

Marketing Policies in Indian Banking Sector – Case Study of Public Sector Banks

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Abstract :- Indian banking sector historically passed through five stages: pre-independence, post-independence, pre nationalization, nationalization and post-liberalization stages. In all these stages, other than the last stage, marketing was always considered not to be a banker's cup of tea. But today, it is considered to be an integral management function in the banking sector. India's banking sector has made rapid strides in reforming and aligning itself to the new competitive business environment. Traditionally, Indian banks have not really paid adequate attention to marketing and market research. The paper focuses on the marketing policies adopted by the Indian Banking Sector in order to market their products and services to the probable customers. The present study is based on the survey of two public sector banks in the Jabalpur district of Madhya Pradesh. Finally, the paper ends with the conclusion that marketing services are not only for the survival but also needed for improving the efficiency of banking services and building a loyal customer base.

Keywords :- Banking sector, Service Marketing, Marketing Policies.

1. Introduction :- After the reforms in Indian Banking Sector, marketing has developed as a more integrated function within financial service organizations like banks largely as a result of rapid changes in the operating environment. Bank Marketing is defined as an aggregate of functions directed at providing services to satisfy customers' financial needs and wants, more effectively than the competition, keeping in view the organizational objectives of the bank. Bank marketing has become a very complex yet

interesting subject as it requires the knowledge of economics, sociology, psychology, banking and also core marketing concept. In marketing, it is the customer who has the upper hand. The mantra of effectively marketing the bank products lies in the systematic and professional approach towards satisfying customers' needs.

Marketing is the crucial connection between banks and customers, no banks can expect to succeed without putting substantial investments in its marketing efforts. Banks nowadays are coming up with surprising and impressing ways to lure the customers and retaining their customer base. These days' banks are focusing heavily on building long term relationships with their existing customers and thereby gaining new customers. Hence, relationship marketing becomes very important for the banks. It is concerned with mapping out all the touch point and evaluating what services are provided, by whom, and when, and how, and what is expected by customers.

2. OBJECTIVES OF THE STUDY

- * To understand the different marketing policies adopted by public sector banks.
- * To analyze the performance of marketing policies in public sector banks.

3. RESEARCH METHODOLOGY :- The present study is descriptive in nature, which is based on empirical evidences in the form of primary and secondary data.

4. SOURCES of DATA :- Primary data regarding the banks' service marketing policies have been collected from the respective bank's executives. In

order to carry out the statistical enquiries questionnaire has been framed and data has been collected from the respective samples. Secondary data has been collected from various published and unpublished sources like books, articles, journals, magazines and internet.

5. SAMPLE PLAN AND SAMPLE SIZE :- The study includes two leading public sector banks i.e. State Bank of India and Central Bank of India available in Jabalpur district of Madhya Pradesh. The sample size has been selected on the basis of convenience sampling method. It was planned to select 45 bank personnel from each bank taken under study and a total of 90 respondents were taken as a sample.

6. LITERATURE REVIEW :- This section presents the studies which have already been conducted in the past regarding marketing policies in banking sector. Few of them are reviewed here under.

Jha, S.M. (1982) in his book "Services Marketing", deals with bank marketing, marketing research, market segmentation and marketing mix for banking services, bank marketing in Indian environment. The author feels that despite the existence of commercial banks, which were established to make available timely and adequate services to the customers. Banks suffered due to lack of adequate and appropriate policies for marketing their financial services. He explained the marketing mix policies such as product mix, promotion mix, price mix, people mix, physical evidence mix, place mix and process mix for the service sector.

Mr. Anil Kumar (2013), "Bank Marketing mix: New Policies in Today Banking Sector" describes that, The Role of marketing in the banking industry continues to change. For many years the primary focus of bank marketing was public relations. Then the focus shifted to advertising and sales promotion. That was followed by focus on the

development of a sales culture. Today banking sector all elements of the marketing concept – customer satisfaction, profit integrated framework and social responsibility are all equally important.

T. Sreenivas and Smt. Sk. Mabunni (2013), "this article evaluates the innovative marketing policies adopted by banks to sell their products and create marketing process through 7Ps i.e. Product, Price, Place, Promotion, People, Physical evidence and Process in sample banks taken from Public sector and Private sector Banks. For this purpose, it is proposed to make a comparison study of public sector banks with private sector banks in terms of the sample of SBI and HDFC respectively.

7. PUBLIC SECTOR BANKS MARKETING POLICIES :- Marketing Policies in banking sector revealed that banks can base their marketing policies on various parameters which are broadly in terms of 7Ps of marketing viz product, place, price, promotion, people, physical evidence and processes.

PRODUCT POLICY :- Product and service are the words used interchangeably in banking parlance. The bank products are deposit, borrowing or other products like credit cards or foreign exchange transactions which are tangible and measurable whereas service can be such products plus the way/manner in which they are offered that can be expressed but cannot be measured i.e. intangibles. Better service is more important than just a good product while marketing of banking products, so the focus should be on providing services related to each product.

The table below furnishes the details about the opinion provided by the bankers during the survey regarding policy associated with marketing of banks products to probable customers.

Table No. 1
Product policies

| Policies | No. of Bankers | Percent |
|----------------------|----------------|---------|
| Online banking | 20 | 22.22 |
| Focus on customers | 21 | 23.33 |
| Product innovation | 31 | 34.45 |
| Value added services | 18 | 20 |
| Total | 90 | 100 |

(Source: Primary data)

INTERPRETATION :- Table 1 shows that the major policy adopted by the public sector bank is product innovation (34.45%). More specifically public sector banks also focus on customers (23.33%) followed by online banking (22.22%) and value added services (20%). Some services which are more important to the customers are not in practice.

PLACE POLICIES :- Place policy focuses more on the location of bank branch and also the location of specific banks ATM counters. Suitable place of

the bank branch remains the cornerstone on banking business. Therefore management always attempts to locate the branch at the most suitable place, but faraway location is considered as unsuitable from the business point of view. So the selection of an appropriate place for the establishment of a branch is very important. To analyze this very factor of marketing mix the opinion of bankers were asked regarding the type of place policies.

Table No.2
Place policies

| Policies | No. of Bankers | Percent |
|--------------------------|----------------|---------|
| Physical ambience | 20 | 22.23 |
| Location policies | 16 | 17.78 |
| Easy availability of ATM | 26 | 28.89 |
| Total | 90 | 100 |

(source: Primary Data)

Interpretation :- Table 2 presents the details of the place related policies based on the opinion of the bankers. Easy availability of ATM network 28.89% of bankers focuses on this policy. The physical facility available inside the bank premises is followed by 22.23% bankers and 17.78% of bankers expressed their satisfaction regarding their location which is convenient to both the parties. All customers are not nearer to the bank.

So the location of the bank is one of the problems as per place policies.

PRICING POLICIES :- In banking services the correct prices has become an essential element for the marketing policies. Pricing decisions are found an instrumental in motivating or influencing the target market. The views of the sample bankers with regards to pricing policies are presented as below table.

Table 3
Price Policy

| Policies | No. of Bankers | Percentage |
|--------------------------------|----------------|------------|
| Strategic pricing | 30 | 33.33 |
| Market based approach to price | 26 | 28.89 |
| Cost based pricing | 14 | 15.56 |

| | | |
|----------------------|----|-------|
| Price privileges | 11 | 12.22 |
| Price discrimination | 9 | 10 |
| Total | 90 | 100 |

(SOURCE: Primary Data)

Interpretation :- Table 3 shows that the majority of the public sector banks adopted strategic pricing (33.33%) and follows market based approach to price and cost based pricing. Only a small percentage of public sector banks are following price privileges (12.22%) and price discrimination (10%).

PROMOTION POLICIES :- Promotion policies are very important when the banks are offering new and innovative services frequently in the market. The promotional tools should help the customer in making most valuable decision. So well designed promotional policies are very important to promote banking services effectively. The opinion of the bankers about the promotion policies are shown below.

Table No. 4
Promotion policies

| Policies | No. of Bankers | Percent |
|------------------|----------------|---------|
| Advertising | 20 | 22.22 |
| Sales promotion | 18 | 20 |
| Personal selling | 11 | 12.23 |
| Public relations | 30 | 33.33 |
| Direct marketing | 11 | 12.22 |
| Total | 90 | 100 |

(Source: Primary Data)

Interpretation :- Table 4 shows that the majority of public sector bankers (33.33%) focus on public relation at its service entity. Only 12% of the public sector banks use the personal selling and direct marketing policies to market their products. In public sector banks the direct marketing of banking products and personal canvas are ineffective.

PEOPLE POLICIES :- Employee plays an important role in the marketing operations of a service organization. So the banker's attention should be focused on employee service quality and to develop of their service skills consistently. It includes attitude, behavior, expertise, courtesy and willingness to help the employees towards customers. The view of bankers regarding people related policies should be shown below.

Table No.5
People policies

| Policies | No. of Bankers | Percent |
|-------------------------|----------------|---------|
| Willingness to help | 15 | 16.67 |
| Providing training | 29 | 32.22 |
| Polite behavior | 14 | 15.56 |
| Customer friendly staff | 18 | 20 |
| Action oriented staff | 14 | 15.56 |
| Total | 90 | 100 |

(Source: Primary Data)

Interpretation :- Table 5 shows that the majority of the public sector bankers (32.22%) focus on providing training to staff on new products. Only small percentage of people policies like polite behavior of staff and action oriented staff of each 15.56% respectively. In public sector banks the staff behavior and staff actions affect the customers a lot.

PHYSICAL EVIDENCE :- The physical evidence is also important for banks because it conveys to the customers an external image of the service package. If a bank wants to have user friendly, hi-tech and efficient image, the branch infrastructure will have a comfortable seating, computer systems with advanced technology and network connectivity. The opinion of the bankers regarding Physical evidence is depicted in the table below.

Table No. 6
Physical evidence policies

| Policies | No of Bankers | Percent |
|------------------------------|---------------|---------|
| Adequate floor space | 29 | 32.23 |
| Sufficient computers | 10 | 11.11 |
| More counters | 8 | 8.89 |
| Adequate waiting space | 12 | 13.33 |
| Comfortable air conditioning | 10 | 11.11 |
| Total | 90 | 100 |

(Source: Primary Data)

Interpretation :- Table 6 depicts that the most of the bankers have the opinion that the branches have adequate floor space, air conditioned premises, adequate waiting space, more counters etc. More or less bankers expressed their overall satisfaction regarding the physical facilities available in their respective branch premises. Overcrowding is one of the major problems at the beginning of the month.

PROCESS POLICIES :- The well designed process assures service availability and consistent quality being provided to the customers by the banks. But the process involved in the banking services should be easy and smooth, fast and accurate and customer friendly. Following are some of the process related policies followed by the public sector banks.

Table No. 7
Process policies

| Policies | No. of Bankers | Percent |
|---------------------|----------------|---------|
| Flow of activities | 21 | 23.33 |
| Standardization | 18 | 20 |
| Customization | 17 | 18.88 |
| Convenient services | 16 | 17.77 |
| Simplicity | 18 | 20 |
| Total | 90 | 100 |

(Source: Primary Data)

Interpretation :- Table 7 depicts that the flow of activities is the main process policy for the public

sector banks. All the major activities of banks follow RBI guidelines. Next public sector banks

focus on standardization and simplicity (20%) each. Then the customization (18.88%) and convenient services (17.77%) respectively follows the process policies in banking services. The main problem faced by the customers in process policies is delayed in banking services.

8. Conclusion :- The banking sector in India has become tougher in term of development and economic growth the number of customers in the financial sector. The next generation will play a vital role in further strengthening the banking sector. Nowadays, the new technology ensure that the future of banking will introduce more offers and services to the customers with the bust banking product and innovations. Banking sector also increased the accessibility of a common person to bank for his productivity and requirements. The Indian banking sector has improved the terms and new Technology. The innovative banking technology changing reforms have changed the face of Indian banking and financial sector. The banking system has improve the manifolds in terms of product and services, technology, banking system, trading facility etc. it is the evident that the banking system has grown in India to compare with other country. In future, the banks will comprehend their customers and bank will be meeting their requirements.

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Manjula Padmanabhan's 'Harvest': Flashing Light on Indian economic scenario

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Padmabhan's play 'Harvest' is set in 2010 Mumbai. The financial crisis has turned the life of people. The play 'Harvest' with very apt little, describes how one such family fall victim to the flesh market controlled by the rich people. The action of the play moves around four full fledged characters, Om the jobless husband, his 19 year old wife Jaya and his 17 year old brother Jeetu and his 60 year old widow mother, Indumati Prakash. There are four other nameless mechanical guards, two screen characters, Ginni and Virgil and a neighbour Vidhyutbai.

When the play opens, Ma and Jaya are seen waiting for Om who is about to come after job-hunting. Apart from the usual retorting and differences between the mother in law and the daughter in law, one notes their concern for Om's getting hunting of job. In 'Harvest' a fictitious atmosphere is created by the presence of a white faceted globe which looks like a Japanese lantern, which lights up, moves in slow circles and also vertically. Throughout the play the characters on stage are seen talking to the image beautiful woman called Ginni, the alleged buyer of Om's organs. The movement of globe creates a disconnect in the realistic aspect of the play. It draws the attention of the audience towards the illusory nature of economics which society sees is the basis of success. It lights up the irony that the people who have the money to buy the organs are dependent on those very seller for their existence. By breaking the wall of suspension of disbelief; intrinsic to realism, this dramatic technique makes it possible for the audience to question the effects of poverty on man.

Ginni begins to control lives of the family members so much, so that she doesn't allow any one of them sneeze before Om because she wants Om to be healthy at any cost. The

aptness of the title is proved here when she starts treating the body of Om and the family as the soil where she has sown the seeds, she feeds Om give. Other members in the family care of the plants of the crop as farmers take. Ginni takes every care in feeding and keeping them away from every disease as a farmer uses fertilizers and pesticides on plant for their well growth and protection from any insects. As a farmer sows, uses and applies pesticides for the better growth of the crops so that he can ripe the fruits and can have the expected harvest. Similarly, for Ginni, Om's body is no more than the land where she wants to grow his body like the crops in hygienic atmosphere and she could harvest them when she needs them.

'Harvest' deals with an impoverished family fading up by extreme hunger and unemployment. Her play 'Harvest' shows how poverty force poor people to make themselves objects. Bad economy is evil because it suppress humanity. The economic losses and social dislocation that are being caused to many developing countries by rapid financial and other lines of trade, the growing inequalities of wealth and opportunities arising from globalisation; and the perception that environmental, social, cultural problems have been made worse by the free market economy and the soaring degree of attack by element of terrorism are some of what have characterised economy of Today's India. It means developing nation like India is facing more problems

In his very sublime analysis of Harvest, Rajkumar explains -

'Harvest is an ironic examination of the relation between developing and developed countries. The play is set in imminent future. It imagines a Grisly pact between the first a and

third world desperate people who can sell their body parts to wealthy clients in turn for food, water, shelter and riches for themselves and their families.¹

He further describes it as a “dystopian play” because nothing is good in Om’s life and his family. Your body organs in order to improve your standard of living, only for you to lose it all in the end. The play indicates the power of money in developing country like India where money means a lot to survive. Ginni rich woman is a receiver of body parts control the family in a play until toward the end of the play. The play exposes the true nature of poverty, how poverty compels people to adopt a wrong way to come over from it. People of lower medium class and of lower class have limited means to earn.

Om: I went because I lost my job at the company and why did I lose it? Because I am a clerk and nobody needs clerk anymore! There are no new jobs now; there is nothing left for people like us! Don’t you know that?

Padmanabhan goes to the extreme of the human predicament, where the basic commodity of exchange are the body organs. This is on the basis of individual economy. Om’s last statement confirms the aghast state “How could I have done this to myselfwhat sort of fool I am?”²

He puts his life on the line for the sake of money. Om shows no positive attitude towards changing this decision and looking for alternatives for his problems. It was to read how uninformative the guards were in this whole procedure of which organ was removed and donated. All they knew was that Om was going to get paid for being a donor. Jaya seems like the only one who is very sceptical about this procedure and constantly questioning this whole set up, but in comparison of her every member of the family surrender themselves towards the situation.

The condition which the play ‘Harvest’ are enforced into are really shocking through one can share their agony and aches. Harvest gained

popularity among the western world as well as in India. The novel shows 2010 where poverty, slavery and the inhuman exploitation were at the peak. This is because it deals with the sale of human parts –macabre like. She paints the picture of Third world populace caught in the bracket of the exploitative First world who leave no chance of survival for the former.

Padmanabhan portrays India as a very vulnerable and helpless country still it has millions of poor people leading their lives in horrible poverty and this play is unique and memorable in such aspect which shows extreme point of poverty which compels man to sell the organs of body. In India still people have no jobs no standard of living. Life needs various facilities to be fulfilled and it is not possible to make compromises in different stages of life

Economic factors are experienced in everyday life. It is influenced by the diffusion of commodities and ideals, reflects a standardisation of cultural expressions around the world

Manjula Padmanabhan was born in 1953, and is well known journalist, illustrator, cartoonist, fiction writer, author and writer of children’s book. She won the Greek Onassis Award for the play “Harvest”. After completing her university studies. Padmanabhan returned to India and began a career in journalism. She wrote several plays – including Light Out (1996), The Artist’s Model (1995) and Sextet (1996) and a well known book of short stories, Hot Death, Cold Soup (1915). Her most recent novel is ‘Getting There’.

The play ‘Harvest’ discloses the fact that how money regulates the life of human being. Infact by signing contract with Ginni, the life of Om and his family is completely hijacked by Ginni and her Interplaza services.

And there begins the governance of the contact module on the family of Om Prakash. The timing of food, bathing, taking medicines, even going to toilet are monitored by the contact – module. After sometime, a loud tone sounds. All three react, looking immediately at the globe. The contact module comes to life. It displays a

young woman's face, beautiful in a youthful, glamour first world manner.³ The young woman's name is Virginia Ginni .She gives instruction to Om to be happy and healthy and other members of the family .Jaya and Ma are ordered to keep him healthy so that his organs remain healthy and fit to be transplanted.Om is given food as prescribed by Ginni , the kitchen is modified ; a toilet is installed in the same room .Ginni instruct in a commanding way because she has got the ownership on the body of Om. Poverty makes human being object.

GINNI. ' Zhaya. you see , it's important to smile all through the day .After all; if you are not smiling it means you are not happy .And if you are not happy , you might affect your brother's (Om is presented as jaya's brother)mind and then where would we be?

If I have said it once , I have said It a hundred times. The most important Thing is to to keep Om smiling or if If Om smiling. It means his body's Smiling ; it means his organs are smiling . And that's the kind of organs that will survive a transplant best , smiling organs.⁴

Not only this, this, the contact signed by Om compels him to present Jaya , his wife as his his sister and his brother Jeetu as his brother in law .But careless Jeetu fails to report himself as per the contract and he is derecognized by the contact module .He is not allowed to enter the house .When he appears after spending few days at the dirtiest gutter feeding on the left out shared with street dogs and pigs, his mother and Om don't want to take in. The contract affects their relations also. Money matters a lot for people, actually Om and Ma do not want to irritate Ginni after all she is the person who is providing them lots of facility

This incident effects Jaya a lot due to poverty she bears to become Om's wife in front of Ginni but Jaya angrily wipes off the kum-kum mark on her forehead head saying "my forehead burns ,when I say the word sister" when she comes to know that Om, without her knowledge ,

has declared her as his sister to the company allowing him to donate his organs Om does this to circumvent the precondition of the company that the donor has to be unmarried .For Jaya the word 'sister' being used as a hammer to break the relationship of Om and Jaya.

