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## Reverse Mortgage-An Ideal Financials Product for Senior Citizen.

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### **Introduction**

One of the most important issues for many seniors today is how to secure their retired life and most importantly how to continue to live comfortably in their homes after retirement. Today seniors are living longer and the majority of them will be living in their own houses. At the same time, many are living on fixed incomes and/or on the proceeds of investments that do not meet their financial needs. Some require additional sources of income to cover day-to-day expenses, while others need cash to pay for more significant costs such as health care services, home repairs etc. In order to help the senior citizens especially in the evening of their life, keeping in mind these necessities, banks have developed a scheme styled as 'Reverse Mortgage' so that they live their life peacefully.

### **REVERSE MORTGAGE**

- A reverse mortgage is a loan available to senior citizens. Reverse mortgage, as the name itself suggests, is exactly opposite of a typical mortgage, such as a home loan.
- "A reverse mortgage is a loan available to senior citizen and is used to release the home equity in the property as one lump sum of multiple payments. The homeowner's obligation to repay the loan is deferred until the owner dies, the home is sold, or the owner leaves"

The analysis of definition provides some basic features of reverse mortgage products, these are

- The loan is available only to senior citizens owning a home
- The loan can be in the form of lump-Sum or multiple payments like annuity etc
- Homeowner does not have obligation to repay the loan till the house is his prime residence

The payback is done once the owner dies or leaves the house. This is done though selling the house and recovering the loan through its proceeds.

### **REVERSE MORTGAGE IN INDIA**

A reverse mortgage (or lifetime mortgage) is a loan available to senior citizens and was introduced in India in the year 2007, which was already a well known concept in the West. There are about 80 million senior citizens in India (larger than the entire population of Britain) and the number is on increase. Estimates show that India's old age population will increase to 113 million by 2016, 179 million by 2026, and 218 million by 2030. As per reports only 8 million (employees of Central government, state government as well as those of some public sector undertakings) enjoy the benefit of pension after retirement, which ensures cash flow for their maintenance. The others have traditionally depended on their children for their financial needs. Seven out of ten elderly people in India are below the poverty line but 10 percent of them receive pension. In urban India, the elderly face loneliness and insecurity as their family members have either migrated or are too busy to provide support. In rural India, shrinking land holdings and a vast landless population has led to conflict among families. As a result, in the last phase of their life elders feel uncared and unsecured. In these circumstances, 'Reverse Mortgage' is a novel scheme to help this segment tide over the golden years with ease and financial security.

### **Types of Reverse Mortgage Products**

- **Home Reversion / sale and Lease Back-** The homeowner sells the house but keeps the right to live in the house till the time it is his prime residence. The amount could be used for home improvement, any other health need etc.

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- **Interest-only Mortgage**- The borrower takes lump sum and pays only interest during his lifetime. The principal is recovered through the sale of the home
- **Mortgage Annuity/ Home Income**- The loan is used to purchase an annuity for the homeowner. The advantage is that even if the homeowner moves out of the home, the annuity will continue till his death
- **Shared Appreciation Mortgage**- This provide loans at a below market interest rate. In return, the lender gets a pre-aged share in any appreciation in the property value over the accumulate value of the loan.

#### **How is it different from Traditional Home Loan?**

When one buys a house through a home loan, every EMI one pays towards servicing the loan, increases ones equity in the house. Once loan is paid in full, equity in the house becomes 100 percent. In the reverse mortgage, exactly opposite happens. When one pledges one's house for reverse mortgage with a Bank, equity in ones house decreases with every disbursal that the Bank makes to him/her. In traditional home loan, borrowers need to have sufficient income to service the debt i.e. to pay EMI. The same is not required in case of RML

#### **How does it help the elders?**

- In the old age when medical and day to day expenses increase, RML takes care of the same.
- Helps unlocking illiquid wealth to generate income i.e. helps in converting investment of residential property to lump sum cash or periodical income.
- Provides security when few old age social security schemes and financial help lines exist in the changing social structure, supporting older people in family is becoming rare
- No one would like to shift to newer and unknown place at the old age; RML allows staying the borrower in the same house till their death.
- When there is no source of income exists on outliving their retirement income or no income for spouse after demise, RML comes to help.
- RML allows retaining the title of the property till death, as our society is very sensitive in home ownership issue.
- While granting reverse mortgage loan current income and debt to income ratio are not considered. So the person without any income can get the loan.

#### **The following are the guidelines given by RBI for Reverse Mortgage**

- Any house owner over 60 years of age is eligible for a reverse mortgage.
- The maximum loan is up to 60% of the value of residential property.
- The maximum period of property mortgage is 15 years with a bank.
- The borrower can opt for a monthly, quarterly, annual or lump sum payments at any point as per his discretion.
- The revaluation of the property has to be undertaken by the bank once every 5 year.
- The amount received through reverse mortgage is considered as loan and not income; hence the same will not attract any tax liability.
- Reverse mortgage rates can be fixed or floating and hence will vary according to market conditions depending on the interest rate regime chosen by the borrower.

