528 | 6632 |
| 12 | Anantapur | 141936 | 2441 | 139495 | 27899 | 26859 | 25655 | 28599 | 30483 |
| 13 | Chittoor | 300307 | 7340 | 292967 | 58593 | 57895 | 56896 | 59856 | 59727 |
| | Anicuts & open head Channels | 354234 | 41507 | 312727 | 62545 | 61489 | 60458 | 61545 | 66690 |
| | GRAND TOTAL | 2560444 | 995959 | 1564485 | 312896 | 303058 | 305214 | 314722 | 328595 |
| | Or say in Lakh Acres | 25.6 | 9.96 | 15.64 | 3.13 | 3.03 | 3.05 | 3.14 | 3.29 |

**Source:** http://irrigationap.cgg.gov.in/wrd/home

The financial inputs needed per year in average is Rs.2000 Cr to stabilize the total gap Ayacut in next five years and also to create new Ayacut for achieving following growth engines.

- Effective and sustainable Irrigation infrastructure and its management.
- Area of cropping land is to be increased duly bridging the gap Ayacut
- De-silting of tanks to increase the capacity of tank, to increase the ground table thereby increase the irrigated Ayacut.
- Increase in water use efficiency to irrigate more Ayacut with minimum water.
- Agricultural output is to be increased by better irrigation practices.
- Water conservation and better water management.
- Increase the role of farmers and ease the burden on Government.
- Area planted with cash crops is to be increased considerably
- Value of Agricultural exports is to be increased.
- Beneficiary income is to be increased.

**Jalasiriharati Scheme :-** Chief Minister N. Chandrababu Naidu has said that 28 irrigation projects will be completed in the next three months under 'JalasiriHarati' scheme to help keep drought away from the State.

**Smart water grid scheme :-** The Purushothapatnam and Pattiseema lift irrigation projects will cater to the needs of 11 districts, except Vizianagaram and Srikakulam, under the 'Smart Water Grid' scheme.

**Neeru-Chettu Programme :-** is a programme implemented with a view to improve water conservation and management in the State with people's participation in order to make the state drought proof. This Neeru-Chettu Programme is also water Conservation work which will improve the storage capacities of tanks and inturn improve the Ground water table of the surrounding areas.

The Vision of the Honorable Chief Minister of Andhra Pradesh is to prepare the state as a drought proof state within 5 years and is aimed to eradicate of poverty and reducing economic inequalities by better Water Conservation. Water Conservation Mission Under primary sector mission is one of the seven missions constituted for invigorating the growth engines with the main objective being poverty alleviation.

**Water Conservation Mission :-** has been constituted by involving relevant line departments.

**Two aspects of the mission are :-**

**1) Water Conservation** :- Which would take into account the total rainfall, surface flow and the ground water and prepare a plan to make its optimum use by preventing wastage into the sea? The approach has to be from the ridge to the valley and the major departments to be involved in this exercise should be Irrigation, Forest, Rural Development and Ground Water.

**2) Water Management :-** Which would require making most efficient use of the conserved water for various sectors of state economy and the major departments involved in this exercise, would be agriculture, Animal Husbandry, Horticulture, Fisheries, Rural and Urban Water Supply etc.

**Conclusion :-** Andhra Pradesh is undergoing a dramatic shift in the irrigational pattern moving from large scale surface to ground water irrigation. Several studies pointed out that in the recent years (since 2002), irrigation growth of the state has become very sensitive to rainfall. This is evident from decline in the ground water irrigation in the shallow hard rock regions of Rayalaseema occasionally suffering from droughts. Evidence suggests that climate change has transformed groundwater into more critical and yet threatened resource, and requires a reorientation of the state's water. Different programmes and irrigation projects being taken up can improve the irrigation status in India.

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# Special Economic Zones (SEZS):Growth Engines For Economic Development

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**Abstract :-** Special Economic Zones (SEZs)denote geographical areas which enjoy special privileges as compared with non SEZ areas in the country .The main motive force for setting up SEZs came from the ministry of commerce with a view to boost up the exports by attracting both Indian and foreign corporates to undertake investment in these areas .Earlier Processing Zones are now also being converted into Special Economic Zones. Accordingly, the government has converted Export Processing Zones (EPZ) located at kandla first in Asia setup in 1965 and Surat (Gujarat), Santa Cruz Mumbai (Maharashtra), Falta (West Bengal), Chennai (Tamil Nadu), Vishakapatnam (A.P) and NOIDA (Uttar Pradesh) into SEZs.