Jaya rightly reacts when Om suggest presenting Jeetu to the guards regarding his recognition and admission into their family , Jaya says, "what faith you have in them ? They don't care about any of us not as people, not as a human being"⁵. She tells him about Ginni-

JAYA. 'Oh. Yes she cares – that as meat as she cares about her chicken she eats for dinner.'⁶

'Never mind chickens! Have you seen how their beef cattle alive? Air conditioned! Individual potties! Music from loudspeaker .Why they have even their psychiatrists! Only because that their meat, when it finally goes to Ginni's table, will be freshest purest sanest, happiest.'⁷

Finally when the moment of transplant occurs, the interplaza guards appear and inform them in the strongest language "Resistance is useless ! We are authorized to break down this barrier if you do not completely without reflect is tar seconds exactly" (256)But accidently they grab Jeetu as the donor instead of Om who has signed the contract. Out of fear, Om hides himself under the table. Jaya tries to tell them about their confusion but without success .Finally they capture jeetu and take him any. This scene shows how a young boy has no will of his own just because due to their weak financial position his brother has given his consent to sell his organs. Like animals poor people also don't have their own will

GUARD1 : 'Interplaza services thank you for your Cooperation. Your family member are to fulfil the solomen and noble contract into which he entered .We on our part offer you as sincerest assurance that we will do everything on our part to ensure that he will come no discomfort their than what is deemed normal under the circumstances.'⁸

The guard install the video image of Ginni in the mind of Jeetu. He is fully controlled .He is willing of die for Ginni now .It shows how poor people are captured by rich people , for them poor people's are like non living things. One can note the piece of dialogue between Jeetu and Ginni to see how Ginni has taken total possession of Jeetu's being with technology.

GINNI. 'The next phase of the transplant you see, We have to progress rapidly now and I need all Your support, until we reached this platform of contract We could'nt be sure .But now that we are we've got to More readily fast .Are you with us? JEETU. Yes

GINNI. Because you have to be willing for what he want to Do now , You have to be really willing passion JEETU. Tell me, Ginni .Tell me what you want.

GINNI. Help , you' all have to go back to the clinic and they' all prepare you. JEETU. You need some more parts of me?⁹

Finally it is interesting to note that it comes at a point of direct confrontation when Jaya's life seems to be at stake. Jaya's come to note that she has been the actual target of the organ buyer, Virgil, and that after using the bodies of both Om and Jeetu, he is now intent on impregnating her with his seed mechanically to propagate his race, irrespective of her wishes. Once she realizes his designs, she locks herself in a room and counters his threats with her own conditions. Knowing full well that she is most important factor for the implementation of his plans she tells him that she will agree to conceive his child only if he comes to her and goes through the natural process of conjugation and that she will commit suicide if any other means is forced upon her. Saying "The game is over! Either you have to erase me and start again or.... You must accept a new set of rules". She settles down in front of the T.V. to wait for him. She tells him that she does not want to be disturbed anymore and that she is going to enjoy herself for the first time in her life, eating for three and taking thee baths a day. This decision of Jaya

feels the stage to signify her movement of empowerment. Everybody in the audience would have gone through a situation of intense dilemma and the relief. Jaya's empowerment comes from the fact that she is ready to win by loosing. She is willing to go through the agreement but on her terms. All these conditions of the play show the predicament of life due to poverty.

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Status of Elderly Persons in Changing Family Structure: An Indian Scenario

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Abstract :- There are several disadvantages associated with ageing which make the elderly population as one of the most marginalized segment of the society. Among such disadvantages, changing traditional family structure is the one which is having more consequences on the elderly persons. With ever fast changing socio-economic scenario, living conditions of the elderly people in the society have changed dramatically. Elderly persons find it very difficult to face new socio-economic settings. Feeling of detachment with a sense of social marginalization is becoming a major problem for most of the elderly and their role in concerned families has widely shrunk and they find themselves on circumference. Within the society several structural changes are taking place and the ascribed status is replaced by the achieved status due to the industrialization, urbanization and modernization. Accordingly, filial responsibilities are weakening and the inter-personal and inter-generational relations are also getting distorted. This paper will try to identify the status of elderly people in changing family structure; how changing family structure is responsible for the plight of elderly and will also try to give suggestions to tackle this issue.

Keywords :- Elderly People, industrialization, urbanization, tradition, Family- Structure, change

I. INTRODUCTION :- The significance of family structure in India had been recognized since Vedic age. The concept of **Vasudhaiva Kutumbakam** (The earth is one family) was given to the world by India. Indian people learn the important themes of cultural life within the bosom of a family. However, the last two decades have drastically changed Indian social scenario. A rapid shift from joint to nuclear to single parent or childless families is apparent. In such a condition dealing with financial, social and moral obligations is

becoming more and harder for the earning member of family. Manageable problems such as, time, money and attention has shifted to serious problems of security and health issues. In the recent past, the outcome of globalization have further intensified the change of social and family structures in the world and India is not an exception. Simultaneously, life expectancy has increased, resulting in more elderly people who need care. (Srivastava and Sasikumar 2003).

The obligation for looking after the elderly parents by children was accepted and carried out in all customary societies. In several Asian countries, it continues to be honoured and observed. In patriarchal society, the eldest son was assigned this obligation. In the traditional Hindu society, the eldest son had not only the obligation to take care of the old parents when they were living but also to perform their obsequies when they were dead. The upanishads commend the virtue of filial duty and encourage the young to adore and respect their parents and worship them as god. Manusmriti further elaborated this concept and declared that all troubles that the parents have gone through in raising their children cannot be adequately compensated by children even if they serve them for hundred years.

However, the joint family system, stands in a different position. This distinctive institution of traditional Indian society idealized the features of the family; its togetherness respect and obedience of elders and conjugal, filial, fraternal obligations. Performance of the social function was always related to age and this was recognized and accepted not only by the family but by the society as well. This means that instead of being a disqualification, age was elevated to the position of supreme respect and reverence. It should not be understood that the elderly persons were respected and obeyed only in the joint family. In

all types of families, they enjoyed this position. Only in the case of the joint family, the authority and power derived from control over property. Hence, the old had an assured status in the joint family.

II. CHANGING PICTURE OF FAMILY :-

Conventionally, in India, the most common form of family structure was the joint family. The extended family comprised of at least two generations living together and this arrangement was generally to the advantage of the elderly as they enjoyed a special status and power. But with developing urbanization and depending on the approachability of jobs, children are moving out of the extended family set-up, leaving the 'empty nest' and forming their own nuclear families. Industrialization, urbanization, complexity of life and increasing individualism have changed the traditional concepts of family. The joint family system wherein the young and the old, the employed and the unemployed, the breadwinners and the bread consumers, the kith and kin, and the near relations and the not so near relations lived in harmony and happiness is gradually dwindling. The old bonds of love and respect for each other are fast disappearing. The problems of the elderly in India are gradually taking the shape of those in western countries where family bonds and emotional attachment are gradually diminishing. The erstwhile joint family- the natural support system- has crumbled. The fast changing face of life has added to the woes of the elderly. The worries of the elderly are not only concentrated on the economic front, but on the social front as well (James, 1994; Irudaya, 2004; Alam and Karim, 2005). More notably, issue relating to ageing population should be analyzed from regional perspectives, as there are substantial socio-economic and cultural variations for dealing with this specific demographic age group.

In the coming years, the elderly population will remarkably grow in numbers and at the same time, the family size is reducing, more so in the urban areas. In the absence of traditional caregivers, due to the disintegration of the joint

family and women moving out of the household, the elderly persons have become a vulnerable group, needing care and attention. The structure in the family refers to the type of family (i.e., joint, nuclear and extended) and functioning represents the dynamics of interaction, interpersonal relations and communication between family members. Healthy interaction between family members leads to healthy relationship created and strengthened by positive communication. But due to structural changes in the family the relations and the communication patterns have unavoidably changed. This transition in all the three components is a serious threat for healthy ageing at the level of the family.

Increasing individualism in youths has resulted in asserting strongly for individual self, and they are in a great hurry to have every source of pleasure ignoring others' consideration entirely. Such attitudes may lead to indignity, disgracefulness, embarrassment, dishonour, disheartening, disregard, indifference, injustice, lack of care, psychological torture and unlimited hostility towards elders (Khan, 2004). At present, elderly people cannot take it for granted that their children will be able to look after them when they need care in their old age (Reddy, 2002). The social and cultural heritage of the family as an institution of care of elders has already entered the risk zone. The dynamics of relations in the family are experiencing unprecedented changes. The emotional bondage- the sources of keeping the family intact, united and fully functioning are changing not only in joint families but also in nuclear families.

Elderly people are encountering both physical and psychological distancing in families; they feel isolated and side tracked (Bajpai, 1998). These changes at the family level and unhealthy approaches sometimes hurt them and encourage them to relocate themselves in old age homes. Some times their family members force them to shift to old age homes. But, elderly people usually prefer to derive a sense of meaning of connectedness to their homes, their

neighbourhoods and their natural environment (Prakash, 2004). For this they are usually ready to make compromises, which tax their physical and mental well-being. Depression and emotional shocks are common among them. They cultivate negative emotions towards themselves due to lack of employment, low income and failing health, the newly added worries and feeling of neglect, loss of importance in the family, feeling of inadequacy, loneliness and of being unwanted (Bose, 1990). This in turn makes them sensitive to the physical and psychological world.

III. TRADITION AND SIGNIFICANCE OF FAMILY SUPPORT :-

In India, the elderly people occupied a respected position in the family and in society. According to the Ancient lawgiver 'Manu', it was the duty of the head of the Hindu family to provide for his elderly parents. The Hindu joint family was a social unit which took care of the elderly, sick, widows and orphans. Our ancient culture demands that the elderly should be respected. Since time immemorial most of the traditional families in India cling to the belief that since it is the responsibility of the parents to look after their children, it is equally mandatory upon children to look after their dependent parents. One repays one's duty to the parents and also paves one's way to salvation. Family has strong bonding in India and is still the prime source of strength for the elderly. The spiritual tradition, value of life based on an ancient culture, the family care of all its members, young and old, is all pervasive. Hence, the family's role is manifold in providing personal care, food, shelter, medical aid and financial assistance.

Being a society embedded in deep rooted values and traditions, caring for the aged in India was considered as one of the biggest moral responsibilities of individuals and families. This applies universally across the country irrespective of caste, religion or ethnicity. Large-scale devotion to this responsibility, which proved to be the biggest insurance mechanism against fatalities, old age and other provide providential risks, has led public institutions to escape from a major role in

social security provisioning. Despite growing contradictions, the role of family is assumed to continue by the makers of the National Policy on Older Persons (January 1999). With ongoing changes in family composition and gradual erosion in values, many of the traditions are now increasingly at stake.

IV. ROLE OF YOUTH :-

In any portrayal of the condition of the elderly in the family, the role of the youths, especially of the third generation, becomes a critical factor. Their attitude and behaviour towards the old members of the family can be a decisive factor in the mental health of the old members. The emerging trend of a large number of old men and women taking the role of "looking after grandchildren" gives a new dimension to this situation. In Soodan's study, 82% of the males and 63% of the females were found to be taking up this role. Several studies indicate that the attitude of youth towards the old is not based on traditional values. In his study of Shamirpet, S C Dube stated that, "they (the youths) scoff at their parents, belittle the experience of elders and seem to think no end of themselves.....education shakes a person's belief in the traditional ways and creates, in turn, new desires and ambitions." The young people also were found to nurture adverse stereotyped notions about the elderly people. The urban adults (25-40 years) who had at least one old member in the household entertained the following notions about the elderly persons-

1. Most elderly people spend too much time prying into the affairs of others and in giving unsought advice.
2. Most elderly people are constantly complaining about the behaviour of younger generation.
3. They make excessive demand for love and reassurance from the young people.
4. Most of the elderly people are irritable, peevish and unpleasant.

The generation gap has been widened by longer life span and deepened by the explosion in knowledge and rapid changes in the value system.

One trained visible over time consistently is that intergenerational conflict is increasing. When the young are having unfavourable attitude about the old, it cannot be assumed that the old can live peacefully in the family along with them. The point to be borne in mind is that even mature adults entertain such prejudice, part of which would have come from their own experience and interaction with the

V. CONCLUSION :- The social structure with its external and joint family patterns still offers support to the elderly. Most grown-up children with families of their own are still willing to have their elder parents with them. Hence at the time of crisis and in problematic situations, timely help will go a long way in keeping the older persons in the family and in easing out stress situations. Among the lower income group families, the most pressing problem is the financial problem. Since the older people is a non-productive member, in terms of income he becomes an extra burden within the slender resources of the family, and this is felt more in the case of men who have no income and who do not perform any chores in the house, rather than women who have always been at home and contribute in sharing the household chores. Elderly persons living in families have an important role in family system. They not only form integral part of an ideal family, but also act as custodian of traditional values. Emergence of nuclear families of older persons is not a happy equation for all-round development of human society. Family support system is most urgent need of the elderly people in old age. Well-timed actions should be taken to increase role of older persons in their respective families or societies, while sensitizing generations towards traditional family system of the country and imparting core human values in them. Younger generation in every family set up, governmental agencies, Nongovernmental organizations, media and other stakeholders should play a vital role in this direction.

The progress of a nation may be marked by the care which it provides for the aged. The

problems of the old are increasing steadily. Though the financial problem seem to be urgent, psycho-social adjustment also needs to be given consideration. The changing values and the expectation of society in recent times of self-dependence, self-reliance in old age, too, make it imperative for every ageing person to prepare well in advance for old age. The elderly persons should try to adjust themselves according to changed circumstances and thus can make their 'twilight years' happy and carefree. It should essentially be a two-way process. The elderly and the young have to try to understand each other and make each other happy and comfortable.

No, no institution can replace the family. So, the demand is to find a care model which supports elderly care while living in the family. This needs some community services to help the family in changing its mindset and provide low cost care for the elders. WHO, India is involved in developing models for community based health care for the elderly. Similarly, ICMR has conducted a long project in rural South India and has offered a feasible model for the total health care of the rural aged within the existing infrastructure with some extra inputs. Other efforts are to be made in this path to take care of the elderly in their families by providing community care. I would like to propose some tentative suggestions which can be initiated to help the aged for positive ageing, while living in the family:

1. Children, while going through the socialization process and education, should be made sensitive to the needs of their elders.
2. The government needs to start some training programmes for elders, for the facilitation of positive and productive ageing with the help of NGOs.
3. There must be some law against elderly abuse; grown up sons and daughters must be forced by the law to take care of their aged parents and to meet their physical and psychological needs.
4. Realistic portrayal of old age and awareness and facilitation of positive and productive

ageing through various media channels is crucial.

5. Joint activities, involving all age groups, related to community development must be organised with the support of local government.
6. Essential training for decisiveness must be given to elderly people.
7. Elderly people must be made to feel that they are needed for the community.
8. Sufficient training programme may be organized for caretakers, so that they can meet the demands of elderly people.

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Role of Digital Marketing in Building Rural Entrepreneurship

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Abstract :- Rural Entrepreneurship is gaining wide attention by organizations, employers and media because of the emerging need of the Indian System to reduce disparities in the economy. Huge number of villages in India are what you might call 'media dark'. There is no reliable electricity source and therefore no TV. The only media channels people can use are AM and FM radio or basic feature phones.

Rural industries generated employment for 47.97 lakhs people in the year 1996-97, as against 37.21 lakhs people in the year 1992-93. There are a large number of products and services available in rural areas, which can be leveraged by entrepreneurs to set-up new and small micro enterprises.

RSETIs are Rural Self Employment Training Institutes, an initiative of Ministry of Rural Development (MoRD) to have dedicated infrastructure in each district of the country to impart training and skill upgradation of rural youth geared towards entrepreneurship development. RSETIs are managed by banks with active co-operation from the Government of India and State Governments. This Paper describes about the rural entrepreneurship as well as the role of Digital Marketing in transforming the condition of villages in India.

The Purpose of this study is to analyze the role of Digital Marketing in inculcating rural entrepreneurship with the help of descriptive research.

Keywords :- Digital Marketing, Rural Entrepreneurship, Media Dark, Micro enterprises, MoRD.

1. Introduction :- The concept of rural entrepreneurship is a subject of constant debate, especially regarding the relative stage of rural development. Rural Development includes not only the economic, social and environmental development of rural territories, but also the development of good governance in these areas. The concept of rural development encompasses all actions aimed at improving the quality of life of people living in rural areas to preserve natural and cultural landscape and ensure the sustainable development of rural areas according to specific conditions of those lands. The Rural Development Policy of the European Commission is one of the two pillars of the Common Agricultural Policy (CAP). This helps in finding answers to the challenges facing rural areas for sustainable development. The guidelines were the decentralization of responsibilities, thus strengthening partnership based on 22 measures to be targeted and implemented according to specific needs of Member States in the 2014-2020 funding period. The policy objectives have been simplified and clarified around three clearly defined economic, environmental and territorial objectives namely: (1) improving the competitiveness of agriculture and forestry; (2) improving the environment and the countryside; and (3) improving the quality of life in rural areas and encouraging diversification of economic activity. The proposed new Regulation for rural development policy after 2013 is the latest step in a series of political developments aimed at creating a coherent and sustainable framework for the future of Europe's rural areas. The indicators presented in this analysis are developed by CCME (impact, reference, input, output and result indicators), namely: socio-economic importance and types of rural areas - NUTS 3, economic

development, economic structure and development of tourism rural areas.

India is one of the oldest, culturally richest and diverse country full of colours and boasts of civilization with rich flora and fauna. Our cuisine is mouth watering, scenic beauty is breathtaking, folk dances are simply enchanting, and there is a wide array of places of tourist attraction. These are just a few of the reasons why Government has termed us as Incredible India. Nearly two-thirds of our fellow brothers and sisters live in the villages where our roots are contained. There is the wealth of craft, performing art, vivid lifestyle and cultural diversity contained in our rural India. Thus, rural entrepreneurship will further help bridge this gap between the rural and urban areas, and the development of urban areas won't happen at the cost of our rural areas.

Human resources are amongst the essential resources that are required for fostering rural entrepreneurship. The importance of human resources cannot be overemphasized, for it is this resource alone that makes the greatest impact on socio-economic development of rural areas. Childhood reading, upbringing, exposure to challenging situations, self-study, apprenticeship, coaching and training, all contribute to achievement motivation, which is a key to entrepreneurship development. This helps us by applying a check on social evils (like poverty, the growth of slums, etc.), awakening the rural youth (to expose them to various avenues and adopt entrepreneurship and promote it as a career) and also improve the standard of living of the rural youth.

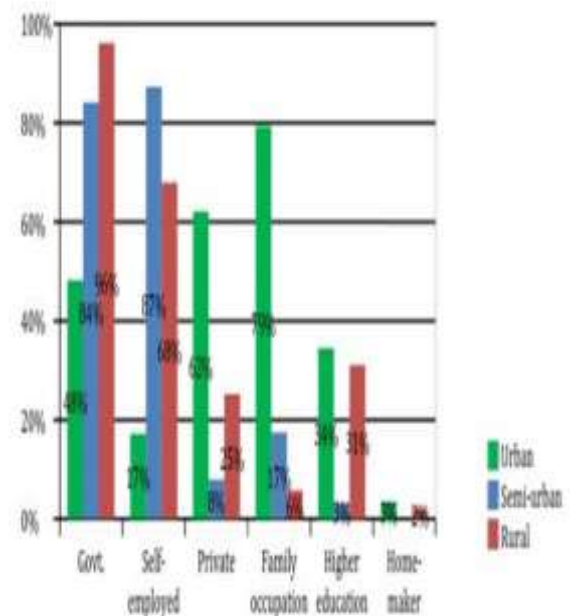
2. Objectives of the Study :- The Objectives of the study are the following:

- To analyze the impact of Digital Marketing on building image of the organization
- To analyze the impact of Digital Marketing on rural areas
- To analyze the impact of Digital Marketing on potential entrepreneurs.