#### **Significance of Reverse Mortgage in India**

The society in India has under-gone huge changes in last 4-5 decades. Nuclear family has replaced the joint family system. The system of family supporting the older people has gone. The public pension system has not been able to provide an alternate support to old people. This condition leaves the older people in jeopardy. They face following issues

- Outliving their retirement income

- Depending on their children to help pay expenses
- Getting sick and having no way to pay the expenses
- Not being able to guarantee an income for their spouse after they are gone
- Being able to live as long as they like in their own home.

Looking at the current situation, the needs for a product which can help these people to solve some of these problems is always a welcome step. Reverse mortgage or equity release products tries to answer all these problems. Every Indian, irrespective of its income level tries to build a home for himself during his working life. Reverse mortgage will give him/her an opportunity to generate income from that very home. As the ownership remains with the borrower, he can transfer the home to his successors also if the later agrees to pay the loan amount. Such a product relieves the pressure on government also to provide old age security and thus government also needs to support such initiative.

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## Banking Sector Reforms in India

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### **Introduction**

In India the banking and financial sector reforms were initiated during the last decade of the 20<sup>th</sup> century as a part of general economic reforms with a view to improving the soundness of the public sector banks and other financial institutions. Public sector banks achieved spectacular success during the post nationalization period but such spectacular progress was witnessed in the spread of branch network of banks, mobilization of savings and in creating employment opportunities rather than in the improvement of the services to the customers. Frauds, corruption and misutilisation of public money were this covered. The vast expansion and spread banking sector resulted in surfacing of several internal deficiencies in the system. Due to these deficiencies the customer service was attached badly, work technology remained stagnant and the transactions cost kept on increasing over the years.

### **Meaning of Banking**

- 1) Banking Regulation Act, 1949 was the state act enacted to control and regulate the activities of the banking companies, it defines the term BANKING as, "Accepting for the purpose of tending or investment of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque draft, order or otherwise."
- 2) Britannica Encyclopedia, "Bank is an institution that deals in money and its substitutes and provides other financial services. Banks accepts deposits and makes loans and drives a profit from the difference in the interest rates paid and charged, respectively. Some banks also have the power to create money."
- 3) Greek History, "Bank means a bench or table for changing money."

### **Functions of the Bank**

1. Acceptance of deposit.
2. Lending money.
3. Investing funds.
4. Rendering various services customers.
5. Credit creation.
6. Remittance of funds.
7. Dealing in foreign Exchange.
8. Dealing in securities.
9. Accepting safe custody of valuables or providing lockers .
10. Acting agents.
11. Contracting & Negotiating loans.
12. Managing issue of shares / debentures.
13. Carrying on business.
14. Dealing with property in possession.
15. Dealing with security.
16. Undertaking and executing trust.
17. As a executor, trustee of estate.
18. Managing building / work necessary of bank.
19. Dealing with rights of bank.
20. Promotion of banking business.

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### **Financial Sector Reforms**

Financial Sector Reforms were necessary for the successful implementation of new economic policy pursued in India since 1991. Under this policy deregulation of industries, privatization of public undertaking and reduction of tariff on exports and imports have been extensively adopted. The financial sector reform was the rise to country's productive capabilities in the global competition. The policy makers thought that under deregulated atmosphere, the competitive growth of private enterprises will induce the necessary efficiency and the rate of growth.

The Banking Sector Reforms are based on Chakraborty committee, Narasimham committee I & II and Vaghul Committee reports.

#### **The recommendation can be classified as under.**

1. Ownership of financial institutions and banking structure.
2. Functional improvements of banks.
3. Structural and functional change from, lower level of co-operative of the money market.
4. Global participation, and
5. Supervision and regulation.

#### **Why financial sector reforms were necessary?**

The economic crises and financial sector crises of 1991 gave birth to the reforms. The Narasimham committee had proposed a wide of banking sector reforms for-

- Improving the financial viability of the banks.
- Creating their autonomy from government directions.
- Restructuring unviable banks.
- To allow the entry of the private sector in banking.
- To intensity operational flexibility and competition among the financial institution.
- Liberalizing the capital markets and
- Setting up of proper supervisory system.

The committee made separate recommendations for all the financial segments. i.e. The banking sector, The public sector financial institutions and The money and capital markets. The following major recommendations are given by the committee.

The committee on banking sector reforms under the chairmanship of Mr. M. Narasimham was constituted on December 26, 1997 to review the record of financial sector in 1991, and to suggest remedial measure for strengthening the banking system, covering areas of banking policy, institutional structure, and supervisory system, legislative and technological changes. The report of this committee, which was submitted to the government on April 23, 1998, sets the pace for the second phase of banking sector reforms.

#### **The major recommendations of the (Narasimham Committee – I) committee are-**

- Reduction of Statutory Liquidity Ratio (SLR) 25% over a period of five years.
- Progressive reduction in Cash Reserve Ratio. (CRR).
- Phasing out of directed credit programmes and redefinition of the priority sector.
- Deregulation of inter interest rates so as to reflect emerging market conditions.
- Stipulation of minimum capital adequacy ratio of 4% to risk weighted assets by March 1993, 8% by March 1996, and 8% by those banks having international operations by March 1994.
- Adoption of uniform accounting practices in regard to income recognition, asset classification and provisioning against bad and doubtful debts.
- Imparting transparency to bank balance sheet and making more disclosures.
- Setting of special tribunals to speed of the process of recovery of loans.
- Setting of assets reconstruction funds (ARFs) to take over from banks a portion of their bad and doubtful advances at a discount.
- Setting up one or more rural banking subsidiaries by public sector banks.