**Introduction :-** A country of over a billion people take on the challenge of providing a better life to its citizens, efficiency of broad based economic development as a primary tool for providing the average citizen a better deal. The country needs a massive investments in manufacturing, infrastructure development and its productive capacities, need to provide aggressively promote exports of goods and services in an ever so highly competitive global market place .This alone would lead to a strong edifice for sustained growth and creation of productive employment .These were the very aims for which the Government of India mooted the Special Economic Zone(SEZ) Policy in April 2000 which was further concretised through the SEZ Act 2005 and the SEZ rules 2006 Policy.

**Objectives :-**

- Manufacturing or service activities are allowed
- Full freedom for sub-contracting
- No routine examination by customs authorities of export/import cargo
- Units in SEZs have to become net foreign exchange earners within three years and
- Domestic sales from them are subject to full customs duty and the import policy in force.
- SEZ can be set up in the public sector, private sector or joint sector or even by the state governments in collaboration with any corporate.

SEZs are duty-free enclaves of development and are deemed as foreign territories for purpose of trade, duties and tariffs.The policy offers several fiscal and regulatory incentives to developers of the SEZ as well as to the units within these zones.

Corporations in SEZ will not have to pay any income tax on their profits for the first 5 years and only 50% of the tax for two years thereafter the concession of paying only 50% of the tax can be extended for another three years if half of the profits is reinvested in the corporation, besides Income tax benefit, units in SEZ shall be exempted from a host of other taxes and duties like customs duty, excise duty, service tax, value Added tax (VAT), dividend tax etc.

For SEZ developers, all raw materials from cement to steel to electric parts shall be exempt from ant tax /duty. All imports for developing SEZs shall be exempt from any customs duties.

**SEZ policy motivated by the Chinese experience** :- China Established in 1980 special economic zones (SEZ) in 14 coastal cities.The Main purpose was to provide a dual role for SEZ to act as window in developing the foreign – oriented economy,thus,generating foreign exchange by boosting exports and importing advanced technologies,consequently SEZs became “radiators” in accelerating economic development.in these zones,to attract foreign investment,custom duties and income tax were :eliminated.Then policy helped to attract foreign-funded enterprises to invest over $30 billion in China and over 5,000 domestic enterprises all over the country to invest about 20 billion Yuan in SEZ regions. As a result, sixpillars Industry took firm roots in China.They are automobiles and spare parts and components,micro-electronics and computers,household electric appliances,bio-medicines and optical,mechanical and electric products.

**SEZ And Future Programmes :-** The government has so far approved atotal 588 SEZs .During 2004-05 the total exports from the special economic zones were of the order of Rs 17,729 cores.This works out to be 4.9% of the country's total exports.By 2009-10 they increased to Rs 2, 20,711cores,which constitute about 26.1% total exports.

**SEZ State wise Distribution**

| STATE | Formal Approval | In-principleapprovals | Notified SEZs |
|---|---|---|---|
| Andhra Pradesh | 109 | 6 | 76 |
| Chandigarh | 2 | 0 | 2 |
| Chattisgarh | 2 | 1 | 1 |
| Delhi | 3 | 0 | 0 |
| Dadra & Nagar Haveli | 2 | 0 | 1 |
| Goa | 7 | 0 | 3 |
| Gujarat | 47 | 7 | 32 |
| Haryana | 46 | 3 | 35 |
| Jharkhand | 1 | 0 | 1 |
| Karnataka | 62 | 1 | 41 |
| Kerala | 29 | 0 | 20 |
| Madhya Pradesh | 19 | 2 | 6 |
| Maharashtra | 103 | 16 | 64 |
| Nagaland | 2 | 0 | 1 |
| Orissa | 10 | 1 | 5 |
| Pondicherry | 1 | 1 | 0 |
| Punjab | 8 | 0 | 2 |
| Rajasthan | 10 | 1 | 10 |
| Tamil Nadu | 69 | 6 | 53 |
| Uttar Pradesh | 34 | 1 | 21 |
| Uttarakhand | 2 | 0 | 2 |
| West Bengal | 20 | 3 | 11 |
| **GRAND TOTAL** | **588** | **49** | **386** |

(**Source:** Special Economic Zones in India, Ministry of commerce and Industry, of commerce)

The concept of special economic zones is not new since they were considered as growth catalysts with the philosophy of export led growth in several countries like China, Indonesia, Philippines, Iran, Thailand, Russia, Ukraine etc. Even USA HAD AROUND 258 free trade zones. The total number of SEZs in the world is around 3,000 though china had only 6 of them along the coastal region, being operated by the government.