3. Methodology :- The research paper is an attempt of Descriptive Research, based on the secondary data sourced from various Annual Reports, journals, magazines, articles and media reports.

4. Results and Interpretations :- The NDA government, which came to power with a promise to cut red-tapism aimed to re-invent India's business-friendly image, which so far placed it as one of the 40 'least' favorable countries in the world for starting enterprises. But even as the Startup India announcement has captured the imaginations of urban India – aspirations of rural entrepreneurship remain forgotten.

In a basic study conducted across four states, for the Niti Aayog, Pratham expectedly found that government jobs remain the holy-grail for low-income youth. In an unlikely twist, however, almost 70 per cent of the respondents from rural and semi-urban areas aspired to become 'self-employed' entrepreneurs, in stark contrast to their urban counterparts, for whom entrepreneurship was least aspirational.



*Multiple answers were permitted

In another survey conducted by Pratham with the low-income youth who had migrated to urban areas in and around Mumbai, it was found that 42 per cent of all respondents who had migrated wanted to return to their villages, eventually, while another 21 per cent said they would only continue living in the city if they were able to afford relocating their families with them. Thus, it isn't just the daunting idea of relocation that dissuades organized-aspiration, but also because of shared-experiences of migration, which aren't always positive.

For instance, 22-year-old Rahul Dharmik, who hails from the Naxalite-torn district of Gadchiroli in Maharashtra, relocated to Mumbai after completing a 2-month long vocational training course in masonry. The reason for his migration was not to escape the violence in his region, or for the charms of a city-life. Dharmik labors for 12-hours a day, in frankly terrible working conditions, so that he can learn the skills of the trade and create enough savings to start-up as a construction-contractor in his own village.

Recently, a Business Today article featured India's Hottest Startups. The article lists startups from many different industries, from organic food to technology. Below are the following points I observed/calculated from the article:

- Average age of a founder is 37.
- Standard deviation in the age of founders is 8.
- Youngest entrepreneur is 26 and the oldest one is 58.
- Average amount of funding: Rs. 25 crore. (USD 6.25 million)
- Range of funding: Rs 0 – Rs 72 crore. (USD 18 million)
- Average amount of revenues: 25.2 crore (USD 6.25 million)..
- Range of revenues: Rs 0 – Rs 110 crore.

According to the index India scored an overall 41.7 points, ranking 49 among 54 economies globally with comparatively low in Women

Business Ownership percentages.

The index uses 12 indicators and 25 sub-indicators in 54 economies across Asia Pacific, Middle East and Africa, North America, Latin America and Europe, representing 78.6 percent of the world's female labour force.

It is said India presents lower opportunities for women to assume leadership roles, participation in the workforce or engagement in entrepreneurial activities - a disparity that explain the low scores for Business Ownership by Women in the country.

The **sixth economic census**, released by **ministry of statistics and programme implementation**, presents a worrisome picture of the status of women entrepreneurs in the country.

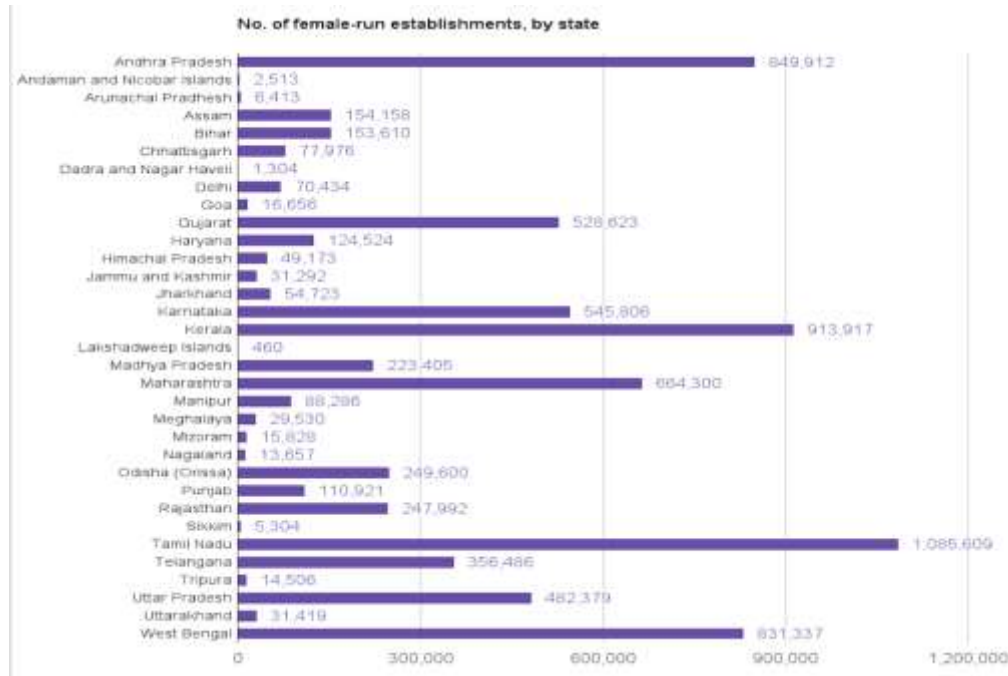
- The survey shows that women constitute only 13.76% of the total entrepreneurs, i.e., 8.05 million out of the 58.5 million entrepreneurs.
- These establishments in total, owned by females, provide employment to 13.45 million people.
- Another revelation is that out of these entrepreneurs, 2.76 million women (34.3% of the total entrepreneurs) work in agriculture sector whereas 5.29 million females (65.7% of the total entrepreneurs) work in non-agricultural sectors.
- In the agriculture, livestock dominates (with a share of 31.6 %) among all other farming activities.
- Among the non-agricultural activities owned by women entrepreneurs, manufacturing and retail trade are dominant ones with corresponding percentages being 29.8% and 17.8% respectively.
- Out of the total establishments under women entrepreneurs, percentage share of various social and religious groups OBC: 40.60%, SC: 12.18%, ST: 6.97% and Others (40.25%); Hindus:

65.6%, Muslim: 12.84% and Christian: 5.2%.

- Among the states, the largest share in number of establishments under women entrepreneurship is of Tamil Nadu (13.51%) followed by Kerala (11.35%), Andhra Pradesh

(10.56%), West Bengal (10.33%) and Maharashtra (8.25%).

- Average employment per establishment for women owned establishments is 1.67.



5. Concluding Observation :- The digital India programme has brought the communities together. The start-ups can now access reliable data and trusted information about setting up and running their business, just with the use of their fingertips. Connecting with the established businesses is no more a thing of pain. With better connectivity assisting/mentoring, the work of business houses has become much easier. Digitization of the economy has made it easier to start a company. Benefits like self-certifications and online registration of the companies allow the potential entrepreneurs to start their business hassle free. The initiative has mushroomed innovative projects that are further improving the country's economic growth while enriching career growth of the new generation. Setting up of incubation centers, free guidance on compliance and other added benefits are raising the spirits of budding entrepreneurs to give life to their dream. With the introduction of digital India, the government has hit the nail to eliminate the

dilemma that prospective entrepreneurs face in executing their ideas. Today, when it's easy to replicate an idea, the decision to making the patent process faster had undoubtedly turned out to be a game changer. To sum up, it is an encouraging and positive change that is helping the Indian start-up ecosystem to flourish at a fast pace.

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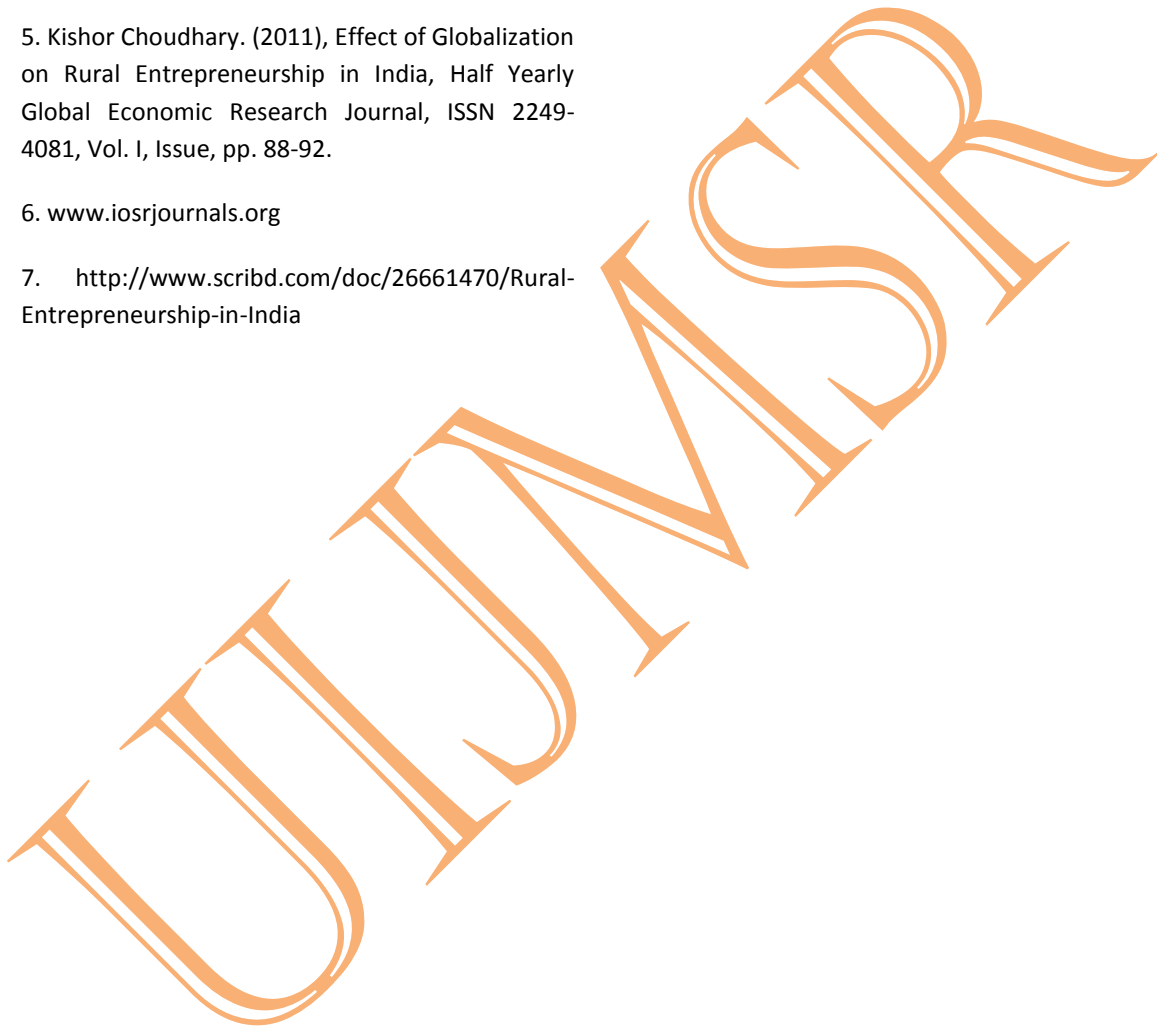
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Human Resource is one of the Potential Resources

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INTRODUCTION OF HRM :- Human resource are the people and their characteristics at work either at national level or at organizational level. From the National point of view, Human Resources are knowledge, skills, creative abilities, attitude and other attributes obtained in the population whereas from the viewpoint of an organization, they represent the total of the inherent abilities, acquired knowledge and skills as exemplified in the talents and aptitudes of its employees.

The Management is concerned with people at work and with their relationship within an enterprise. Its aim is to bring together and develop an effective organization of men and women, who make up an enterprise and who have regard for the well-being of the individuals and of working groups.

Human capital consists of well-employed human resource that is actively engaged in meaningful, worthwhile work and delivering some level of desired productivity. However, in practice, such a distinction is not made and human capital is defined as consisting of knowledge and abilities. For example, Becker has defined human capital as, "stocks of skills and knowledge embodied in the ability value. It is the skill and knowledge gained by a worker through education and training."

Since an organization performs a number of functions to achieve its objectives, it requires Human Resources of different types which may be categorized on the basis of functional areas such as Production, Marketing, Finance, etc. or Organizational Hierarchy or levels at which these resources are placed. Thus, Human Resources across the functional areas may be arranged into Top Management, Middle Management, Supervisory Management and Operatives.

Human resource is one of the potential

resources of any country's economy. It is the wealth of the country. India, being a country with a large population, has a vast potential in its human resource. People have always been central to organizations, but their strategic importance is growing in today's knowledge-based industries. An organization's success increasingly depends on the knowledge, skill and abilities of the employees, particularly as they help to establish a set of core competencies that distinguish an organization from its competitors. With appropriate human resource policies and practices an organization can hire, develop and utilize the best brains in the market.

Human Resource Management is a strategic and coherent approach to the management of an organization's most valued assets - the people working there who individually and collectively contribute to the achievement of its objectives.¹ It is a process of bringing people and organizations together so that the goals of each are met. It tries to secure the best from people by winning their wholehearted cooperation.

Human resource management (HRM) is concerned with the "people" dimension in management. Since every organization is made up of people, acquiring their services, developing their skills, motivating them to high levels of performance, and ensuring that they continue to maintain their commitment to the organization are essential to achieve the organizational objectives. Getting and keeping good people is critical to the success of every organization whether profit or non profit, public or private.

HRM is the back bone of each and every type of business organization. It is man who make it possible to get more production. among the four factors required for development –Task, Men,

Machine, and Money. It is the man or human resource which is required more than any other factors which determine the quantity and quality of the performance and output.

The triumph of every organization depends upon the worth of person it employs. HRM helps in spotting the exact individual for the precise job suitability for the job and the quality of work go hand in determining the quality of any work force.

In modern industry, the Human Resource Management plays an important role in promoting good relationship between labour and management and smooth functioning of organization. The success and growth of any organization depends upon the effective use of its human resources. Each and every industry including defence industry in our country is providing employment opportunities to a large number of people in its respective areas.

There is a wide spread unrest in industries these days, strained workers, management relations, lack of confidence in each other and emergence of militancy in trade union have become the order of the day. HRM is required to create proper understanding among the workers and the management

There is a humanization of work environment in industrialized countries. Globalisation of economy has exposed the industry in developing countries to international competition. An improvement in efficiency and quality of work force can come only when workers develop organizational commitments. The business environment is rapidly changing, technological improvement has revolutionized the production procedures. automation has been introduced in office operations. There is a need to cope with the new and changing situation. the operational efficiency of employees must be improved to face the new challenge.

AREA OF THE STUDY :- Defence forces are considered as the backbone of nation. India is maintaining the third largest army in the world equipped with latest types of equipments.

Basically the defence forces of nation consists of army, navy, and air force but beside these forces there is a hidden force of our nation that silently work for defence production known as defence industries.

Defence industries in present trend constantly wrestle with revolutionary changes like global competition, deregulation, technological and demographical change, they must strive to withstand in the turbulent business environment.

The Indian defence history needs to be developed into a modern, strong and a robust industry with the aim of achieving self reliance. the human resource of the organization is the most important asset of the organization. It is the source of achieving competitive advantage. The defence industries performance is influenced by a set of effective HRM policies.

Unlike, the most other sectors, defence industry requires a highly skilled labour force currently there is hardly any thinking on how to create a robust human resource base both in terms of number and quality clear evidence to this effect is visible in the DRDO which is the premier institution for India's defence innovation.

In today's highly competitive and turbulent business environment all modern organization are operating in dynamic changing scenario. Due to increasing complexities and cut throat competition running in organization effectively became challenge for employees. To gain competitive advantage organization need to implement unique strategies.

Managing human resource is very challenging as compared to managing technology or capital. Its effective management organization require effective HRM system, it should be backed up sound HRM practices. It gives fruitful results like enhancing employee commitment retention and reduce employee turnover. HRM practices like recruitment and selection, training, development and promotion, employee control and discipline, employee welfare services etc will help defence industries to improve organizational behavior is areas as staff committed, competency and

flexibility which in turn leads to improved staff performance.

In manufacturing sector, the companies formulate a well defined HR policy where rewards and benefits are made transparent throughout the organization at every level. Organization development is a well planned, organization wide effort to increase the organization effectiveness. This is designing of system to assist an organization with planning change. Those are performed by HRM function and have a direct linkage with objectives of the organization.

Human resource in defence sector reform also seeks to improve quality of services and employee satisfaction. HR professional face many obstacles in their attempt to direct high quality performance. Effective Human Resource Management will play a vital role in the success of defence industries. Though we have seen the adoption of HRM practices in the corporate sector, but the defence sector is yet to adopt HRM practices. The basic need of HRM practices is to attain a sustained competitive advantage through effective utilization of human resources.

Most traditional resources such as capital equipment and location are less significant as they can be acquired by anyone at a price, where as the acquisition of a ready pool of highly qualified and highly motivated personnel is rather difficult if not impossible. A committed and dedicated workforce is a valuable asset that can hardly be duplicated or imitated by the competitors.

HR has been recognized as an indispensable input for the organization effectiveness and efficient management of this resource has assumed a critical role to play in the performance and success of the organization.

The achievement of target of any industry including Defence Industry is based on many factors which include Human Resource Management also, thus it is necessary to formulate an appropriate HR policy to achieve the goals of an organization. Many organization have

failed to achieve their goals because of lack of proper management of human resource.

The defence industry is considered to be vital one in many aspect as it provides employment opportunities' to many people and play a main role in defence production. Defence Industries are adopting modern technology based machines so that quality product can be produced. There are 41 Indian ordnance factories in India. Where as in MP. there are six factories :-

JABALPUR – Vehicle factory Jabalpur (VFJ), Khamariya Factory Jabalpur, Grey iron foundry, Gun carriage factory.

KATNI – Katni Ordnance factory.