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- Permitting RRBs to engage in all types of banking business.
- Abolition of branch licensing.
- Liberalizing the policy with regard to allowing foreign banks to open offices in India.
- Rationalization of foreign operations of Indian banks.
- Giving freedom to individual banks to recruit officers.
- Inspection by supervisory authorities based essentially on the internal audit and inspection reports.
- Ending duality of control over banking system by banking division and RBI.
- A separate authority for supervision of banks and financial institutions which would be a semi-autonomous body under RBI.
- Revised procedure for selection of chief executives and directors of boards of public sector banks.
- Obtaining resources from the market on competitive terms by DFIs.
- Speedy liberalization of capital market.

### **Narasimham Committee – II**

This committee constituted in January 1998 submitted its report in April 1998. The major recommendations are-

- Capital adequacy requirements should take into account market risk also.
- In the next three years entire portfolio of government securities should be marked to market.
- Risk weight for a government guaranteed account must be 100% .
- CAR to be raised to 10% from the percent 8 %, 9% by 2000 and 10% by 2002.
- Banks should avoid ever greening of their advances.
- Their should be no further recapitalization by the government.
- NPA level should be brought down to 5% by 2000 and 3% by 2002.
- A provision of 1% on standard assets is required.
- Government guaranteed accounts must also be categorized as NPAs under the usual norms.
- Banks should update their operational manuals which should form the basic document of internal control system.
- Recruitment of skilled man power directly from the market be gives argent consideration.
- To rationalize staff strengths an appropriate VRS must be introduced.

The government accepted all the major recommendations of the committee despite the opposition from trade unions, political parties and the finance ministry officials. Government of India set up the Narasimham committee in August 1991, which submitted its report within three months. The following were the major problems / issues before the committee.

1. Productivity and efficiency of the system has suffered.
2. Their portfolio quality has badly deteriorated
3. Several public sector banks and other financial institutions have become weak financially.
4. Their profitability has been eroded.
5. Some public sector bank has been incurring losses year after year.
6. Their customer service was poor.
7. Their work technology was outmoded.
8. They were unable to meet the challenges of a competitive environment.

### **Banking Sector Reforms**

#### **I] First Phase Reforms: 1991-1996**

The government of India implemented the following reforms in the banking sector.

1. The deregulation of entry of new private sector banks, both domestic and foreign in 1992-1993.

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2. Liberalization of branch licensing policy allowing banks more freedom of plan branch expansion in response to market needs, subject to certain minimum performance requirements.
3. Phase wise deregulation of interest rates on both deposits and advances.
4. Introduction of capital adequacy norms of 8% in line with the norms set by the Bank for International Settlement. (BIS).
5. Institution of transparent prudential and income recognition norms.
6. Allowing public sector banks to access the capital market to raise equity.
7. Gradual reduction of CRR and SLR.

### **Second Phase Reforms--1997-2000**

The major changes in macro – economic environment and institutional structures called for a critical evaluation of policy initiatives already undertaken. Accordingly, the Government implemented the following reforms.

1. Strengthening of capital adequacy including explicit capital of market risk.
2. Tightening of the prudential and disclosure standards in line with international best practices.
3. Consolidation of banking system. (Mergers and Acquisition)
4. Restructuring of weak public sector banks.
5. Dilution of government equity in public sector banks of 33% and providing functional autonomy to government banks.
6. Technology improvements to modernize Indian banking.
7. Adoption of scientific tools for management of risk emphasis on management asset / liability and NPAS.
8. Legal reforms for expedite recovery of banks dues.

### **Third Phase Reforms: 2000-2001**

The segment – wise status of the reforms is provided as under-

1. Capital Adequacy and providing.
2. Exposure norms.
3. Prudential Accounting Norms.
4. Entry Norms for new Private Sector Banks.
5. Norms for Banks and NBFCs Entering Insurance.
6. International standards.
7. Technological Developments.

### **Success of Indian Banking**

A) Banking Sector comes under a Competitive Environment.

B) Territory Sector Records Higher GDP Growth.

Contribution to various sectors to GDP

Sector	1980-81	1985-86	1991-92	1995-96	2004-05
Agriculture	38.10	34.83	29.86	27.64	26.83
Industry	20.91	23.02	24.68	22.27	22.01
Service	40.99	42.35	45.86	50.09	51.16

### **C) Mergers:**

#### **Mergers in the Banking Sector – 1984 to 2000**

Year	Bank	Merged with
1984	Lakshmi commercial bank	Canara bank
1984	Bank of cochin	State bank of India
1984	Miraj state bank	Union bank of India
1985	Hindustan commercial	Punjab national bank
1987	Traders bank	Bank of Baroda

1988-89	United industrial bank	Allahabad bank
1988-89	Bank of Tamil Nadu	Indian overseas bank
1988-89	Bank of Thanjavur	Indian bank
1988-89	Parur central bank	Bank of India
1990	Purbachal Bank	Central bank of India
1993	New bank of India	Punjab national bank
1993	BCCI	State bank of India
1994	Bank of Karad	Bank of India
1995	Kashinath Seth bank	State bank of India
1997	Ban Doab Bank and Punjab cooperative bank	Oriental bank of commerce
1999	Bareilly corporation bank	Bank of Baroda
1999	Sikkim bank	Union bank of India
1999	Times bank	HDFC bank
2000	Bank of Madura	ICICI bank

Source: Bank Economist conference (2002)

### Conclusion

Banking sector reforms is a part and parcel of financial sector reforms, which initiated in 1991 to remove the deficiencies in financial sector, particularly in the banking sector to strengthen the economic reforms.