In India while passing the SEZ Act in May 2005, the following objectives of SEZs were laid down:

- Generation of additional economic activity
- Promotion of exports of goods and services
- Promotion of investment from domestic and foreign sources
- Creation of employment opportunities and
- Development of infrastructure facilities.

With regard to availability of uncultivable land as per land use cultivation of the country, barren land uncultivable land is available to the extent of 18 million hectares. In many of the coastal states, land near the coast is saline, which is not good for cultivation .This is the area where SEZs or any other industrial enterprise can be set up. This will not affect our food security. China has developed SEZs in the coastal areas.

**Minimum area for Various types of SEZs**

| TYPE | MINIMUM AREA | MINIMUM AREA FOR SPECIAL STATES/UTs |
|---|---|---|
| Multi product | 1000hectares | 200 hectares |
| Multi-services | 100 hectraes | 100 hectares |
| Sector specific | 100 hectares | 50 hectares |
| IT | 10 hect and upto 1 lakh sq.meters | 10 hect and minimum 1lakh sq.meters |
| Gems and Jewellery | 10 hec and up to 50,000 sq.meters | 10 hec and up to 50,000 sq.meters |
| Bio-tech &non conventional energy | 10 hect and minimum upto 40,000 sq meters | 10 hect and minimum upto 40,000 sq meters |
| Free trading and ware housing zone | 40 hect and minimum up to 1 lakh sq.meters | 40 hect and minimum up to 1 lakh sq.meters |

(Source:-Parliamentary standing committee on commerce, 83rd report on the functioning of Special Economic Zones)

**Minimum area for Various types of SEZs**

| TYPE | MAXIMUM AREA | | MAXIMUM AREA FOR SPECIAL STATES/UTs |
|---|---|---|---|
| | Cultivable land | Only waste land | |
| Multi product | 2000 hec | 5,000ha | 500 ha |
| Multi-services | 200 hec | 500 ha | 200 ha |
| Sector specific | 200 he | 500 ha | 200 ha |
| IT | 20 ha | 50 ha | 20 ha |
| Gems and Jewellery | 20 ha | 50 ha | 20 ha |
| Bio-tech &non conventional energy | 20 ha | 50 ha | 20 ha |
| Free trading and ware housing zone | 100 ha | 200 ha | 100 ha |

(Source:-Parliamentary standing committee on commerce, 83rd report on the functioning of Special Economic Zones)

**Nature of Employment in SEZ**

| STATE | PERMANENT | TEMPORARY | CASUAL/CONTRACT | TOTAL |
|---|---|---|---|---|
| Gujarat | 3,213(16.8%) | 11,413(58.4%) | 4,572(24.9%) | 19,101(100.0%) |
| Madhya Pradesh | 998(54.9%) | 562(30.9%) | 257(14.2%) | 1,817 (100.0%) |
| Tamil Nadu | 12,906(64.7%) | 3,650(18.3%) | 3,389(17.0%) | 19,945(100.0%) |
| Kerala | 5,445(69.6%) | 1,552(19.8%) | 825(10.6%) | 7,822(100.0%) |

(Source:-Parliamentary standing committee on commerce, 83rd report on the functioning of Special Economic Zones)

**Conclusion :-** There is need to reconsideration of SEZ approach to Industrialization and export promotion SEZ is path breaking document which indicates the direction in which the country must move if it wants to purse industrialization with a human face. There is also a great need to usher in polices in the functioning of SEZ so that workers are assured a fair deal in the value added in SEZ.

**Source** :- Parliamentary standing committee on commerce, 83rd report on the functioning of Special Economic Zones, Planning commission: An Approach to 12th Five Year Plan.

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