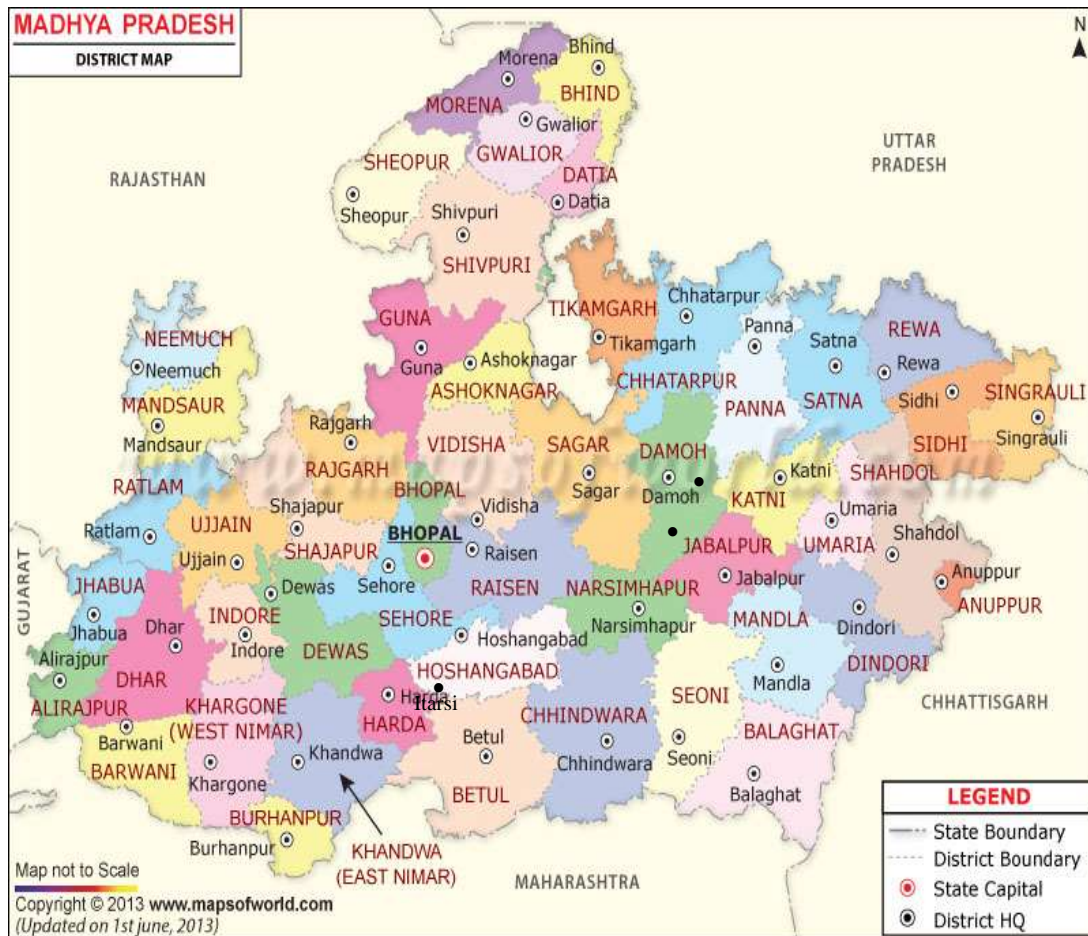
ITARSI – Itarsi ordnance factory.

Large numbers of workers are employed in defence industries, hence systematic HR policies must be adopted in recruitment and selection, training development and promotion, employee control and discipline, employees welfare practices.

Defence industry plays a very important role in the development of the economy of the country. so far no systematic and specific study about HRM in defence industry has been made. In this situation, the need to study the Human Resource Management practices in defence industries of Jabalpur and to evaluate the present system of Human Resource Management of defence industries. Hence, an attempt has been made by the researcher to study HRM practices in defence industries of Jabalpur.

LOCATION OF STUDY AREA :- The defence cluster of Madhya Pradesh is located at Jabalpur, Itarsi and Katni. Main anchor units present in the cluster are Gun Carriage Factory, Grey Iron Foundry, Vehicle Factor, Khamaria Factory. There are 45 Industrial Units in these defence cluster but only few are catering to the anchor units. These industries contribute maximum in this cluster among industries products such as chassis, vehicle body, gear boxes, thrasher etc.

MAP 1.1
Location Map of Madhya Pradesh



• Location of Ordinance Factories in M.P.

The Govt. of India has announced a defence production policy which encourages joint ventures between Indian private sector and foreign companies with direct FDI of upto 49%. In view of high presence of public enterprises in and around Katni, Itarsi and Jabalpur and the potential for involvement of private sector units in these and other areas of M.P. in consonance with GOI Policy, the state Govt. of M.P. has developed this policy to boost investments in defence production sector in M.P.

The researcher has chosen Jabalpur based defence industries because they cover maximum production in state.

IMPORTANCE OF STUDY :- The significance of HRM can be discussed at four levels –corporate, professional, social and national

Corporate Significance :- Human Resource Management can help an enterprise in achieving its goals more efficiently and effectively in following ways.

- 1) Attracting and retaining the required talent through effective Human Resource planning, recruitment, selection, placement, orientation, compensation and promotion policies.
- 2) Developing the necessary skills and right attitudes among the employees through training, development, performance appraisal and the like.
- 3) Securing willing co-operation of employees through motivation, participation, grievance handling and the like.
- 4) Utilizing effectively the available human

resource.

- 5) Ensuring that the enterprise will have in future a team of competent and dedicated employees.

Professional Significance :- Effective management of human resource helps to improve quality of work life. It promotes team work among employees by providing a healthy working environment. It contributes to professional growth in the following ways.

- 1) Providing maximum opportunities for the personal development of employees.
- 2) Maintaining healthy relationship between individuals and different work groups.
- 3) Allocating work properly.

Social Significance :- Sound Human Resource Management has a great significance for the society. It helps to enhance the dignity of labour in the following ways.

- 1) Providing suitable employment that provides social and psychological satisfaction to people.
- 2) Maintaining a balance between the jobs available and the job seekers in terms of numbers, qualifications, needs and aptitudes.
- 3) Eliminating waste of human resource through conservation of physical and mental health.

National Significance :- Human resource and their management plays a vital role in the development of a nation. The effective exploitation and utilization of nations' natural, physical and financial resources requires an efficient and committed man power. There are wide differences in development between countries with similar resource due to differences in the quality of their people.

Countries are under developed because of their people are backward. The level of development in a country depends primarily on the skills, attitudes and values of its human resource. Effective Human Resource Management helps to speed up the process of economic growth which in turn leads to higher standards of living and more employment opportunities.

In the modern era of automation and computerization, machine is useless without competent people to operate it. Human resource

management has become very significant in recent decades due to the following factors.

- i. Increase in the size of complexity of organizations, for example a multinational corporation employing millions of persons.
- ii. Rapid technological development such as automation, computerization etc.
- iii. Rise of professional and knowledgeable work.
- iv. Increasing proportion of women in the work force.
- v. Growth of powerful nation wise trade unions.
- vi. Rapidly changing jobs and skills.
- vii. Growing expectations of society

SCOPE OF STUDY :- It involves continuous improvement of employees capabilities of the resources. Without HRM, no organization will function efficiently. In order to be the effective organization, every manufacturing industry needs competitive people. Every organization wants to develop diversity, renew and change and finally improvement which required efficient employees. So the competencies and the capabilities of the employees can be developed through effective HRM techniques i.e. recruitment and selection. Training development, promotion and performance appraisal, employee control and discipline, employee welfare services and various incentives schemes etc. so this study aims at finding out the effectiveness of HRM practices followed in Defence Industries in Jabalpur M.P. on the basis of employee's views and perception. There are four defence industries in Jabalpur i.e., Vehicle Factory Jabalpur, Khamaria Factory Jabalpur, Gun Carriage Factory Jabalpur, Grey Iron Foundry.

So, the researcher has chosen only these four industry for the study because these industries are producing large quantity and high quality of defence products.

OBJECTIVE OF RESEARCH :- There is a great scope in undertaking research work in Human Resource Management.

1. To review history and progress of defence industry in general and an overview of the HRM mechanism of defence industry in M.P.
2. To measure the basic elements of human resource development as perceived by employees (supervisors, executives and managers) and to evaluate the effect of the HRD system on performance of the employee of defence industry.
3. To find out how HRM concerns are operationalised in organization and what is their rationale and to verify the extent of similarity between theoretical concepts of HRM and actual practice.
4. To identify the scope of HRM in defence industry.
5. To develop model for HR practices in defence industries as current requirement in

competitive world.

RESEARCH DESIGN AND METHODOLOGY :- The validity of a research depends upon the method of collecting the data and analyzing the same. In the present study extensive uses of both primary and secondary data which were collected systematically. For collecting primary data, field survey technique was used in the study area i.e., VFJ, KFJ, GCF, GIF of Jabalpur M.P. through the questionnaire. First-hand information pertaining to existing HRM practices of the selected sample respondent towards HRM practices in the study area were collected. For this purpose, the respondents are classified into three categories i.e. Group A Officer, Group B Officer and IE'S worker.

TABLE 1.1
Classification Of The Respondents For Data Collection

| Category | Actual Population | Sample Size | % of Actual Population | Sample Size % |
|-----------|-------------------|-------------|------------------------|---------------|
| Group – A | 150 | 30 | 20% | 2.22% |
| Group – B | 700 | 70 | 10% | 5.19% |
| IE's | 12500 | 1250 | 10% | 92.6% |
| Total | 13,350 | 1350 | - | 100% |

DATA COLLECTION

Primary Data :- In order to fulfill the above objectives a sample study was undertaken using well-framed questionnaire and got it duly filled in by the employees. Respondents of varying nature were selected based on the important aspects of their present position, educational qualification, age and experience and working department etc.. The drafted questionnaire was circulated among, Joint General Manager, Additional General Manager, Assistant General Manager (GROUP A OFFICERS), Work Manager, Junior work manager (Group B Officers) and IE'S of defence industries.

Researcher has used structured questionnaire to collect the primary data. For the collection of primary data employees are classified into 3 types based on their position i.e. Group A Officers, Group B Officers and IE'S of Defence Industries of Jabalpur M.P.

Secondary Data :- The primary data were supplemented by enough secondary data. The secondary data pertaining to the study were gathered from books, annual reports, journals etc., were utilized to get the necessary and latest information required for the study. The key aspects of the present research to be studied were identified from the HRM concepts, websites, HR journals and some selected books.

Discussions and Informal Interviews :- In order to know about the general working pattern of the HRM, several rounds of discussions were held with knowledgeable persons in the field. For this purpose, a good report had been established with the leading Managers, Heads, and Supervisors.

Period of Data Collection :- The primary data were collected by researcher during the period more than One year. (2013 to 2015)

Analytical Frame Work :- By virtue of a mass data obtained from the research survey through

questionnaire, as well as data from secondary sources collected and presented in this report, descriptive and analytical study were considered as the most appropriate for this study. The study reveals the HRM practices followed in defence industry of Jabalpur (M.P.)

STATISTICAL TOOLS USED :- The analysis of employee's opinion about the existing HRM practices, the data collected from three different categories of respondents were studied by means of Percentage Analysis, Mean, Standard Deviation & Chi-square Test

LIMITATIONS OF THE STUDY :-

1. The attitude of response may be a limit while responding the questionnaire which will be used for analysis of data.
2. The resources is confined to Jabalpur district so, time may be one of the constraint for research purpose.
3. As research is to be conducted on defence

industries the fact and figures may not be given by organization due to security reason.

DEFENCE SECTOR IN INDIA :- India has the third largest Army, the fourth largest Air force and the seventh largest Navy in the world. India is among the top 10 countries in the world in terms of military expenditure and world's largest arms importer. India allocates about 1.8% of its GDP towards defence spending, of which 40% is allocated to capital acquisitions and only about 30% of India's equipment is manufactured in India, mainly by public sector undertakings. Even when defence products are manufactured domestically, there is a large import component. All these factors make the Indian defence market one of the most attractive globally and provides an immense opportunity for both domestic and foreign players in the defence sector.

TABLE 1.2
Country Wise Military Spending 2014

| Region | Spending (\$ billion) | Change(%) |
|-------------|-----------------------|-----------|
| USA | 610.0 | 3.5 |
| Russia | 84.5 | 4.5 |
| China | 216.0 | 2.06 |
| India | 50.0 | 2.4 |
| World Total | 1776 | - |

Source: Facilitating 'Make in India' in Defence Sector Through Defence Procurement Procedure July 2013

TABLE 1.3
Top 10 Arms Importers 2010-2014

| Importer | Share of international arms imports (%) | | Main Suppliers (share of Importer's total Imports) 2010-14 | | |
|--------------|---|---------|--|--------------|---------------|
| | 2010-14 | 2005-09 | 1st | 2nd | 3rd |
| India | 15 | 7 | Russia (70%) | USA (12%) | Israel (7%) |
| Saudi Arabia | 5 | 1 | UK (36%) | USA (35%) | France (6%) |
| China | 5 | 9 | Russia (61%) | France (16%) | Ukraine (13%) |
| UAE | 4 | 5 | USA (58%) | France (9%) | Russia (9%) |
| Pakistan | 4 | 3 | China (51%) | USA (30%) | Sweden (5%) |

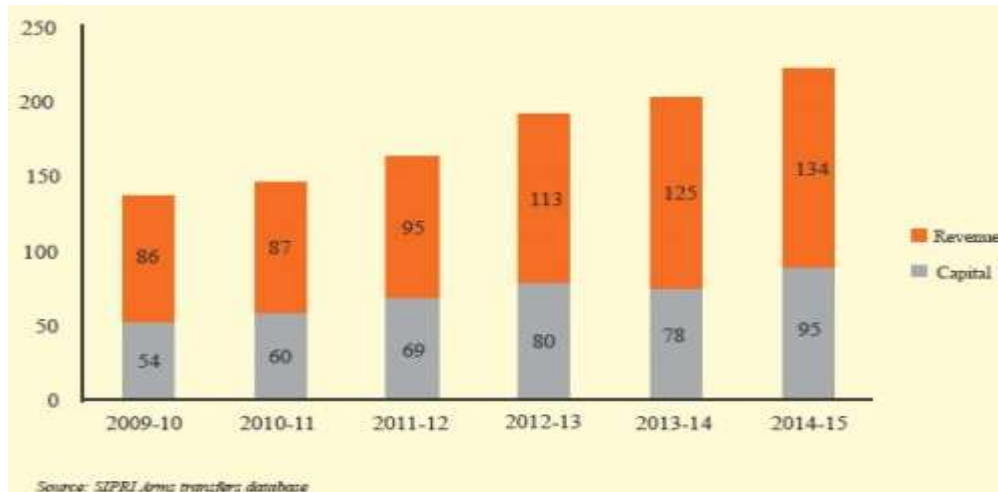
Source: Facilitating 'Make in India' in Defence Sector Through Defence Procurement Procedure July 2013

TABLE 1.4
Indian's Total Defence Expenditure (INR in Crore)

| Year | Actual | Percent Increase (Actuals) | (%) GDP* |
|---------|-----------|----------------------------|----------|
| 2007-08 | 91917.79 | 7.87 | 1.84 |
| 2008-09 | 114499.49 | 24.57 | 2.03 |
| 2009-10 | 141781.08 | 23.83 | 2.19 |
| 2010-11 | 154116.71 | 8.70 | 1.98 |
| 2011-12 | 170913.28 | 10.90 | 1.90 |
| 2012-13 | 181775.78 | 6.36 | 1.80 |
| 2013-14 | 203499.36 | 11.95 | 1.79 |
| 2014-15 | 174260.21 | - | 1.75 |

Source: Controller General of Defence Accounts

GRAPH 1.1
Indian Defence Budget (000 Crore INR)



Source: SIPRI Arms transfers database

Defence Industries in India :- The post-independence industrial policy placed the production of defence items in the reserve List making it mandatory for production to be taken up only by the public sector. The sector for the first time was opened up to 100 percent Indian private sector participation in 2001. Reforms in the defence industrial sector and the acquisition policy have been one continuous process since then, beginning with the formulation of DPP 2002 and its successive revisions, formulation of the Defence Production Policy and the issuance of Joint Venture guidelines.

Indian defence industry is dominated by defence public sector undertakings (DPSUs) and ordnance factories (OFs) which contribute about 90% of the total domestic defence manufacturing

output. The 41 ordnance factories are spread across 26 different locations and employ close to 1,25,000 people. The DPSUs and OFs manufacture a wide spectrum of equipment including small arms and field guns, ammunitions, explosives, armoured vehicles, transport vehicles, clothing, parachutes and general stores. DPSUs account for approximately 65 percent of the total industrial output of the defence public sector enterprises.

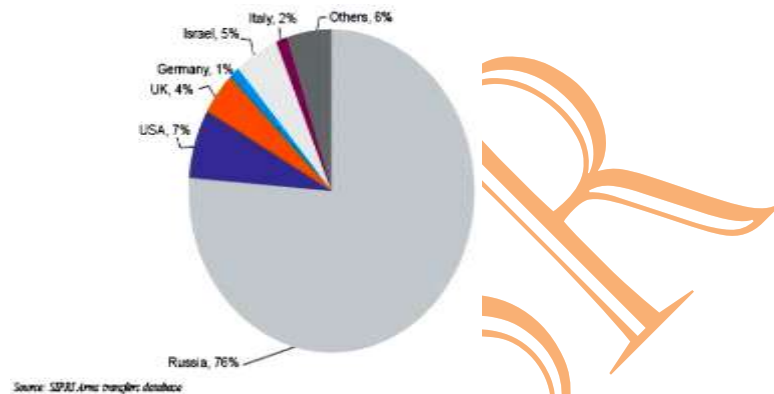
Combined, the DPSUs and OFs have played a critical role in building a domestic industrial base in this sector as they typically outsource 20 to 25% of their production requirements to private companies. In addition to the public undertakings, there is a small but growing number of medium large private companies that have already entered, or are

seriously evaluating entry into the market. These are in addition to about 6000 MSMEs that have largely depended upon the DPSUs for survival. The Indian defence industry's import export ratio is inferior to countries with a much smaller defence industrial base. India's arms imports are now

almost three times as high as those of the second and third largest arms importers—China and Pakistan. India is among the top five arms importer, besides China, Pakistan, the UAE and Saudi Arabia.

India's Import Breakup

GRAPH 1.2



Since opening up of the defence industry for private sector participation, the Department of Industrial Policy and Promotion (DIPP) has so far issued 222 Letters of Intents (LOIs) and issued Industrial Licences (ILs) to more than 150 companies for manufacture of a wide range of defence items. 46 companies have so far reported commencement of production. The licenses have been issued to the Indian private sector for manufacture of Military Aircraft, Unmanned Aerial Vehicles, Radars, Electronic Warfare Systems, Ship borne platforms, Armoured Vehicles etc. In the recent years, many Indian private industries have been involved in a small way with several defence 'Make' projects. These are Integrated Materiel Management Online System (IMMOLS), Integrated Air Defence Command and control system (IACCS) Tactical Communication System (TCS), Battlefield Management Systems (BMS) and Futuristic Infantry Combat Vehicles (FICV). While (IMMOLS) and (IACCS) have been deployed, TCS, BMS and FICV are in the early stages of development. Award of major projects under 'Make' category to Indian private industries is a new beginning in Indian defence industrialization.

Larsen & Toubro, Tata group, Pipapav Defence and Offshore Engineering Ltd., Reliance Industries Ltd., Mahindra and Mahindra, Ashok Leyland Defence Systems, Piramal System and Technologies are some of the key Indian players in the defence industry.

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Impact of Resource Planning Strategy on Patient Satisfaction In Healthcare Sector

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Abstract : The hospital sector in India, in past few decades show impressive growth in terms of economy. With the entry of private players, healthcare sector enhances its service offering by utilizing its resource fullest. This sector understand the needs of its customers and thereby tries to satisfy them by providing variety of services. And it can be possible to them only by proper use of their resources through proper prior planning. Now-a-days hospitals formulate a complete hospital resource planning strategy to distinguish themselves from their competitive units. In this paper we are exploring the impact of this strategy of private hospital on patient satisfaction. For this, 5 private hospitals are selected from Indore city and data is collected from administrative staff through semi interview method to get better understanding in this concern.

Keywords : Hospital Resource Planning, Patient satisfaction, healthcare sector.

Introduction : Service sectors are complex in nature and when it comes to hospital sector, it become more crucial due to highly people involvement. The success or failure of any healthcare unit depends on the performance which is based on the process they adopt to satisfy customers, quality of care they ensure to customers and also the resource they utilize to obtain maximum benefit for both service ends.