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## Medical Tourism in India: Challenges and opportunities: An Overview

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### INTRODUCTION

The concept of 'Medical Tourism' has been in existence since ages. It has been recorded that Greek pilgrims travelled long distances and from all the corners of Greece to the sanctuary of healing gods to get blessed and healed by the holy water baths, there are many more such examples from various parts of the ancient as well as newer world. In short medical tourism is about patients visiting different places for needful or elective medical treatments.

In the view of economical benefits foreigners travel from far in search of low-cost treatment options provided by equally competent medical experts practicing in state-of-the-art hospitals. In the recent times the spectrum of 'Medical Tourism' has gained importance in developing countries like our own, India. Medical services are already one-step ahead in expansion in India particularly in Maharashtra cities like Mumbai and Pune have become global health destinations. Concept of medical tourism can be defined as 'provision of cost-effective medical care in collaboration with tourism industry for patients needing specialized treatment options.'

### MEDICAL TOURISM AS A INDUSTRY

This concept is emerging as a lucrative industry the reason being that globalization has promoted consumerist-culture even in the health sector. With the private-practitioners in the business the motive is shifted to maximizing the profit and expanding the coverage with the prettification of public and private for such services medical tourism has become the industry. This expanding business not only attracts patients from developed countries but also from poor countries and developing countries where treatment facilities are not available. Bangkok, for example has become the centre for medical tourism offering services in 26 languages Cuba, Malaysia, Jordan Thailand and few others are now centers for medical tourism.

### ARE WE PREPAARED FOR MEDICAL TOURISM.....?

The health care sector in India has witnessed enormous growth in Private, NGO and Public Sectors. With the state of art infrastructure and medical expertise Indian health care providers are attracting tourists and in particular NRI's from all over the world. Medical tourism has now become a business of approx. \$ 2.3 billion and there estimated addition of 13% revenue for next 6 year. It has been observed that about 10000 odd medical tourists reported during the year 2006-07. In Maharashtra alone with 15% annual rise till recent. The hospitals in Maharashtra like Bombay Hospital, Hinduja Hospital, Asian Heart Hospital (Mumbai); Ruby hall, Lata Mangeshkar Hospital, Aditya Birla (Pune), Escorts Hospital, Wokhard Hospitals are few of the leaders attracting patients from south East-Asia, Africa, Middle-East, Sri Lanka, Dubai, etc. The governmental policies are also liberal the quality council of India under ministry of Health and Family Welfare is now taking firm steps towards accreditation of hospitals both in modern and traditional system of medicine. NABH (National Accreditation Board for Hospitals), NABL (National Accreditation Board for Laboratories) are given the additional benefits.

### 'SWOT ANALYSIS' OF MEDICAL TOURISM IN INDIA

#### STRENGTH – State-of-the-art infrastructures of hospitals

- Medical expertise
- Lower cost of services

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- Various destination

**WEAKNESS** - poor response from govt.

- Under developed Indian systems of medicine
- Inadequate research base

**OPPORTUNITIES** – progressive increase in no of patients reporting

- Development of tourist centers at various destinations
- Cost cutting is easier
- Largest pharmaceutical base.

**THREATS** - Indian law of malpractice are inadequate

- Inadequate follow up care
- Multinationals infiltration
- Gap between newer medical armamentarium and recovery of the investment

**'7-P ANALYSIS' OF MEDICAL TOURISM IN INDIA**

- 1) **Product:** health care and treatment , tourism to various destination in India (cost saving + pleasure)
- 2) **Price:** the costing of various procedures in Indian hospitals is compared below.

	INDIA	US
A. Heart surgery	\$7000	\$50000
B. Knee replacement	\$7000	\$25000
C. Bone marrow Transplant	\$30000	\$200000

The above comparison is sufficient to explain the price difference.

- 3) **Place:** The Indian corporate hospitals are now in tie-up with the hospitals abroad. The health care hubs such as Mumbai, Pune and Delhi are well connected with international tourist traffic.
- 4) **Promotion:** The promotion of Indian hospitals for the quality and cost effective services is being done through the campaign in India and abroad.
- 5) **Physical evidence:** The state-of-the-art infrastructure and medical equipments are comparable to world class hospitals. The research papers and innovations done by Indian scientist are the evidence of developing medical tourism in India.
- 6) **Process:** With the help of liberal policies of govt. And private tour operators the process of registration, reservation, traveling, shifting, treatment, follow-up etc. Have become simplified.
- 7) **People:** The service providers including the doctors have now developed professional approach to the services to the patients coming under the category of medical tourism.