Among all, the first step hospitals consider in the planning is of their resource planning. Hospital resource planning include all types of resource viz. human resource, asset management, location utilization, Govt. policy utilization and others which are considered as internal environment in strategy formation. The

health care units tries to optimize this resources fully so that they can get external benefit on the foundation of this. But resource planning is not easy task, it covers financial, human resource, inventory management, waste management, redressal system and others which directly and indirectly affect the performance of the hospital and ultimately leads to patient satisfaction.

Today, when there is lot of scope of growth in this sector, hospitals are facing competition as private entity are willing to spend a lot to gain competitive advantage. In this condition top management tries to get more and better resources and willing to get updating process for medical and non-medical equipment so that they can manage their resources efficiently and also provide better services to patients.

In this paper, various variables of hospital resource planning are considered which directly or indirectly affects patients and also crucial for the image of the hospitals for obtaining NABH approval. These variables are analyzed from the perspective of administrative department of hospitals, so that we can understand how they plan their resources to provide maximum satisfaction to their customers.

Objective of study : The main purpose of this study is to find out the impact of hospital resource planning strategy of private hospital on patient satisfaction.

H0: There is no significance difference between mean ranks of hospital resource planning strategy which satisfy patient's needs.

H1: There is significance difference between mean ranks of hospital resource planning strategy which

satisfy patient's needs.

Research methodology : To understand this relationship, Random sampling is done to collect data. The sample is collected from administrative staff of 5 private hospitals of Indore city. The technique used for data collection is semi interview along with the questionnaire filling to get the insight observations from the respondent. Total 150 responses were recorded and this data is then analyzed through Friedman's test technique along with post hoc test to get interpretation.

Data Collection and Interpretation : The hospital resource planning in this study comprises of

variables, which are implemented by hospital in order to achieve maximum utilization of existing resources and also which are valuable in framing overall strategy by which can satisfy patient's needs and wants.

Null hypothesis H₀ : There is no significance difference between mean ranks of hospital resource planning strategy which satisfy patient's needs

To test this hypothesis, Friedman's test was used. Mean ranks were composed of all the items of **Hospital resource planning** strategy. Chi-square value also was computed. The results are summarized in Table-

TABLE
Friedman's test for significant difference between mean ranks of Hospital resource planning strategy

| HOSPITAL RESOURCE PLANNING | MEAN RANK | CHI-SQUARE VALUE | P-VALUE |
|--|-----------|------------------|---------|
| PERSONNEL ARE KNOWLEDGABLE AND APPROACHABLE | 6.19 | 319.845 | 0.000* |
| HOSPITAL FOLLOWS GOVT CODE OF CONDUCT FOR MEDICAL DISPOSAL | 6.22 | | |
| HOSPITAL HAVE WASTE MANAGEMENT PLAN SEPARATELY | 5.97 | | |
| WASTE MANAGEMENT DONE BY UPDATED EQUIPMENT | 1.56 | | |
| UPDATION OF EQUIPMENT ARE DONE PERIODICALLY | 4.45 | | |
| WORKING SHIFTS & APPRAISAL ARE REVIEWED FREQUENTLY | 5.66 | | |
| FINANCIAL HANDLING HAVE BEEN AUDITED PERIODICALLY | 5.54 | | |
| ONLINE HISTORY UPDATED ON HOSPITAL SERVER | 3.04 | | |
| HOSPITAL FOLLOWS HOLISTIC APPROACH IN RESOURCE PLANNING | 6.36 | | |

* denotes significance level at 5%

Table above reveals that since p value is less than 0.005, the null hypothesis is rejected at 5% level of significance. Hence it is concluded that there is significant relationship between mean ranks of **Hospital resource planning strategy** that satisfy patients' needs. Based on mean ranks,

“Holistic approach” (6.36), “Govt. code of conduct for med disposal” (6.22) and “Personnel are knowledgeable and approachable” (6.19) are the top most three variables of health service strategy which satisfies patient’s needs and wants



Inference : The table indicate the value of mean ranks of all variables of Resource planning strategy of hospital. The graph indicate that Holistic approach in Resource planning is most important variable for administration as it obtained highest value of 6.36. It means that hospital consider all factors of resource planning of equal importance and formulate strategy according to this viewpoint. After that second highest value is of Medical disposal system. Hospital follows government code of conduct very strictly for medical disposal (6.22). The least favorable variable is waste management done by updated equipment with value 1.56. It has been observed that waste management still done by traditional

methods and updated equipment are not used by hospitals. This shows that there is much scope of service improvement in resource planning strategy of hospital.

Post Hoc Analysis : As the null hypothesis rejected and it has been observed that Resource planning strategy is statistically significant. But Friedman’s test does not show where significance difference lies. For this purpose, Wilcoxon sign post hoc test is applied with Bonferroni adjustment.

In Resource planning strategy, 9(r) sub variables are defined so Bonferroni adjustment for is-

Bonferroni = p/r

$$=0.05/9, = 0.0055$$

significant. The result of Wilcoxon test is as follows-

The Wilcoxon test shows which sub variable is responsible for proving hypothesis

| | HOSP FOLLOWS GOVT CODE FOR MED DISPOSAL- HOSP PERSONNEL ARE KNOWLEDGEABLE | HOSP HAS SEPARATE WASTE MGMT PLAN- HOSP PERSONNEL ARE KNOWLEDGEABLE | WASTE MGMT DONE BY UPDATED EQUIP- HOSP PERSONNEL ARE KNOWLEDGEABLE | UPDATION DONE PERIODICALY- HOSP PERSONNEL ARE KNOWLEDGEABLE | ONLINE HIST OF PATIENT ON HOSP SERVER- HOSP PERSONNEL ARE KNOWLEDGEABLE | HOSP HAS SEPARATE WASTE MGMT PLAN- HOSP FOLLOWS GOVT CODE FOR MED DISPOSAL | UPDATION DONE PERIODICALY- WASTE MGMT DONE BY UPDATED EQUIP | UPDATION DONE PERIODICALY- HOSP HAS SEPARATE WASTE MGMT PLAN |
|-------------------------|---|---|--|---|---|--|---|--|
| Z | -.435 ^b | -0.593 ^b | -8.029 ^c | -4.737 ^c | -6.826 ^c | -1.136 ^c | -7.363 ^c | -4.252 ^c |
| Asymp . Sig. (2-tailed) | .664 | .553 | .000 | .000 | .000 | .256 | .000 | .000 |

From above table it is clear **Hospital personnel are knowledgeable** (0.00) and **Updation done periodically** (0.00) are two sub variables which are responsible for proving hypothesis significant because this pair has value less than Bonferroni adjustment value 0.0055, other all pairs have value more than this Bonferroni correction value.

Statistically we concluded that - There was statistically significant impact of Resource planning strategy in achieving customer satisfaction with $X^2 = 319.845$, $p=0.00$ with degree of freedom 5 and Post hoc test using Bonferroni adjustment reveals that Hospital personnel are knowledgeable and Updation done periodically are less than 0.0055

This allow us to prove that our hypothesis is statistically significant and further analysis point out the pair of variables that are responsible for it.

Conclusion : The purpose of this paper is to find out the impact of hospital resource planning used

by private hospitals and how they are capable of fulfilling patient's needs and wants. Planning itself is tough task, nothing goes wrong affect the series of decision in any enterprise. Resource planning of hospital is diverse and bulky task as it touches so many aspect which are highly people oriented and also code of ethics plays its role too. For this, hospitals are compel to formulate innovative strategies and provide services to gain competitive advantage and thereby utilize their resources efficiently .

Limitation : Some of the limitations of the research are as follows-

1. The research is focused on only one strategic tool, while other elements also have scope which are not included.
2. This study included only 5 major private hospitals due to limitation of resources.
3. It can be further analyzed on different parametric and non-parametric measures.
4. Number of respondents is limited because of availability of resources

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U I J M S R

Internet Banking As a Part of Digital Banking

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Abstract: In this technological world, the entire world comes in one click. Internet banking is doing traditional banking services through an electronic communication mode, viz, Internet. Internet banking system and method in which a personal computer is connected by a network service provider directly to a host computer system of a bank such that customer service requests can be administered automatically without need for intervention by customer service representatives. Digital Banking includes Internet Banking, Mobile Banking, and social media banking.

Keywords: internet banking, digital banking, mobile banking

In this technological world, the entire world comes in one click. Technology possesses the day to day routine of every person. Computer and internet is an important part of that technology. Business and economy sector are not untouched from these changes. Banking sector also accepted the changes and developed and up gradated their systems as per the changes.

Computerisation of banks, Core Banking, ATM cards, Credit Cards, Internet Banking, Mobile Banking, SMS Banking and Virtual Cards are the products introduced by banks are

Internet Banking: Internet banking is doing traditional banking services through an electronic communication mode, viz, Internet. Internet banking system and method in which a personal computer is connected by a network service provider directly to a host computer system of a bank such that customer service requests can be administered automatically without need for intervention by customer service representatives. The system is capable in distinguishing those customer service requirements capable of being automated fulfilment and requires handling by a customer service representative. Internet banking is also called Virtual Banking. We can use internet banking not only for accessing accounts, we can

use it for payment transfers, demanding for draft, applying for different debit and credit cards, applying for loan. ICICI Banks introduced "Infinity" as internet banking facility first time in India.

After the reformation of banking sector and technology changes, the banking sector changed the way and process of banking transactions. The computer and internet is widely used and accepted by the public and as per the technological changes, internet is gradually used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is normally referred to as Internet Banking. Through internet banking, banks are providing their services and products to the customers. To regulate and monitor the Reserve Bank of India constituted different types of working groups to examine different issues relating to internet banking and recommend technology, security, legal standards and operational standards keeping in view the international best practices. The working group covers from the areas of basic structure of Internet and its characteristics to their international existence of banks in relation with internet banking. With the use of technology there had been increase in areas of business, delivery channels. It impacts on the way of doing business transactions with banking also.

Banking sector adopted computerisation of their system. After reformation of banking sector, banks have changes in the way of working and their process. Now at these days, all the



transactions have one through the computer and server. Server is connected with through the internet to other branches and their networks. After computerisation, the system works on the basis of internet. After the introduction on internet banking, Indian banking sector works on cost effectiveness. It also enlarged the choices, improves the productivity efficiency and created new markets for banking sector. Electronic delivery channels, ATMs, internet Banking, Mobile Banking, Plastic money (Debit and Credit Cards), mobile banking are the some ways have come after technological changes for doing banking transactions. It creates greater and effective communication skills and customer relationship.

Internet banking facilitates the customer to do their daily banking transaction through internet using with their desktop or laptop. Internet banking mainly focuses on remote deposits, money transfers, bill pay, and basic online management of accounts. Other synonyms for online banking include internet banking, virtual banking, and e-banking. With the help of internet banking, banking transactions can be done anywhere and anytime. Customers can penetrate into their account information, make transfers and also set up the automatic payments. All banks offer the internet banking facilities. Internet banking is use of the services related to online solutions provided by the bank.

Digital Banking: Digital Banking includes Internet Banking, Mobile Banking, and social media banking. banks using social media, new generation projects such as Artificial intelligence, Machine learning, Cognitive thinking, Big Data, Natural Language processing, Bio-matrix etc are also comes into the digital banking. Digital Banking is the use of specially offered services through any online channels like debit cards, credit cards and mobile applications. Digital banking is the digitization (or moving online) of all the traditional banking activities and programs that historically were only available to customers when physically inside of a bank branch.

Digital banking is the new concept which provides considerable benefits to banks in terms

of increasing productivity and profitability. It changes the internal process and external interfaces of banks. The expectation from digital banking is to improve the cost, control, convenience and customer experience by the banks.

Digital Banking Definition: "Digital Banking—a new concept in the area of electronic banking, which aims to enrich standard online and mobile banking services by integrating digital technologies, for example strategic analytics tools, social media interactions, innovative payment solutions, mobile technology and a focus on user experience."

Digital banking promotes to the reuse, standardisation and cost reduction for the banks. Digital banking is also helpful to complete the agenda of Government of India as "Digital India". Digital banking helps to public and organisations to do transactions through the digital channels like debit card, credit cards, PoS, UPIs. It is paperless, branchless and signature-less banking offering 24*7 services to its customers. In India, the digital banking is based on Aadhaar infrastructure. Digital banking is simple and cost effective, there are still security risks. As per the situations, digital banking has no down fall. Customers are accepting and using digital banking channels for their transactions.

The use of biometric authentication can remove the requirement of multiple passwords and PIN codes. The Indian banking sector is also progressively adopting biometric authentication to provide simple and secure banking experience to its customers.

Henceforth, we can say that internet banking is the one part of digital banking. Although the adoption of technology by Indian banks and Indian customers are less. If they adopt this digital banking extensively, then country can go and achieve the new path with this technology banking.

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A study of Application of Blockchain Technology in Agriculture Sector

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Abstract : Blockchain was early like the internet in 1990's but it could be as big. It sounds incredibly simple but very complex to understand. It has the power to change our lives in the next 20 years, the same way the internet changed it in the past 20 years. A Blockchain is a collection of data. It is an increasing list of records and transactions which are linked to each other very securely. This paper emphasises on the working and importance of Blockchain accounting in Agriculture Sector in India.

Keywords – Blockchain, Transaction, Agriculture Sector, Smart Contracts

Introduction : At the most basic level of understanding, Blockchain is just a chain of blocks, but not in traditional sense. In Block-Chain, block refers to data or digital information and chain refers to the network of people it connects. Understand block-chain as one big ledger. Now just like ledgers are very important, similarly is Blockchain important.

For eg- if A sends \$ 100 from India to a friend B in the US, it is not money that flies from India to US. But actually it is a ledger entry that happened in the ledger of A and a parallel entry that happens in the ledger of B and money is transferred.

Now the problem that occurs is, that between the Ledger of A and B, there are bunch of other ledgers that are owned by banks, money transferring agencies, other financial institutions, regulators, insurance companies. All these intermediary ledgers need to be reconciled and changed which creates a friction, which in turn creates delay in time and cost. So the \$ 100, A sent to B will be received after a period of 4-5 days and probably only \$ 96 reach her. Now if instead of this broken system, if there is only one universal ledger and all the participants A, B, the banks, regulators

were participants to that one unified ledger. In other words, all participants were nodes to that ledger. Now every time any transaction happens, every single one of the participant has to authenticate it. In such a scenario, there would be only one entry, real time.

This concept of a single universal ledger is the heart of the Block-chain. Whenever a new transaction takes place, it get added on as one more block in a chain of already existing transactions. This transaction that has been added has been authenticated by everyone and is right. Not only has this but this Blockchain been protected by the best cryptography algorithms available. So it gets very difficult to hack. One important thing is that every block added is immutably linked to the last block and that block is linked to the last block and so if a hacker tries to change any one block or transaction, he / she has to change the entire chain which is very difficult. Hence super security.

Another thing is that since it is a chain, so it can be traced back to any event block by block or transaction by transaction. Also no one owns the chain, so who maintains it? It's not one bank or single trusted authority, in fact it's the entire bunch of people but to maintain this chain, you require resources , computing power, electricity, time, money.

Therefore when Santosh Nakamoto in 2008 invented this concept he did a very brilliant thing, He created a currency along with it and that currency was an incentive for all the people maintaining this chain and that currency, because it was the Bitcoin Blockchain was called Bitcoin. The people who managed it mined and they were called miners.

Blockchain and crypto currency feed off of each

other. You cannot have a crypto currency unless you have a Blockchain behind it, but on the other hand, unless there is a cryptocurrency built incentive system, you cannot manage the Blockchain.

Blockchain Accounting:Blockchain technology is the next step to accounting. Instead of keeping separate records based on expenditure and receipt, companies can record and classify the transactions directly into a joint register, creating secured system of accounting records. All the transactions are cryptographically sealed and secured. Changing or falsifying any one transaction is impossible. So if a hacker tries to change any one block or transaction, he / she has to change the entire chain which is very difficult.

Blockchain technology isn't all about digital cash. Blockchain technology is a powerful and secure kind of a database. It is a ledger or records of transactions that is easy to change if one has the authorization but nearly impossible to hack and tamper into, once a transaction has been recorded. Hence, Blockchain is a trusted and secure way to record transactions, certify, and transfer assets without the need to rely on a bank, broker, or other middlemen.

The way business keeps its accounting records and transactions is everywhere around us- a small trip at the shopping mall, grocery shopping, dining out with friends, these small individual transactions are a result of numerous transactions for the end product or service to reach the customers. Entrepreneurial spirit has increased within the past decade.

Many small and medium sized businesses are opening up and replacing huge conglomerates. Unfortunately, the way accounting data is stored is highly inefficient and double entry methodology, the very heart of modern accounting has been around, unimproved for 500 years. Each company must reconcile each and every transaction and the balances due among businesses have to be agreed upon.

For small and micro companies, such reconciliations are a huge waste of time and resources. A medium sized enterprise will employ a few accountants for reconciliation with costs aggregating to hundreds of thousands and for large enterprises it's about having huge reconciliation department with hundreds of employees, with cost running into millions.

Manipulation of records and efficiencies, duplication of work are always present to a certain extent. Financial crisis like Enron and Lehman Brothers are becoming more common when such manipulation happens. In such a case, trillions of Dollars get wasted.

The vision of Blockchain accounting is to create a power shift from a centralized system to a distributed ledger technology, making it available to everybody and removing entry barriers for small and medium enterprises.

Objectives of the study

- To know how Block-Chain works
- To analyse the application of Blockchain technology in agriculture sector in India.

Research Methodology : The following paper is descriptive in nature. A descriptive research is used to describe characteristics of a population or phenomenon being studied, basically it attempts to describe "What" of a research statement. The data have been gathered from secondary sources like websites, news articles etc.

Literature Review :

In a recent Publication PWC "Shifting patterns: The Future of the Logistics Industry" (2016), refers Blockchain technology as a big help in increasing security of supply chains, reducing time lag, bureaucracy, errors and efficiency. But it also considers as uncertain.

Coletti, 2015 has referred to Blockchain technology as immutable. Derosé, 2015 says that immutability or resistance from tampering is what makes crypto-currencies and Blockchain so secure

and inevitable.

Guerrini, 2015 explains that the culmination of Blockchain technology and artificial intelligence will reshape the management practice in the future.

Cawry, 2014 explains that it is difficult to move money around the globe and hence, a synchronized protocol is needed to act as an interface not only between the financial institutions but all the participants to the transactions.

The centralization of digital identity is very important. A pioneer in this field is the Government of India running world's largest National Digital Identity Scheme, the Unique Identification Authority of India with each of the resident being assigned a 12 digit unique number called AADHAR. (The Times of India, 2015). This helps in creating a separate digital identity of every person.

These studies show the immutability and security of the Blockchain Technology. These characteristics of a blockchain can be used beneficially in many sectors, hence Agriculture sector which is the backbone of Indian Economy has been chosen.

Analysis

Characteristics of Blockchain

Blockchain is one big ledger in cloud. As discussed above, these are immutable, cannot be tampered with, secured network, trust and have provenance. The features of Blockchain technology includes :

- **Immutability**– Whenever a new transaction takes place, it gets added on as one more block in a chain of already existing transactions. This transaction that has been added has been authenticated by everyone and is right. Not only has this but this Blockchain been protected by the best cryptography algorithms available. So it gets very difficult to hack and change the data or information once it becomes the part of

Blockchain.