**MEDICAL TOURISM: ADVANTAGES IN MAHARASHTRA**

- A) Tourist destinations: the destinations such as Ajanta, Ellora (Verul), Khultabad various Historical Forts spread over Maharashtra, the Western Ghats declared as world tourist spot the coastal area of Maharashtra with clean and wonderful beaches, metros like Mumbai, Industrial corridor of Pune, Nashik, and Aurangabad. The IT-development in Pune etc. Are the great assets to organize tourism?
- B) The network of star and luxury hotels, health resorts at hill stations like Mahabaleshwar, Lonawala, organize tour operators are the most effective tours in medical tourism.
- C) Corporate multispecialty and superspeciality hospitals at the bigger cities which are nearer to the tourist destination. These hospitals are providing services in advanced medical faculties such as organ transplant, advanced cardiac and neurosurgery, endoscopic surgeries, high tech equipment for cancer treatment etc.
- D) The state of the art hospitals having equipments for advanced imaging such as CT, MRI, 3D-4D USG, and DXA-bone scan etc. the latest in medical technology is installed in these hospitals with quality assurance and reliable results.

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- E) Renowned and expert doctors who cater the services locally and also visiting doctors and to the expertise pool.
- F) Largest pharmaceutical network.

### **CONCLUDING REMARK**

In view of the growing demand for health care needs all over the world developing countries like India can form a lucrative medical tourism hub. The concept of globalization and coming together of varied civilizations has increased the horizon. In particular, states like Maharashtra hold advantage over other states by virtue of accessibility, infrastructure and tourist destinations.

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## Experiments of Rural Development

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### **Introduction**

It has been accepted by all that the goals of economic planning cannot be achieved unless the people actively involve themselves in the participation, implementation and follow-up of the developmental plans and programmes. Through the importance of public participation in planning has been accepted right from the First Five Year Plan, the spirit of participation has not been realized. Whatever planning we have attempted has low rate of success due to lack of people's participation. In fact people's participation forms the central idea of democracy. In order to maximize people's participation the Government has taken a right step in 1992 by introducing 73rd Amendment of the "Indian constitution". A part from strengthening the Panchayat Raj System the Amendment aims at reducing the political and bureaucratic interference in the rural development. In this paper we intend to explore the importance of people's participation in planning; take a stock of some experiments in this regard in Ahmednagar District and suggest alternative strategy to make people's participation more effective.

### **Objectives of the Study**

- 1) To study the importance of public participation in rural development for their own villages
- 2) To know the role of Hon' Anna Hazare in the development of Ralegan Siddhi village.
- 3) To study the Five point formula introduced by Hon' Anna Hazare.
- 4) To study the role and contribution of Hon' Popatrao Pawar in development of Hiware Bazar village.
- 5) To study Jamkhed experiment of Dr. Rajnikant Arole and Dr. Mrs. Mabelle Arole.
- 6) To learn and study the lesson from the forth experiment.

### **Scope of the Study**

The study is related with the development of rural area, particularly Hiware Bazar, Ralegan Siddhi and Jamkhed. The work of Hon' Anna Hazare, Hon' Popatrao Pawar, and couple of Arole family. Various experiments introduced by these of fame people are considered and detected the effects of their experiments.

### **Research Methodology**

The research paper is based on primary and secondary data. Primary data is collected through discussion with the people's of the related villages and observations. Secondary data is collected through books, research papers published in different journals and other published and unpublished data. The special data is collected for Ahmednagar District.

#### **A) Anna Hazare's Ralegan Siddhi Experiment:**

Anna Hazare, a well known social activist, is now a national figure. Various state governments like Goa, Andhra Pradesh, Jammu and Kashmir have invited Anna Hazare to learn from his development work at Ralegan Siddhi. Ralegan Siddhi, the former drought prone village of Ahmednagar District, has been transformed into an oasis, by the non tiring efforts of Anna Hazare in the last 25 years. The main thrust of Anna Hazare was to convince the people to embrace watershed management techniques intelligently.

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Watershed management is not something which the villages would not understand. Simply put, it needs one to conserve rain water in every way possible. Starting off with trenches and earth bunds on hill slopes to farm ponds and check dams supported by boulders the village of Ralegan Siddhi started harvesting rain water. The availability of water around the year has helped in changing the face of the village economy.

## **FIVE POINT FORMULA**

The villagers of Ralegan Siddhi also willingly agreed to implement Anna Hazare's five point formula. This includes.

### **1) The Prohibition of Liquor**

Many such addicted farmers have to sell their land to repay the debts. Anna Hazare convinced the villagers regarding the horrible effects of drinking. Now there is no shop selling wine in the village. Even bidi and gutkha is not available. The villagers willingly abstain from consumption of wine and tobacco.

### **2) Adopting Family Planning Norm**

The population in India is crossed the one billionth mark. It is generally agreed that this population explosion has nullified whatever gains of development we had in the planning period. 70 % of Indian population still lives in the rural area and this proportion has remained unaltered over the years. In agriculture it is always possible to find some work or the other for the children. It is for this reason that children have never been considered as an economic burden in an agrarian society. Anna Hazare was successful in creating awareness among the villagers and pursued them to adopt small family norms.

### **3) Supplying Self Labor**

Anna Hazare realized that of all the new values to be created, self-help and self reliance were the most important ones. The villagers had a tendency to depend on external help-whether of some agency or the government and in the process their own initiative and vitality had been sapped. Anna Hazare instilled work-culture and through their voluntary help (Shramadhan) could build a school building and other amenities. Anna Hazare is of the opinion that it is not the shortage of physical resources but factors that inhibit the fullest expression of man's natural self i.e. identify with work in which he should find pleasure and fulfillment, that has restarted development in India.

### **4) Stopping Tree Felling**

The hills around the village, which were ones full of green trees, were bare due to indiscriminate tree felling. The local population depended on the forest for fodder and fuel. The villagers failed to realize that they were cutting their own life line. Anna Hazare explained the need of forests. The forests help in generating top soil, conserving water, checking floods, maintaining weather cycle and of course provision and food, fodder and fuel. Now the ones barren hills around the village bloomed once again with lush green forests.

### **5) Stopping indiscriminate cattle grazing**

Anna Hazare persuaded the villagers to stop indiscriminate cattle grazing to preserve the grass on the hill slopes. Special grass was grown to feed the cattle.

Anna Hazare, through his charismatic leadership, made the villagers to stick to the above five point formula. This formula has transformed the village, supported by water tankers, to a self sufficient one with enough water, green fields, employment, higher standard of living and addiction free happy people. Ralegan Siddhi has now turned in to a 'Model Village'. People, not only from India but abroad, flock to

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see this village. It is the magic of people's own efforts and popular participation in improving their own lot. Initiatives like his may be the saviors of our economy.

### **(B) Hiware Bazar - Replication of Relagan Siddhi Model**

Anna Hazare's Ralegan Siddhi experiment had begun in early seventies and by 1990 the face of the village had completely changed. Politicians, bureaucrats and common people flocked to see this 'Model village' in the hope that this model could be replicated. It was in 1990 that Mr. Popatrao Pawar, the Sarpanch of Hiware Bazar, started seriously replication the Ralegan Siddhi model of development.

Hiware Bazar is another typical village situated 17 Kms. from the district place, Ahmednagar. The village was surrounded by barren hills and had to depend on water tankers in the summer months. The agriculture was rain fed and poor farmers were prone to depression and alcoholism. Many Problems in the village related to its undulating hilly topography, with shallow land and poor soil fertility. The average rainfall per annum largely amounted to 350-400mm. the topography and poor rainfall contributed to a perennially drought like situation.

The transformation of this water scarcity village began in the early 1990's. Within last ten years Hiware Bazar has demonstrated a successful transformation from a drought prone habitat to a picture of plenty and prosperity. He village has bagged the Gram Abhiyan Pruraskar (1995-99), the Vanashree Puraskar and the Clean Village Puraskar (2000-2001). Mr. Popatrao Pawar, the Sarpanch of Hiware Bazar, admits that he was inspired by Anna Hazare's Relegan Siddhi model. He is a Commerce Graduate. In 1990, when he was elected unopposed as the village sarpanch, he started studying and implementing various government schemes for village development. As his efforts have borne fruits the villagers have elected him unopposed as the Sarpanch for the third time successively.

On the lines of Ralegaon Siddhi Mr. Pawar decided to undertake watershed development plan for the village. 976.84 hectares of land area around the village was divided into four watersheds. Along with the villagers he decided to construct various types of bunds and trenches on the hill tops accompanied by tree plantation drives. Up to 1998-99, with the help of the villagers, 3, 53,000 trees were planted on 378 hectare land area." At various places around the village storage and percolation tanks were constructed. This integrated approach helped in recharging ground water, improving soil fertility and agricultural productivity. The rise in its water table led to additional cultivation of 250 acres of land. The villagers were also pursued to adopt improved cropping patterns and new irrigation techniques. The farmers now grow onions, potatoes, cotton and vegetables; in addition to the tradition crops like jowar and bajra. There has also been an increase in the production of oilseeds, pulses and fruits. He villagers thoughtfully decided against planting of crops like sugarcane and banana as they consume excessive amount of water. The villagers have also succeeded in increasing the availability of fodder from a meager of 200 tonnes in 1994 to over 1,500 tonnes in 2000. This has helped in increasing the milk production from 300 liters in 1994 to over 2000 liters in 2000.

Today, due to the charismatic leadership of Mr. Popatrao Pawar and the collective efforts of the villagers towards water shed development, the village of Hiware Bazar has been dramatically transformed from a drought prone village to a green and prosperous' model village'. Hiware Bazar has adopted Anna Hazare's Relegaon Siddhi model, along with their five point formula, with great success.

### **C) The Jamkhed Experiment**

In 1970 work on a comprehensive rural health project was started in Jamkhed, a less developed taluka in A'nagar district, by a dedicated doctor couple; Dr. Rajnikant Arole and Dr. Mrs. Mabelle Arole. Provision of health delivery system by emphasizing the participation of the community in decision making. Their final aim was to see that the village community in decision making. Their final aim was to see that the village community owned and ran their own health programme. Their thrust was on the use of local

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resources and personnel. The attempt was to evolve total-not fragmented health care, integrating promotional, preventive and curative care. Though the project was started with outside funds, the community leaders were involved in it from the very beginning.