- **Easy traceability/ Provenance** – With Blockchain it becomes to trace the data. This is so because every block added is immutably linked to the last block and that block is linked to the last block and tracing the origin of the produce / raw material gets easy.
- **Decentralization**– Blockchain is a decentralized platform. It makes the data to be distributed on network rather than stored on central server
- **Data security and transparency**- Since all the information is cryptographically stored, it is not easy for anyone outside the system to change it. Moreover, all the information is visible to the entire system or people in the network, thus making it the most inevitable technology of the future.
- **Authentication** - Whenever a new transaction takes place, it gets added on as one more block in a chain of already existing transactions. This transaction that has been added has been authenticated by everyone and is right.

Block-chain in Agriculture

For transforming anything in India, we have to start with Agriculture. Agriculture contributes 16% to The Gross Domestic Product (GDP), 12 crores farmers are directly engaged in farming. In fact India has the second largest proportion of land under Agriculture in the world. But there are also 23 farmers that kill themselves every single day in India. Why?

Indian farmers who were once the heart and soul of the Indian Economy are now struggling to get basic subsistence level prices for their yield.

What are the main reasons for their distress?

- Erratic weather and poor rainfall
- Lack of availability of irrigation canals
- They don't have farm equipments,
- Even if the own land, they can't get the required output from the inputs that

have been used due to small land holdings

- 30%-40% of agricultural produce gets rotten due to lack of proper warehousing
- Even if the land is owned by the farmers, most of the time it is not recorded as theirs and hence they cannot get financing for all the inputs that they want.
- Lacking access to formal credit system.
- Middlemen enjoy profits and farmers get very less price for their produce
- This pressurizes them to take loan from the informal sector – money lenders etc. And they end up killing themselves due to this debt trap.

How can Blockchain help here?

A typical agricultural supply chain involves complex interconnected processes which involves various stakeholders such as the producer (farmer), inspection and insurance company, logistics and shipping agencies, banks, manufacturers, importer/retailer before it reaches the ultimate consumer who might be sitting at the other corner of the world. However in this long process there are quite a few challenges. End consumers or importers find it difficult to track provenance to understand the place of origin and quality of the produce. As the produce moves between multiple stakeholders, the ownership or custodian information becomes difficult to trace. Private agencies that certify crop produce may not be trusted by international importers, information flow between various stakeholders is sequential, leading to delays in downstream decision making. Overall, Stakeholders lack transparency in this whole process and lose track of relevant transactions

If somehow the middleman is eliminated from the entire transaction. How will the farmers take part in the transaction? Some suggestions can be use of PayPal, credit card. But these require fee and bureaucracy that the farmers cannot deal with. Hence the answer can be Block-Chain Technology. Blockchain establishes a direct network between

farmers and the Retailers or consumers. Blockchain technology gives all the small and marginal farmers to get together and organize themselves to get their produce to the market without any intermediary.

Any activity can be distributed and stored in the distributed ledger, only with consensus of all participating stakeholders. Thus making the network more trustworthy than any individual entity. These trusted stakeholders can transact among themselves through smart contracts without the need for a centralized body. Every stakeholder will have their own copy of the distributed ledger which enables information access in real time.

For eg – Infosys Blockchain

A from Uttar Pradesh is a farmer who cultivates mangoes and sells bulk of his produce to B, who owns a pulp factory in Uttar Pradesh. B is ordered to export Mango Pulp to C who owns Factory of packaged foods in Germany. A will add details about his crop, request inspection and get his produce insured in time. The contract between A and B as well as the one between B and C are stored on their Blockchain network as smart contracts. The relevant stakeholders will certify the produce with standard certificates. Once the mangoes are harvested, A generates an invoice requests a pick up. The logistics company picks these mangoes up from A farm and delivers it to B's Factory/warehouse. The delivery receipt is updated and made available to all stakeholders on the network. Once B accepts the consignment, the smart contract between A and B is executed. B's Bank will be notified to initiate open account transfer to A's Bank. The transaction details will then be updated on the Blockchain network. Meanwhile B is busy making Mango pulp to deliver it to C. The pulp is inspected and certified as well. B then issues an invoice to C. C tracks the provenance of the product entirely from where the mangoes were cultivated to the inspection and insurance details before accepting the invoice. B then raises a shipment request with the shipping company. Once the bill of lading is uploaded by

the shipping company, the smart contract between B and C gets executed. Now C's bank initiates a payment with B's Bank. The transaction details are updated on the network.

Thus C sitting in Germany is able to track the provenance of the mango pulp imported from India. Hence, helping the acceptance of Indian produce globally.

Blockchain need not only store data related to the cost of the yield, but there can be other information that can be used by the farmers. Blockchain can be used to track Farmers data, Seed quality data Soil moisture data, Climate and environmental data , harvest and yield data, demand and sale price data, temperature at which the yield is sold, how it is being transported, tracking crops. This allows putting better information not only in the hands of the farmers, retailers but also the consumers.

This gives better and fruitful information top farmers for a better produce with conducive environment. It is also beneficial for the consumers as they know the origin of the yield

For eg – Ripe. Io is a start-up that uses Blockchain in agriculture. The start-up tracked 200 tomatoes 20 different plants. Sensors were used to record the temperature, humidity , light , water and air, in order to get a good yield. As the tomatoes were being loaded onto the truck, another set of sensors logged the humidity and temperature at which they were stored and also tracked the distance being covered.

Advantages of Blockchain in the Agriculture Supply Chain : A Blockchain traces the crops from the very planting of seeds to harvest and storage to delivery of the crop. This shows the farmer if he has got the right price for the crop. Also these records are secure, doesn't lead to double counting. The status of all your crops is available in real time.

Good quality produce - Farmers can ensure good quality of produce by getting the crop inspected and insured through the Blockchain and even

manage the money exchange, including instant payment, via the Blockchain. Their platform promises real-time transactions, payments, and access to farmers to get maximum price for their crops.

Traceability does not just mean tracking the growth of crops. It also includes sensors in/on field so that records of soil quality, weather, farming practices, seed type, humidity and water required can be stored.

Transparency in the Blockchain will allow the participants to remove poor processes. Hence ensuring proper and ideal conditions not only in the farm but also in the market. Hence Food safety can be taken care of. This could save millions of lives, money and time.

Traceability of Blockchain can also reduce hoarding, black marketing of food, Food fraud and false labelling on eatables.

Financial rewards- The market of pesticides is worth more than \$35 billion per year. A huge volume of these chemicals gets washed away or discharged into bodies of water that are used for drinking, cooking, and/or bathing. By Incentivizing Sustainable Practices, Blockchain can motivate the farmers to use more organic and sustainable farming methods and practices, so as to ensure soil fertility. Financial rewards can make the most impact.

Mobile Remittance for Small Farmers- Small and marginal farmers face a lot of hardships due to unpredictable changes in the weather, pest infestation. These uncertainties can be reduced by real time payments for goods and services. Transparency, micro-insurance, Inspection of crops is certain activities which can be done through Blockchain. These will further help the cause.

Blockchain opens up new markets for the farmers - Earlier farmers could only connect with a few middlemen and they had to accept whatever the middlemen offered them in exchange of their produce. But With Blockchain, now the farmers can have an access to a large number of trusted retailers, without the need for a middleman.

The ultimate agenda is

1. to provide the farmers with basic financial services
2. Provides them with mobile finance
3. Digital Identity
4. Increase farmer income
5. Enable access to Insurance and Loan
6. Access to new products and services
7. Empowerment of small farmers
8. A better life for families and local community.

Conclusion : A Blockchain is very helpful in agriculture. All these features help networks (like farmers, retailers, consumers) to record and share information with utmost security, transparency and speed. The data that gets entered into is visible to every person (node) in the Blockchain. Every node has the right to either authenticate or reject the information. Once the data gets validated, it gets recorded into blocks, which gets recorded in a chronological order and cannot be altered.

Certain ways in which Blockchain can help farmers further in the future :-

Blockchain can be the ideal technology to create fractional ownerships of assets and so 11 farmers can own 1 tractor which reduces the burden on each one of them. Not only is this but the provenance of the tractor also permanently recorded on the network which cannot be tampered with.

The govt. all over the country is trying to digitize land. The problem is that even if it is digitized someone can still hack it or change the name or take the ownership. If the land is digitized, one can only know who it belongs to and not who it belonged to and what was the provenance of that land. Blockchain can solve this problem as it can also ascertain the provenance. Andhra Pradesh has

already started doing so in India with an initiative called Mee Bhoomi. They have started moving their agricultural land recorded to Blockchains. This will benefit the small farmers.

The Blockchain can be utilized for consolidation of the small plots of lands into larger plots. Then these lands can be used optimally by using tractors and harvesters and so on. Blockchain can actually take care of whose land, how much input and output happened on whose land. There is massive transformation can take place through this technology.

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Information Technology Role as Accelerator of Industry and Trade

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ABSTRACT : Information Technology has become an important emerging sector of the Indian economy today as it plays a vital and integral part of every business plan. Modern businesses are not possible without the help of Information Technology as it helps in creating a competitive advantage for a firm. Industries are using Information Technology to improve the way they design and manage customer relationship and to coordinate multiple activities in the business world. It linked the business with their suppliers, customers, manufacturers, business partners etc. and provides them better services and products. This paper examines the impact of Information Technology on Industry and trade in the evolution of India's economy.

Keywords - Information Technology, Business, Industry.

INTRODUCTION : Information Technology has played a key role in putting India on the global map. IT industry in India has been one of the most significant contributors for the Indian economy. The industry has played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and provides a world class technology and business services.

With the introduction of IT the business world has changed as communication is essential to the business world and information technology gives the resources to the company that it needs to communicate quickly and effectively. Using computers and software, businesses ensure that their departments run smoothly and have the ability to view changes in the global markets far faster than they usually do. They use information technology in a number of different departments including human resources, finance, manufacturing and security.

IT has allowed businesses to keep up with the supply and demand as consumers grow more

anxious to have their items instantly. Along with making businesses more cost effective, IT allows businesses to be within reach of consumer. Using IT, businesses like Amazon are working to help busy consumers do their grocery shopping. Businesses have become more cost effective for both themselves and their consumers using IT. By streamlining, businesses increase their productivity. This pays out to greater profits, which allows companies to offer better pay and less working conditions.

For many companies, email is the principal means of communication between employees, suppliers and customers. Email was one of the early drivers of the Internet, providing a simple and inexpensive means to communicate. Over the years, a number of other communications tools have also evolved, allowing staff to communicate using live chat systems, online meeting tools and video-conferencing systems. Voice over internet protocol (VOIP) telephones and smart-phones offer even more high-tech ways for employees to communicate.

With improvements in IT, globalization has increased communication has become an easier, cheaper, and faster system with the help of information technology. The world is brought closer, and the world's economy is quickly becoming a single interdependent system. Information can be shared quickly and easily from all over the globe, and barriers of linguistic and geographic boundaries can be torn down as people share ideas and information with each other.

Information technology has also created new jobs. Programmers, systems analyst's, hardware and software developers, and web designers all owe their jobs to information technology. Without such advances, these jobs would not exist.

INDUSTRY : An industry is a group of manufacturers or businesses that produce a particular kind of goods or services within an

economy. Industry is often named after its principal product; for example, the auto industry. For statistical purposes, industries are categorized generally according to a uniform classification code such as Standard Industrial Classification (SIC).

In modern economies, there are dozens of different industry classifications, which are typically grouped into larger categories called sectors. Expansion of trade and commerce depends on industrial growth.

Classification of Industries

There are various types of industries. These are mentioned as follows:-

1. **Primary Industry** : Primary industry is concerned with production of goods with the help of nature. It is a nature-oriented industry, which requires very little human effort. E.g. Agriculture, farming, forestry, fishing, horticulture, etc.

2. **Genetic Industry** :Genetic industries are engaged in re-production and multiplication of certain species of plants and animals with the object of sale. The main aim is to earn profit from such sale. E.g. plant nurseries, cattle rearing, poultry, cattle breeding, etc.

3. **Extractive Industry** : Extractive industry is concerned with extraction or drawing out goods from the soil, air or water. Generally products of extractive industries come in raw form and they are used by manufacturing and construction industries for producing finished products. E.g. mining industry, coal mineral, oil industry, iron ore, extraction of timber and rubber from forests, etc.

4. **Manufacturing Industry** :Manufacturing industries are engaged in transforming raw material into finished product with the help of machines and manpower. The finished goods can be either consumer goods or producer goods. E.g. textiles, chemicals, sugar industry, paper industry, etc.

5. **Construction Industry** : Construction industries

take up the work of construction of buildings, bridges, roads, dams, canals, etc. This industry is different from all other types of industry because in case of other industries goods can be produced at one place and sold at another place. But goods produced and sold by constructive industry are erected at one place.

6. **Service Industry** : In modern times service sector plays an important role in the development of the nation and therefore it is named as service industry. The main industries, which fall under this category, include hotel industry, tourism industry, entertainment industry, etc.

TRADE : Trade refers to buying and selling of goods and services for money or money's worth. It involves transfer or exchange of goods and services for money or money's worth. The manufacturer or producer produces the goods, then moves on to the wholesaler, then to retailer and finally to the ultimate consumer.

Trade is conducted not only for the sake of earning profit; it also provides service to the consumers. Trade is an important social activity because the society needs uninterrupted supply of goods forever increasing and ever changing but never ending human wants. Trade has taken birth with the beginning of human life and shall continue as long as human life exists on the earth. It enhances the standard of living of consumers. Thus we can say that trade is a very important social activity.

Trade can be divided into following two types:-

1. Internal or Home or Domestic trade.
2. External or Foreign or International trade

INFORMATION TECHNOLOGY :Information Technology is known as "I.T." and it refers to anything related to computing technology, such as networking, hardware, software, the Internet, or the people that work with these technologies. Many companies now have IT departments for managing the computers, networks, and other technical areas of their businesses. IT jobs include computer programming, network administration, computer

engineering, Web development, technical support, and many other related occupations. Since we live in the "information age," information technology has become a part of our everyday lives. A few of these definitions and their sources are included below:

The international foundation for information technology provides three definitions for information technology.

1. The technology used for the study, understanding, planning, design, construction, testing, distribution, support and operations of software, computers and computer related systems that exist for the purpose of data, information and knowledge processing.

2. The IT industry that has evolved to include the study, science and solution gets for all aspects of data, information and knowledge management and or processing.

3. The organization in an enterprise or business that is held responsible and accountable for the technology used for planning, design, construction, testing, distribution, support and operations of software, computers and computer related systems that exist for the purpose of data, information and knowledge management or processing.

The Information Technology Associate of America (ITAM) defines information technology as:

“The study design, development, information, support or management of computer based information systems, particularly software applications and computer hardware”. IT deals with the use of electronic computers and computer software to convert, store protect, process, transmit and securely relative information.

IT is the technology (hardware & Software) requires for the processing of data and other information. IT is a term that encompasses all forms of used to store, exchange and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms including those not yet conceived). It is a convenient term for including both telephony and computer technology in the same word. It is the technology that is driving what has often been

called “the information Revolution”.

OBJECTIVES OF THE STUDY : The study has the following as its specific objectives:

1. To study the possible role of Information Technology in broad based economic development of India.
2. To measure the role of Information Technology in improving Business processes.
3. To examine the role of Information Technology in achieving growth efficiently in various industries and trades and maintaining a competitive advantage in the market place.
4. To study the relationship between Information Technology and Indian Economy
5. To study the contribution of government in the promotion of IT sector for the development of economy.
6. To review the growth of IT sector in the Indian economy.

ROLE OF INFORMATION TECHNOLOGY ON THE OVERALL GROWTH OF THE ECONOMY : The IT sector has served as a fertile ground for the growth of a new business class with innovative corporate practices and has been instrumental in reversing the brain drain, raising India’s brand equity and attracting foreign direct investment (FDI) leading to other associated benefits.

IT more than any other industry or economic facet, has increased productivity, particularly in the developed world, and therefore is a key driver of global economic growth. The IT sector has emerged as a major global source of both growth and employment. Even a single day without computers leaves us feeling paralytic. Information Technology (IT) has made us completely dependent for even the simplest day to day task. The recent incident of system failure at key Swiss government ministries has brought Geneva to a

standstill. This proves how information Technology has drastically transformed the way we carry out day to day activities. It is dynamic and vast and its absence for a day leaves a severe effect on us. Internet being the simplest form of IT has a major role to play in our daily lives. It has become the backbone of every organization as well as house hold.

1. It has entered almost all industry verticals for instance, railways, airways and sea networks are connected with the help of IT, as information plays a vital role in the smooth functioning in those sectors and lack of even for a second can create havoc.

2. Banking is another sector that depends a lot on IT. From carrying out important transaction to storage of confidential data, IT has made several complicated and time consuming work a lot simpler and faster with considerable amount of safety. In fact e-commerce has made on line banking as well as online purchasing and selling of commodities and services much easier and faster adding to the convince of the common man. By simply searching on the internet one can order anything with just a click of the mouse button.

3. Similarly, the travel and tourism sector all over the world has benefited a lot from the development of IT industry. One can avoid the crowd and lengthy procedures of booking air or railway or bus tickets. One can choose from the best deals and book tickets online from the comfort of their living room.

4. IT plays a major role in simplifying various organizational processes. Most business enterprises rely on the power of information technology for carrying out their daily tasks conveniently and faster. IT makes complex procedures easier, faster and also helps a lot in avoiding redundancy. It lets individuals' access necessary data ensuring the safety of confidential ones.

5. The field of education has also been blessed with the benefits of IT. Online application to universities, checking results study materials and much more has made the reach of education broad and easier.

The contribution of India's IT industry to economic progress has been quite significant. The rapidly

expanding socio-economic infrastructure has proved to be of great use in supporting the growth of Indian information technology industry.

The flourishing Indian economy has helped the IT sector to maintain its competitiveness in the global market. The IT and IT enabled services industry in India has recorded a growth rate of 22.4% in the last fiscal year. The total revenue from this sector was valued at 2.46 trillion Indian rupees in the fiscal year 2007. Out of this figure, the domestic IT market in India accounted for 900 billion rupees. So, the IT sector in India has played a major role in drawing foreign funds into the domestic market.

The growth and prosperity of India's IT industry depends on some crucial factors. These factors are as follows:

1. India is home to a large number of IT professionals, who have the necessary skill and expertise to meet the demands and expectations of the global IT industry.

2. The cost of skilled Indian workforce is reasonably low compared to the developed nations. This makes the Indian IT services highly cost efficient and this is also the reason as to why the IT enabled services like business process outsourcing and knowledge process outsourcing have expanded significantly in the Indian job market.

The emergence of Indian information technology sector has brought about sea changes in the Indian job market. The IT sector of India offers a host of opportunities of employment. With IT biggies like Infosys, Cognizant, Wipro, Tata Consultancy Services, Accenture and several other IT firms operating in some of the major Indian cities, there is no dearth of job opportunities for the Indian software professionals. The IT enabled sector of India absorbs a large number of graduates from general stream in the BPO and KPO firms. All these have solved the unemployment problem of India to a great extent. The average purchasing power of the common people of India has improved substantially. The consumption spending has recorded an all-time high. The aggregate demand has increased as a result. All these have improved the gross production of goods and services in the Indian economy. So in conclusion it can be said

that the growth of India's IT industry has been instrumental in facilitating the economic progress of India.

IT-Enabled Services : IT-enabled services are not necessarily related to the production of software or IT in general, but use IT to make the provision of services possible. Customer call centers are one example, where Indians have been training to speak with American accents, in order to deal with customer queries from the US. Accounting services are a second example. Yet another, more long-standing market segment is that of medical transcription. NASSCOM provides a categorization of 10 different types of IT-enabled services, varying widely in terms of skills required and value added..The ten categories overlap to some extent, but they give a good idea of the scope of the industry.

- Customer interaction services
- Business process outsourcing
- Management back office operations
- Insurance claims process
- Medical transcription
- Legal database
- Digital content
- Online education
- Payroll/HR Services
- Data Digitization/GIS
- Web site Services

Supply of Skills : A major reason for the success of India's software industry is the large supply of labor with some IT skills. India graduates perhaps about 125,000 engineers a year, second only to the US worldwide. However, not all these engineers go into the IT industry, and not all IT professionals have engineering or computer science qualifications – this being true of the US as well. India's stock of IT professionals is estimated at over 400,000, so that IT industry revenues per IT professional (assuming that all of them work in the industry, which is unlikely) are about \$30,000. However, future growth will come in IT-enabled services; the additional employment may come in areas where different, easier-to-acquire skills are needed.

Whether growth comes in revenue per employee or number of workers, there are implications for training. Interestingly, the task of training workers for IT-enabled services such as call centers is much easier, since the universities produce large numbers of graduates with some familiarity with the English language and Western culture. In all areas of IT and related services, however, increased private and public investment has occurred. IT industry investment itself plays a role, since the industry has a strong interest in growing the available supply of IT professionals.

IT-BPO Industry : The numbers on India's IT industry tend to be well publicized by the industry association, NASSCOM (www.nasscom.org). NASSCOM is a global trade body with over 1500 members, of which over 250 are companies from the United States, UK, EU, Japan and China. NASSCOM's member companies are in the business of software development, software services, software products, IT-enabled/BPO services and e-commerce. This association represents software (including services and products), as well as business process outsourcing (BPO) but excludes hardware manufacture.

E-Commerce : E-commerce can be interpreted broadly to include business-to-business (B2B) transactions, or even internal processes. B2B transactions are part of the supply chain, and management of the supply chain is also a weak link in India.

Goods that are expensive to stock in full variety, like books and music, are natural candidates for online selling. One already finds a wide range of sites for Indian e-commerce, either very broad-based, like Flipkart, or specializing in specific ranges of goods, such as apparel, shoes, electronics or household items. These online sites, to some extent, fill the gap of the absence of sophisticated department store chains, which are relatively weak or scarce in India (with the partial exception of the southern part of the country).

E-Governance: IT has a dual role to play in the case of governance and administrative reforms aimed at increasing efficiency and effectiveness. First, the use of IT for improving internal government processes is important, through its potential to increase the efficiency of these processes. For example, the costs can be lowered, and accuracy improved, of data entry for tasks such as the preparation of electoral rolls and lists of welfare eligibility. Second, and perhaps more importantly (because it can hasten the first change), transparency, accountability and responsiveness can all be enhanced by using IT to alter the citizen-government interface.

Government Initiatives: In order to alleviate and to promote Indian IT industry, the Government of India had set up a National Task Force on IT and Software Development to examine the feasibility of strengthening the industry. Venture capital has been the main source of finance for software industry around the world. In line with the international practices, norms for the operations of venture capital funds have also been liberalized to boost the industry.

The Government of India is also actively providing fiscal incentives and liberalizing norms for FDI and raising capital abroad. High inflow of FDI in the IT sector is expected to continue in coming years. The inflow of huge volumes of FDI in the IT industry of India has not only boosted the industry but the entire Indian economy in recent years.

Future prospects : Globalization has had a profound impact in shaping the Indian Information Technology industry. Over the years, verticals like manufacturing, telecom, insurance, banking, finance and lately the retail, have been the growth

drivers for this sector. But it is very fast getting clear that the future growth of IT and IT enabled services will be fuelled by the verticals of climate change, mobile applications, healthcare, energy efficiency and sustainable energy.

The near future of Indian IT industry sees a significant rise in share of technology spend as more and more service providers both Indian and global target new segments and provide low cost, flexible solutions to customers.

By 2015, IT sector is expected to generate revenues of USD 130 billion (NASSCOM) which will create a transformational impact on the overall economy. IT spending is expected to significantly increase in verticals like automotive and healthcare while the government, with its focus on e-governance, will continue to be a major spender.

However, to achieve this growth, the sector has to continue to re-invent itself and strive for that extra mile, through new business models, global delivery, partnerships and transformation. A collaborative effort from all stakeholders will be needed to ensure future growth of India's IT-ITeS sector. We will need to rise up to the new challenges and put in dedicated efforts toward providing more and more of end-to-end solutions to the clients to keep the momentum going.

SUMMARY AND CONCLUSION : This paper has highlighted the role of Information Technology on the modern business environment. The evolution of Information Technology has reached a turning point with the development of the Internet. Access to the Internet today by individuals, businesses, and institutions alike has created a global market for Internet service and has spurred an increase in productivity in the technological communication field. Information Technology has improved small-scale business enterprises in India. The impact of technology on developed markets over recent years has been immense and has focused on providing added value to customers through new and improved functions and features. The industries of the future will emphasize application of information technology on the production floor to improve productivity and efficiency, quality and competitiveness.

In the modern world with ever-developing sophisticated facilities and services, the rate of

information exchange determines the rate of successes or failures in the corporate world.

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¹⁵ See Business Week (2001). However, Aggarwal (2001) gives a substantially lower figure of 55,000 engineering graduates annually, excluding private institutes and Masters of Computer Applications (MCA). Arora and Arunachalam (2000) estimate an overall figure, including MCAs and graduates of informal training institutes, of close to 140,000 per annum. Kapur (2002) quotes World Bank estimates of 160,000 graduates and diploma holders in engineering and technology in the late 1990s. See also Arora et al (2001a, 2001b) and Saxenian (2001).

¹⁶ See Arora et al (2000), as well as Heeks (1996) and Desai (2000) for further discussion.

¹⁷ Data from NASSCOM, reported in CCI Business Bulletin, February 23-March 1, 2002, <http://www.ccindia.com/bulletin.html>.

¹⁸ This uses the revenue figure from Table 1, for the Indian IT industry, and is overstated to the extent that it excludes some types of employees. Arora et al (2001a) construct a lower estimate of \$15,600 for 1998-99 (their Table 1).

¹⁹ The implication is that changes in the product-service mix toward that involving higher value-

added tasks would be associated with these improvements, resulting in increased productivity.

²⁰ See Arora and Athreye (2002) and Kapur (2002) and the references therein. The former paper emphasizes the regional concentration of engineering colleges in India.

²¹ IT industry figures include over \$400 million of IT training revenues, for example.

6. Information Technology and its Role in India's Economic Development: A Review*

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Revised April 2014

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Current and Future Applications of Block Chain Technology

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Abstract :- A lot of changes have been witnessed in the way finance, accounting, banking, insurance, trading, exchange, investment, purchase and payment is being handled. Also, the way the accounting records are maintained and managed using sophisticated IT systems. There is a huge demand for the requirements on the security and data integrity.

Block Chain technology has the potential to impact all record keeping processes, including the way transactions are initiated, processed, authorized, recorded, and reported. It provides real time record keeping, transparency and solves security issues by maintaining anonymity and creating accounts which cannot be forged. The research paper aims to explore and study the potential of block chain technology in various applications across different domains for future.

Key words :- Block chain Technology, finance, accounting.

Introduction :- Blockchain is a distributed, shared and immutable digital ledger that keeps a record of all transactions that take place across a peer-to-peer network. It helps to improve the overall business reach by cutting out intermediaries while offering greater transparency and traceability of the business processes.

It is a decentralised (stored in multiple places) record of transactions, also known as a ledger. It is distributed among different entities (nodes) across a network who have access to copies of the record. Participants add to this shared ledger by recording information about transactions (information change), which are validated and accepted by users based on a consensus. Transactions are bundled together into a data block, which undergoes encryption, resulting in a unique signature for each block

known as a hash. These blocks are then ordered sequentially into a chain of blocks, with each block containing the previous block's hash, making it tamper proof. The blocks are immutable, as altering a single piece of data would result in a different hash value, making the change evident to the block chain's users and resulting in the transaction being rejected. The nodes validate the transaction and the user's status using known algorithms.

Objective :-

1. To understand about block chain technology.
2. To know the current and future application which are build using block chain technology

Research Methodology :- The paper uses secondary data from research paper, various websites, newspapers and reports.

Block chain Technology is applied across various domains, government agencies, cross industry and financial area.

1. Block chain Technology in Financial Sector

1.1 Banking :- A disruptive innovation which is changing the banking sector globally is Block chain Technology (BCT).Leveraging the distributed ledger technology, a consortium of India's eleven largest banks including ICICI Bank, Kotak Mahindra Bank, HDFC Bank, Yes Bank, Standard Chartered Bank, RBL Bank, South Indian Bank, and Axis Bank has launched the first India's first block chain-linked funding initiative for small and medium enterprises (SMEs) to tackle the problems of bad debts and defaulters. Block Chain Solutions bring operational efficiency for bank by saving the cost of reconciliation for bank and preventing the losses arising due to fraud.

1.2 Trade and Finance :- A single block chain will embody all of the mandatory data in one digital document, which is updated nearly instantly and viewable by all members on the network at the same time. Among the simplest of block chain's blessings square measure the dashing of dealing settlement time (which presently takes days), increasing transparency between all parties, and unlocking capital that would otherwise be tied up waiting to be transferred between parties in the transaction.

The Society for Worldwide Interbank money Telecommunication (SWIFT) is exploring the employment of block chain in trade finance. In India, Infosys, the second largest software service provider is working on building shared block chain platform for trading and finance which is finacle.

1.3 Crypto currency :- Block chain forms the bedrock for crypto currencies like Bitcoin. Currencies like the U.S. dollar are regulated and verified by a central authority, usually a bank or government. Under the central authority system, a user's data and currency are technically at the whim of their bank or government. If a user's bank collapses or they live in a country with an unstable government, the worth of their currency may be in danger. These are the worries out of which Bitcoin was borne.

By spreading its operations across a network of computers, block chain permits Bitcoin and alternative crypto currencies such as Ethereum, Stellar etc to operate without the necessity for a central authority.

This not solely reduces risk however additionally eliminates several of the processing and transaction fees. It also gives those in countries with unstable currencies a more stable currency with more applications and a wider network of individuals and institutions they can do business with, both domestically and internationally.

1.4 Digital Wallet and Payment :- Block chain is proving to be an innovative and effective way for making secured, transparent and fastest payment gateway for financial institutions. It enables them

to make their own digital payment wallet and make the payment at ease.

1.5 Insurance :- Processing of claims can be frustrating. Insurance processor have to intervene through fraudulent claims, fragmented data sources, or abandoned policies for users.

Since the technology and style of a block chain is generally believed to be significantly secure, the integration of block chain into insurance companies' databases may help cater to the sector's need for data integrity and management.

It is reportable that a syndicate of the fifteen leading Indian Life Insurers have partnered with a world technology firm, to develop a block chain solution facilitating cross-company data sharing for the specific purposes of reducing fraud and money-laundering in the sector

1.6 Anti-Money Laundering and Know Your Customer :- Block chain solutions based on AML/KYC are effective. Both are labor intensive activities. However by applying block chain, the costs can be reduced while monitoring and analysis effectiveness increase exponentially. From analysing transactions to doing a background check, everything will be done and keep on the block chain.

2. Block chain Technology In different Domains

2.1 Agriculture :- Block chain application can play a vital role in solving many agro-related problems with the rise of consumer awareness towards food safety. Consumer demand the information related to the food they are gobbling up as they are more prone to food allergies and food-related illness as they were 25 years ago. With block chain, the data management across a complex network that includes farmers, brokers, distributors, processors, retailers, regulators, and consumers gets streamlined and apparent. Improved data sharing can also help reduce the problems of food waste and better remuneration being paid to the neutral adding the bigger quantity useful.

2.2 Health Care :- Globally, block chain has gained popularity in offering solutions for health data management and health information exchange. Estonia's adoption of block chain based electronic health records (EHRs) is worth mentioning. Some key statistics indicating the success of Estonia's block chain-enabled initiatives are:

100% electronic billing in healthcare, 99% of prescriptions is digital, 99% of health data digitized, 99% of patients have a countrywide digital record.

The stakeholders of Indian healthcare ecosystem are currently at various stages of planning, designing, implementing, and adopting a block chain-based solution to mitigate some of their key challenges. There is participation from both private and public healthcare systems to map health information such as health summary, vitals, prescriptions and reports to the respective unique citizen ID stored on the block chain platform.

2.3 Energy :- The energy industry is likely to find many uses for block chain technology. Transformational examples include enabling the operation of self-managing utility grids and facilitating peer-to-peer energy exchanges – individual households could sell surplus energy (self-generated by solar panels) to their neighbors. In addition, there are many near-term examples of process improvements that could help energy companies to run more efficiently and save money.

An Australian startup, Power Ledger, has created a neighborhood marketplace to sell surplus renewable energy through crypto currencies.

The block chain-based system permits the sale of surplus energy generated at residential and business developments connected to existing electricity distribution networks, or within micro grids. This empowers renewable energy asset owners to decide who they want to sell their surplus energy to and at what price, and allows for each unit of electricity to be securely tracked from the point of generation to the point of consumption.

2.4 Transportation and Logistics :- Block Chain technology enables data transparency and access among relevant supply chain stakeholders, by the intrinsic security mechanisms and by creating single source of truth. Moreover, block chain can achieve cost savings by powering leaner, additionally automated, and error-free processes. Provenance tracking of goods can enable responsible and sustainable supply chains at scale and help to tackle product counterfeiting.

Additionally, block chain-based solutions provide potential for brand new supplying services and additional innovative business models there by optimizing the flow of physical goods as well as the complex flow of information and financial transactions.

3. Block chain Technology uses for Government

3.1 Taxation :- Block chain's core attributes mean that it has significant potential for use in tax such as transparency, control, security and real-time information.

While block chain isn't the cure all for the legal system, it could be applied in a number of areas to reduce the administrative burden and collect tax at a lower value, helping to narrow the tax gap

3.2 Supply Chain, Public Distribution System and Subsidiary System :-

Block chain is a probable answer to cater to the present issue of food security .The idea to implement Block chain in Food Corporation (FCI) of India will not only change the way of how the FCI manages the supply chain but also help in managing major events of wastage and proper management of food grain. Through the block chain network it can view the complete history from procurement till the point food reaches the consumer thereby helpful in finding out in the event of adulteration

By actually getting the share of food for which they have rights to be purchased and consumed the targeted audience in the Public Distribution System will also be benefitted.

Moreover, the distribution and delivery of subsidies will become additional clear leading to the targeted disbursement of subsidies plugging pilferages within the existing system.

3.3 Land Registry :- Land registering for sale and purchase of land is a very cumbersome process and is most susceptible to fraud. Block chain can make all kinds of land recording more efficient and accessible as the data recorded is publicly available bring complete transparency in the system.

India state Andhra Pradesh were the first movers in this space and have partnered with Swedish startup Chroma Way to build block chain solution for land registration and record keeping. This will result in huge cost savings for the government as recordkeeping is a costly and labour intensive process.

4. Block chain Technology benefits across different industry

4.1 Accounting Industry :- Block chain has the potential to boost the accounting profession by reducing the costs of maintaining the ledgers, and providing absolute certainty over the ownership and history of assets. It also enhances efficiency by easily reconciliation of ledgers.

4.2 Auditing :- It will change the way the auditor operate. Auditor can get continuous and real-time access to information in a standardized manner. This saves a lot of time and resources required for retrospective investigation.

4.3 Smart Contract :- A smart contract, referred as a crypto contract, is a computer program that directly controls the transfer of digital currencies or assets between parties underneath bound conditions. . It not only defines the rules and penalties related to an agreement but it can also automatically enforce those obligations.

Block chain is appropriate for storing smart contracts because of the technology's security and immutability and flexibility thereby helping to make business and other transactions more secure, efficient and cost-effective.

Benefit to Health Care: Automating healthcare payment processes using smart contracts can reduce overbilling and prevent fraud.

Benefit to Music Industry: The music industry could record the ownership of music in the block chain, and then deploy a smart contract to ensure royalties are paid when the music is used for commercial purposes.

Benefit to Automobile Industry: Smart contracts and the block chain could benefit the automobile industry by storing readily available information about vehicle maintenance and accident and ownership history.

4.4 Marketing :- Block chain could change the marketing industry in the following ways. There would be removal of middleman in digital advertising. Also, privacy concerns will be resolved and advertiser trust will increase. Moreover, the fraud verification industry will grow, advertising will become more transparent, and influencers will become fewer in number but better in quality.

Conclusion :- Block chain technology is a distributed share ledger that allows the transaction to be stored in a permanent unbreakable chain that can be viewed by the parties in transaction .It has the potential to shape and shift the nature of various sectors. It offers incredible opportunities many of them unrealized, for accounting and finance professionals. If the standards are adhered to it can become a powerful tool for improving the businesses , conducting fair trade, democratizing the global economy, and helping support more open and fair societies.

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Efficacy of Aqueous and Ethanolic Extracts of Some Medicinal Plants Traditionally Used By Tribes of District Guna, Madhya Pradesh, India for Potential Antibacterial Screening

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ABSTRACT :- The present study was undertaken to investigate the antibacterial screening of some traditionally used plants by tribes of district Guna, Madhya Pradesh, India. Antibacterial screening of five traditional plant extracts were evaluated against four bacterial strains. The collected traditional plants were used in folk medicine in the treatment of various diseases. All the tested plants, *Acacia arabica*, *Butea monosperma*, *Cassia fistula*, *Cassia tora* and *Delonix regia* showed antibacterial screening against *Staphylococcus aureus*, *Bacillus cereus*, *Escherichia coli*, *Salmonella typhimurium* and *Streptococcus pyogenes* at different concentrations of 100, 200 and 400 mg / disc. Among the tested plant extracts, ethanolic extracts exhibited a higher degree of antibacterial screening as compared distilled water extracts. The ethanolic extracts of *Acacia arabica* and *Cassia fistula* were most active against tested bacterial strains i. e. *Staphylococcus aureus* and *Salmonella thyphimurium*.

INTRODUCTION :- The main aim of the present study is to collect information on plant species used traditionally for the treatment of various infectious diseases especially bacterial diseases in District Guna, Madhya Pradesh for their antibacterial screening.

There is global resurgence in the use of herbal preparations and in some developing countries like India; it is being gradually integrated into the primary and secondary health care systems. Nearly all societies have used herbal materials as sources of medicines and the development of these herbal medicines depended on local botanical flora. Several plants are

indicated in folk and other traditional systems of medicines as anti- infective agents.

Growing misuse of antibiotics and chemotherapeutic agents leading to drug resistance is now pushing a considerable proportion of people in both developed and developing countries to the use of herbal medicines. The scientific literature is full of reports of antimicrobial activity of plants and are known to contain innumerable biologically active compounds which possess antimicrobial properties (Erdemeier et al., 1996; Hassan and Ahmed, 1996; Darokan et al., 1999; Cutter, 2000; Babu et al., 2002; Samar et al., 2014; Agrawal et al., 2014; Agrawal et al., 2013; Agrawal et al., 2012; Agrawal et al., 2007; Parekh et al., 2005; Prashanth et al., 2001; Saxena et al., 2005).

Rural communities in particular tribes of Guna District, Madhya Pradesh, depend on plant resources mainly for herbal medicines, food, forage, construction of dwellings, making household implements, sleeping mats, and for fire and shade. The use of medicinal plants as traditional medicines is well known in rural areas of many developing countries (Samar et al., 2012).