The Jamkhed experiments demonstrate that an inexpensive delivery system of health care can be built by active participation and involvement of the community. Though the project was successful it was soon realized that health for the sake of health was not a viable mode. There was greater need of providing potable water and food. As the experiment could not continue indefinitely on borrowed food the community had to go in for improved production techniques. Other agencies interested in agriculture and irrigation was contacted. Simultaneously other agro based projects for poultry and dairy were taken up. The whole programme thus took on a much wider canvas- that of social-economic development of the whole taluka.

The Jamkhed project has been successfully with respect to its health aims. They have trained many village level workers, especially less educated women and the health statistics of the region has also improved. But they had to go in for economic programmes to support their nutrition and community kitchen programmes. A part from the dedicated efforts of Mr. & Mrs. Arole, the other major factor for the success of the project has been the continuous inflow of outside funds.

### **Lessons From The Four Experiment**

We have tried to examine four experiments involving different intervention agents. In case of Ralegan Siddhi, a social activist-Anna Hazare, in Hiware Bazar, the village sarpanch-Popatrao Pawar, and in Jamkhed, a dedicated doctor couple-Mr. & Mrs. Arole acted as change agents. All these experiments revolved around a bottom up, participatory model of change. All the persons, who acted as change agents, are from the local area. They realized the need to mobilize the community and organized them to undertake community work. These leaders were in a way successful in creating awareness among the villagers and invoking their voluntary participation in planning and executing community work.

In case of Ralegan Siddhi, Hiware Bazar the leaders were successful in implementing majority of the preset ongoing Government schemes for the development of their villages. It needs to be emphasized here that mere provision of programmes by the Government is a necessary but not a sufficient condition for rural development. Unless the villagers cooperate willingly these schemes cannot be implemented successfully. The villagers have to be made aware regarding the benefits of various Government Schemes. The sarpanch of the village has to furnish necessary documents and pursue the taluka and district level Government departments to get the schemes sanctioned for his village. In the absence of social activities or local organizations this work has to be solely undertaken by the Sarpanch of the concerned village.

It is impossible to sustain a development process in the long run unless the local people are organized. Mobilization, however, cannot be an end in itself, because what is desired is development which is more than being a 'State', is a 'Process'. The process of development has to go on continuously. For this consciousness has to be instilled in the people; so that they continuously work for their betterment. Often the political leaders are successful in organizing people. But his organization is used to get themselves elected; rather than for developmental purposes. More often such leaders wish to keep the masses in perpetual poverty; so that they remain docile followers who depend for everything on them.

The most important problem is the size and reliability of the experiments in the experiments under our study the area of the experiments is a single village or a group of villages, Ralegan Siddhi, Hiware Bazar is single villages. But Jamkhed experiments have covered a group of villages. Another interesting observation is that all these experiments to availability of irrigation and progress of co-operative sugar factories. Now there are visible signs of these experiments being replicated in the nearby villages. But there is a clear need of enlarging and diffusing these experiments throughout the district.

According to Prof. H.M. Desarda, economist and former member of state planning board, "Recurrent water scarcity in the state is due to the failure in planning, improper policies and their tardy implementation and not because of the vagaries of nature." He recommends the strategy of watershed development for ensuring drinking water and protective irrigation. There is meticulous need of micro planning for drought proofing and rainwater harvesting. This is exactly what has been undertaken in the above experiments. There is no point in talking about rural development unless the basic need of water is fulfilled. "Maharashtra Government, in the last forty years, has spent nearly a hundred thousands crore on various water projects and drought related employment projects. However, the situation was desperate because of the lack of conceptually sound and operationally effective approach to drought proofing and rain water harvesting". These two villages, Viz. Ralegaon Siddhi, Hiware Bazar, demonstrate that, if properly convinced, the villagers can change their own fate.

### **Suggestions to Strengthen People's Participation**

Throughout our discussion we have been saying that development cannot be viewed simply as a process of economics growth alone. Development is dynamic and integrated process of change involving economic, social political cultural and ethical factors, leading to a creation of just society. Unless social justice is achieved economic reforms cannot remain the sole prerogative and responsibility of only the government of few elites in the society. It is a process which demands the active and conscious participation of all the people to transform the present structure of the society. Participation of people in the developmental process would stem from a critical awareness of all individuals. The suggestions for strengthening the people's participation in planning are stated in the last chapter.

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## Job Satisfaction among faculty members of Osmania University

**\*Dr. Bharathkumar Purohit**

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### Introduction

Antony Joseph<sup>1</sup> studied job satisfaction among transport employees the study amend at a comparative study of job satisfaction levels of road transport employees who are working in public and private sectors and also to identify the relationship of personal variable like number of departments and experience on job satisfaction variable like salary and other benefits, job security, management. Policies, working conditions, relationship with co-workers etc. were considered the results indicated that public sector employees are highly satisfied in salary and other allowances, social status, relationship with co-workers, working hours whereas the private sector employees are highly satisfied in their relationship with co-workers working conditions and relationship with passengers alone. Thus it is evident that there is a significant difference between public and private sector transport employees in the level of job satisfaction. The results show that number of dependents and experience affect the job satisfaction of transport employees; moreover, significant difference was found in the impact of the number of dependents and experience as regards the public and private sector transport employees. The author concluded that job satisfaction results from both situational and personality variables. The satisfaction of an employee driver from job significance as it has direct relation to his efficiency and to the organization.