In the present scenario of emergence of multiple drug resistance to human pathogenic organisms, this has necessitated a search for new antimicrobial substances from other sources including plants. Therefore, it is imperative to search for new, efficacious and safe antibiotics from natural sources to combat the menace of drug-resistant infections. It is expected that plant extracts showing target sites other than those

used by antibiotics will be active against drug-resistant microbial pathogens (Jain and Agrawal, 2019). In the present study, we have selected 05 Indian medicinal plants which are traditionally used by the tribes to treat various infectious diseases to be screened against human pathogenic bacteria.

MATERIAL AND METHODS

Collection of plant materials :- The Plants were collected from the various villages of Guna district in February, 2016 which was used for the treatment of infectious diseases by tribal peoples of Guna. The fresh five selected plants such as *Acacia arabica*, *bar nilotica*, *Butea monosperma*, *Cassia fistula*, *Cassia tora* and *Delonix regia* were collected based on both open and structured interviews with traditional healers, herbalists, Ayurvedic practitioners, Vaidhyas and Hakeems, local, tribal and rural people as well as presence of plants of family Fabaceae in the study area. The plants were identified and authenticated by Dr. P. N. Shrivastava, Ret. Prof., Department of Botany, S. S. L. Jain P. G. College, Vidisha, M. P., India. Voucher specimen has been deposited in the Herbarium of the Department of Botany, Govt. Girls (Nodal) P. G. College, Vidisha, M. P., India.

Preparation of extracts :- Plant extracts were prepared by Soxhletion method (Harborne, 1984). In order to get the extracts of selected medicinal plants, medicinal plant material (leaves) were dried under shade and ground into fine powder (40 – 60 mesh size). Then the ground material (weighed plant leaves, 100 grams) were extracted with ethanol and sterile distilled water (500 ml) with the help of Soxhlet apparatus. The extraction was continuous running for 48 hours approximately 8 – 12 cycles to get complete extraction. Then, obtained extract was filtered through Whatman filter paper No. 1 and concentrated in vacuo. After this, evaporation was carried out in a rotary evaporator between 30 – 40°C. Now, the obtained concentrated extract was completely free of organic solvents, lipids and other impurities. Further, the dried crude extracts were sterilized overnight by UV radiation and then

stored at 4°C in amber colour clean glass bottles. All these extracts were selected for further experimental work based on their antibacterial activity.

Preparation of Plants Derived Antibiotic Discs :-

The following doses were prepared to observe the antibacterial activity in vitro 100 mg / ml, 200 mg / ml and 400 mg / ml by using the standard formula:

$$X \text{ ml of the Stock Solution} = \frac{\text{Desired Concentration} \times \text{Final Volume}}{\text{Concentration of Stock Solution}}$$

Where,

X ml of the Stock Solution = Quantity of the stock solution to make the desired concentration.

Desired Concentration = 100 mg / ml, 200 mg / ml and 400 mg / ml.

Final Volume = 1 ml.

Concentration of Stock Solution = 400 mg / ml.

Both the crude extracts (ethanolic and aqueous) each 400 mg. were dissolved in 1 ml of Dimethyl Sulphoxide (DMSO) and were prepared various concentrations and then filtered by using membrane (pore size 0.47 µm). The discs of 6 mm diameter of Whatman filter paper No. 01 (Sterile blank) were impregnated into the concentrations i. e. 100 mg / ml, 200 mg / ml and 400 mg / ml of the each extracts. The final impregnated discs used for the sensitivity test were 100 mg disc⁻¹, 200 mg disc⁻¹ and 400 mg disc⁻¹. These impregnated discs were dried in incubator at 37 °C for 18 – 24 hours and after this stored in an amber colour glass bottle at room temperature until further use.

Bacterial strains :- In the present research work, common pathogens of infectious diseases were selected; *Staphylococcus aureus* (NCIM 2079), *Bacillus cereus* (NCIM 2155), *Escherichia coli* (NCIM 2064), *Salmonella typhimurium* (NCIM 2501) and *Streptococcus pyogenes* (NCIM 2608) procured from the National Collection of Industrial Microorganism (NCIM), National Chemical Laboratory (NCL), Pune, India. These cultures were maintained in the Laboratory for further study on nutrient agar (HiMedia). All cultures were sub-

cultured monthly and subsequently stored at 4°C.

Antibacterial Activity :- Disc diffusion method (Bauer et al., 1966) was used to test the antibacterial activity of the extracts against five bacteria. In this assay the bacterial suspension were spread on the Mueller – Hinton agar medium plates. Plants derived antibiotic discs (100 mg disc⁻¹, 200 mg disc⁻¹ and 400 mg disc⁻¹) were introduced on the surface of medium. Blank discs impregnated with DMSO and ethanol were used as a negative control and for comparative purpose and positive control, chloramphenicol (10 µg disc⁻¹) and gentamycin (10 µg disc⁻¹) (HiMedia) were used.

These plates were then kept at low temperature (4°C) for 24 hours to allow maximum diffusion of test samples. The plates were then

incubated at 37°C for 24 hours to allow maximum growth of the organisms. The test materials having antibacterial activity inhibited the growth of the bacteria and a clear, distinct zone of inhibition was visualized surrounding the disc. The antibacterial activity of the test agents was determined by measuring the diameter of zone of inhibition in millimeter by using meter scale. The experiment was carried out in triplicate and the average zone of inhibition was calculated.

RESULT AND DISCUSSION :- To observe antibacterial activity of the crude extracts in vitro experiments were conducted. The antibacterial activity and Zone of inhibition of ethanolic and aqueous extracts of selected medicinal plants and control is shown in Table.

Efficacy of various extracts of selected plants on bacterial strains.

| S. N. | Plant | Solvent | Conc. (mg / disc) | Zone of inhibition (in mm) ¹ | | | | |
|-------|------------------|----------|-------------------|---|-----|----|----|----|
| | | | | Sa ² | Bc | Ec | Sp | St |
| 01 | Acacia arabica | Ethanol | 100 | ++ | ++ | ++ | + | + |
| | | | 200 | ++ | ++ | ++ | + | + |
| | | | 400 | +++ | +++ | ++ | ++ | ++ |
| | | D. Water | 100 | + | + | + | -- | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | ++ | ++ | ++ | + | + |
| 02 | Butea monosperma | Ethanol | 100 | + | + | ++ | -- | -- |
| | | | 200 | + | + | ++ | + | + |
| | | | 400 | ++ | ++ | ++ | ++ | ++ |
| | | D. Water | 100 | -- | + | + | -- | -- |
| | | | 200 | + | + | ++ | + | + |
| | | | 400 | ++ | + | ++ | ++ | ++ |
| 03 | Cassia fistula | Ethanol | 100 | -- | + | + | ++ | + |
| | | | 200 | + | + | + | ++ | + |
| | | | 400 | ++ | ++ | ++ | ++ | ++ |
| | | D. Water | 100 | -- | -- | -- | + | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | ++ | ++ | ++ | ++ | ++ |
| 04 | Cassia tora | Ethanol | 100 | + | + | + | + | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | ++ | ++ | + | ++ | + |
| | | D. Water | 100 | -- | + | + | + | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | + | ++ | + | + | + |

| | | | | | | | | |
|----|---|----------|-----|----|----|----|----|----|
| 05 | Delonix regia | Ethanol | 100 | -- | -- | -- | -- | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | + | ++ | ++ | + | + |
| | | D. Water | 100 | -- | -- | -- | -- | -- |
| | | | 200 | + | + | + | + | + |
| | | | 400 | + | + | + | + | + |
| 06 | Chloramphenicol (10 µg disc ⁻¹) | | ++ | ++ | ++ | ++ | ++ | |
| 07 | Gentamycin (10 µg disc ⁻¹) | | ++ | ++ | ++ | ++ | ++ | |
| 08 | Control Blank Disc | | -- | -- | -- | -- | -- | |

¹-- = No ZOI, + = 5.0 – 9.9 mm, ++ = 10.0 – 14.9 mm, +++ = 15.0 – 20.0 mm.

²Sa = Staphylococcus aureus, Bc = Bacillus cereus, Ec = Escherichia coli, Sp = Streptococcus pyogenes, St = Salmonella typhimurium.

The above mentioned zone of inhibition reveal that the ethanolic extracts of all the plant species were more effective as an antibacterial agent against the selected bacterial strains. The inhibition zones in different concentration of crude extracts are being increased by increasing the concentration of extract. The antibacterial activities were assessed by the presence and absence of inhibition zones.

The results revealed that, in disc diffusion assay, all the extracts showed antibacterial activity with varying magnitudes against bacterial strains. The zone of inhibition above 5 mm in diameter was taken as positive result. Out of 05 ethno-medicinal plants tested for antimicrobial activity, all plant species showed antimicrobial activity by inhibiting one or more microorganisms.

From our results, it appeared that the crude extracts of all 05 traditional medicinal plants has good inhibitory effect against selected bacterial strains. Among the medicinal plants tested herein, Acacia arabica and Cassia fistula showed most promising antibacterial properties indicating the potential for discovery of antibacterial principles.

The antimicrobial studies of *A. nilotica* were performed by Saini et al., (2008) and

confirmed the presence of various plant metabolites in plant tissue. Similarly, the fresh plant parts of *Acacia arabica* is considered as astringent, demulcent, aphrodisiac, anthelmintic, antimicrobial, anti-diarrhoeal, with good nutritional value in Indian traditional medicine system (Rajvaidhya et al., 2012).

Gurav et al. (2008) reported that petroleum ether and alcoholic extract of *Butea monosperma* gum showed some antibacterial activity against various microbial strains such as *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus cereus*, *Salmonella typhimurium*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans* and *Saccharomyces cerevisiae*. Similarly, Pundir and Shreya, (2011) also concluded that the methanol extracts of *Mitragyna parvifolia* barks and *Butea monosperma* leaves were highly effective against all the four bacteria such as two Gram positive (*Staphylococcus epidermidis*, *Bacillus subtilis*) and two Gram negative (*Escherichia coli*, *Pseudomonas aeruginosa*).

Based on the investigations of Sama et al., (2012), methanol extract of root bark of *Delonix regia* showed effective activity against all bacteria. At the concentration of 100 mg / ml and 200 mg / ml, the extract showed maximum antimicrobial activity. Jahan et al., (2010) also showed that the average zones of inhibition of petroleum ether, carbon tetrachloride and dichloromethane soluble fractions of the crude methanolic extract of *Delonix regia*. The dichloromethane soluble fraction of the methanolic extract strongly inhibited the growth of *S. paratyphi*.

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U I J M S R

India's Product for the Tourism: An Appraisal

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Every industry offers something to its consumers so that the viability of the industry could be sustained. The Tourism industry is no exception to this dogma. It offers such products to the tourist to invite attraction of the targeted consumer. The Tourism Product is a collection of tangible and intangible components, including both the products of the industry, such as accommodation, transport and entertainment but also things such as accessibility, weather, value for money, contacts with local people and the extent to which expectations are realized.¹ In view of this, it becomes necessary to think about the extent to which the travel and tourism industry can influence a tourist's overall enjoyment of a holiday. In fact the tourism product is a tourism experience.² India has made rapid progress in energizing this sector since independence.

It was the first Five Year plan that tourism occupied certain focus of the policy makers in 1952.³ India, being a huge country has always been a source of attraction since ancient times. Max Mueller had described her as a paradise on the Earth, having contrasts from tropics to snows. India offers virtually all the elements of a tourist place worth visiting. Nature has endowed her with landscape beauty, flora and fauna. Besides she has also cultivated a rich and diverse culture not to find elsewhere. The tourist products of India may be enumerated as under:

The Scenic Beauty :- India is known for its scenic beauty in the world both for its variety and quality. She has a land frontier of 15200 kilometers and a coastline of about 6000 kilometers. Physically the mainland comprises four well defined regions namely, the great mountain zone, the extensive middle section of Indo-Gangetic Plain, the desert region and the Southern Peninsula.⁴ The Ladakh region of India matches the moonscape for its

desolate beauty. In the Kashmir valley, in Himachal Pradesh, in Uttar Pradesh Hills and in the North-Eastern Hills of the country, it seems that the nature has all the time been conspiring with the mountains, the air, the flora and fauna to create an enriching paradise that few people can forget. Our Himalayas occupy a major place in our songs and legends.⁵ Himalayas comprise three almost parallel ranges interspersed with large plateaus and valleys of some of which like Kashmir and Kullu valleys are fertile, extensive and extremely rich in scenic beauty. Some of the highest peaks in the world are found in this regions.⁶ The Indo-Gangetic plain is formed by the basins of three great river systems, the Indus, the Ganges and the Brahmaputra, which is very fertile.

Of the two desert regions of India, the great desert extends from the end of Rann of Kutch to beyond the Luni River North West. The Little desert extends from Luni River between Jaisalmer and Jodhpur in Rajasthan.⁷ The southern Peninsula is flanked on one side by the Eastern Ghats and on the other by Western Ghats. The coastal regions of Indian Ocean, Bay of Bengal and Arabian Sea are very wide and beautiful. Further, the southern tip of the plateau is formed by the Nilgiri Hills where the eastern and Western Ghats meet.⁸ In addition to this India is endowed with beautiful lakes, falls, wide valleys and beautiful sceneries to enjoy and appreciate.

Wildlife Reserves :- Earlier India was known as the destination of big-game hunters. 'Shikar' and 'Machan' were the vocabulary of tourists whose goal was trophies of Tigers and Elephants. Since then the government has taken a conscious policy decision to conserve nature's heritage. Government of India has launched Project Tiger and Project elephant for their conservation. We have many sanctuaries in India for animals and

birds separately. These reserves, with excellent facilities for tourists, are dotted across the land. In them the tourists can find wild bison, elephants, tigers, deer and other fauna.⁹

Adventure Sports :- India has towering mountains, clear skies, sultry seas sun washed beaches and tropical isles. These provide vast scope for adventure sports. We have Himalayan and Karakoram peaks to scale for the mountaineers.¹⁰ Trekkers can go to glaciers and glacial lakes. Skiing down a 6000 metres Himalayan slope is a great adventure sport. Further training centers have been opened up in these region. Shimla and Kullu Manali in Himachal Pradesh and Kashmir are such tourist centers, where department of Tourism has set up Institute of Skiing and mountaineering.¹¹ In the same way training centre for water Skiing is proposed at Gulmarg in Kashmir. These are helpful in obtaining a lot of foreign currency. The Himalayan Rivers offer matchless opportunities for water rafting.

Beach and Seaside Resorts :- The coastal and beach Resorts are the most popular tourist destination in several countries and represent a distinctive type of tourist development which is primarily due to their location along the sea shore.¹² A typical coastal resort comprises a beach, a promenade and a road beyond which stand rows of accommodations and other establishments, all parallel to one another. Amusements and entertainments are merely sidelines to the major attraction of the Sun, Sea and the Sand. The Mediterranean Club has set up a sea side village at Kovalam in Kerala.¹³ Our coastal panorama encompasses the wild Sundarbans, home of the Royal Bengal tiger, the magnificent lagoon of Chilka, mangrove swamps, riverine deltas and beaches with miles and miles of sand and swept by the Sun almost the whole year round.¹⁴ The beaches of Goa and Kerala are well known for their ambience. The secluded serenity, the breathtaking beauty and year round accessibility of the Indian beach resorts make them some of the most sought after beaches in the world. In addition we have the islands, which have the ingredients of the Sun and the Sea, fun and sport.¹⁵

Architecture :- Indian architecture is essentially of native origin and its civilization goes back more than five millennia. The oldest architectural remains of Mohenjodaro and Harappa, the imposing brick ramparts of Kausambi, Vaishali and Ujjain, the remains of Asoka's capital at Pataliputra are best examples of advanced level of architecture. We have beautiful cave temples at Ajanta and Ellora in Maharashtra. In Tamilnadu the Pallavas rock cut temples at Mahabalipuram and Chola's Brahadeeswara temple at Thanjavur are wonderful examples in this field.¹⁶ We can also find heavy use of sculptural decorations at the temples of repute. The Islamic period saw a highly sophisticated architecture emerging. Excellent piece of this architecture can be seen in Delhi, Agra and a host of other Indian cities even today.¹⁷ During the mughal period, architectural beauty and skill touched its zenith. The wonderful wonders like Taj Mahal, Qutub Minar and Fatehpur Sikari stand splendidly as a living testimony of India's great art and architecture in the world.¹⁸ In the modern period of Indian History the impressive buildings and Churches, which were constructed all over the country by the Britishers are another example of Indian craftsmanship.¹⁹ The Britishers brought their own designs and so did the French, Dutch and Portuguese.

Indian Crafts :- The legendary Vishwakarma is considered to be the first Artificer in India. India was having brisk trade with the civilized world both by land and sea and in the process carpets, spices, perfumes, jewellery and other such items found their way to South-East Asia, China, Rome, and Arabia. Rural art of India evolved enchantingly, captured in wall paintings and in traditional classics like Madhubani, Phulkari, Kalamkari etc. that have achieved international acclaim.²⁰ This is remarkable that one of the peculiar features of modern India is the survival of almost all the arts and crafts.

Performing Arts :- Music, dance and drama have always been an integral part of Indian life. Music developed from ancient times in India. Many singers in India were saints; the raga is the glory of

Indian music and is the basis of melody. Hindustani and Karnatik music are quite popular in India. The famous instruments are Sitar, Veena, Shehnai. Folk music in India is equally popular and flourishes to the full in the village side.²¹ Like music, dance is also much related to the Indian ethos. The dance forms of India have also been greatly influenced by religion and culture. Together with music it formed an integral part of esthetic perfection for the worship of Almighty Lord.²² Bharat Natyam, Kathakali are quite popular traditional dance forms. Kathak was patronized by the Muslim rulers in India. In addition to this the tourist also finds joy in watching folk and tribal dance forms of India. The Indian painting was also widely practiced art in Ancient India. Frescoes of Ajanta Caves painted by Buddhist monks, paintings at Ellora, Mughal paintings and the Kangra Valley School of painting are very popular till today, which become the source of attraction for the tourists.²³ In the field of Literature also India witnessed a wonderful developments. Epics like Mahabharat and Ramyana and the Krishna story as told in Bhagwat Purana constitute the core of Indian heritage of ancient wisdom, philosophy and literary traditions.

Fairs and Exhibitions :- Fairs and Festivals are part of Indian diverse culture. It is noteworthy that India's religious and ethnic diversity ensures that the major festivals of the World are celebrated in some part or the other or even in whole country.²⁴ Indian festivals are unique pageants of colours, revelry and devotion. Holi, Diwali, Mahashivratri Id-ul-fitr, Christmas, Easter, Buddh Purnima, Guru Nanak Jayanti, Mahavir Jayanti are to name a few such Festivals. Fairs such as Pushkar are already well known to tourists. Same is the case with Surajkund fair. Trade fairs organized by the government attract the tourists. Festivals of India in foreign countries, Upna Utsav, Crafts Festival, Kite festival, Mango festival, Elephant festival, etc. have become well known among the tourists, domestic as also international.²⁵ In addition to this India is a hub of Museums to showcase the cultural heritage of the country. Libraries have been successful in preserving the rich History and Culture of Indians and India.

From the above discussion it becomes clear that India has all the products of a fascinating tourist destination for the visitors domestic and abroad. The Visitors witness India's beauty, the rich and diverse culture, being a land of diverse customs, traditions, food, and architectural style. India's close connection with spirituality and land for all religion makes it a favorite destination for the tourists. As such, the success of the tourism industry depends on the quality and diversity of the country's tourism products. As long as they are in place, India's tourism industry has a bright future.

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