Griffin<sup>2</sup> and others studied the role of supervisor in job satisfaction and teamwork. The results demonstrated that the extent of teamwork reduces the level of supervisor support in organization and to some extent the importance supervisory support for individuals however, the perception of supervisory support remained a substantial predictor of job satisfaction for individuals. Nazrul Islam<sup>3</sup> attempted to evaluate the level of job satisfaction of women bank employees in Bangladesh. Thus study includes difference of satisfaction of public and private women bank employees. The study also focused on relative importance of job satisfaction factors and their relationships with overall satisfaction of women employees. The results of the study revealed that level of job satisfaction of women employees depended on factors like income, job liking, work facilities, work allotments, work ability co-worker relations, recognition, etc. Veena<sup>4</sup> and others conducted a survey on 100 male and female secondary school teachers to find out relationship between job satisfaction and extraversion trait of personality. The interesting observation of the study that males were found to be more satisfied with their jobs than females and also a positive correlation between job satisfaction and extraversion even though their article doesn't contribute much to the study undertaken but the significant observation made from the results of the study in that difference noted in job satisfaction of male teaches being more satisfied with their jobs than their female counterparts gave an insight into the present study to study gender aspect is job satisfaction. B.N.Panda<sup>5</sup> and others intended to study the effect of mental health, age sex and management of school (Govt. / private) on secondary school teacher's job satisfaction. The study revealed that mental health had significant effect on secondary school teachers job satisfaction and the interaction of mental health and age had significant effect and management of school has no effect on job satisfaction the study implies that age, gender, mental health influence the job satisfaction of secondary school teaching. According to commerce clearing house, USA today<sup>6</sup> in "Management Ideas & Trends" Dec 18, 2002. When it comes to what employees value most employees ranked job security on the top of three aspects that are very important to employee job satisfaction, along with benefits and communication between employees and management, recognition by management and relationship with immediate supervisor.

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\*Osmaia university Hyderabad.

### Research objective

1. To study the perceived job satisfaction levels of faculty members of Osmania University, according to the independent variables, pay, Advancement, Supervision, Coworkers, Policy, Working conditions, Recognition, Achievement and to explore the variations if any.

### Research hypothesis

The following Null hypotheses are set to study the job satisfaction levels of faculties of Osmania University.

1. There is no correlation between Job satisfaction (dependent variable) and independent variables (pay, Advancement, Supervision, Coworkers, Policy, Working conditions, Recognition and Achievement).

### Study Area

The present study is carried out in Osmania University

Osmania University is one of the premier institutions of higher learning in India epitomizing the national agenda for higher education. "A pioneering and performing university re-accredited by NAAC with the highest rating of Grade 'A' in the service of the Nation, making higher education accessible, affordable and meaningful to lakhs of students from the backward region". This aptly sums up the spirit and essence of Osmania University – the symbol of lifelong learning.

**Table 1.1 – Classification of faculties by departments**

Faculty	Department
Arts	Telugu, Hindi, Sanskrit, Urdu, Philosophy, Linguistics, Marathi, English and Kannada
Social sciences	Sociology, Economics, History, Public Administration, Political Science
Education	Education
Commerce	Commerce
Management	Business management
Law	Law
Sciences	Chemistry, Physics, Mathematics, Statistics, Bio-Chemistry, Geology, Microbiology, Zoology, Botany and Geography
Technology	Physical Education and Technology
Engineering	Computer Science engineering, Electrical engineering, Electronics and communication engineering, Mechanical engineering, IT, Civil engineering

Osmania University's faculty and staff number nearly 5000. It is a multi-faculty and multidisciplinary university, offering varied courses in the fields of Humanities, Arts, Sciences, Social Sciences, Law, Engineering, Technology, Commerce and Business Management, Information Technology and Oriental Languages. There are nine faculties existing in this university. They are arts, social sciences, education, commerce, Management, law, sciences, technology, and engineering. Thus this study is carried out in all the departments of the nine faculties under the university. The above table represents the classification of faculties by departments.

### Participants

All respondents were full-time faculty members currently employed at Osmania University with full-time graduate/Post graduate Programmes. Osmania University had a total 692 full time faculty members working at the time of conducting this survey. The survey instrument was administered to full-time faculty members of above two Universities. They are Assistant Professors, Associate Professors and Professors.

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## Variables in the study

### Dependent variable

Job satisfaction is taken as the dependent variable in this study.

### Independent variables

The following eight variables are considered as independent variables to measure the dependent variable job satisfaction. They are, pay Advancement, Supervision, Co-workers, Policy, Working conditions, Recognition and achievement.

## Data analysis and Result

### Job satisfaction Scale

A plethora of scales are available for measuring job satisfaction in various organizational settings. However, educational settings need a variant scale that is designed taking into consideration the nature of work of the faculty members in a university setup. One such scale developed by Mrs.Jayalakshmi Indirasen, IIT, New Delhi, for measuring job satisfaction of Engineering teachers, India had been used in the present study.

### Statistical Treatment

To analyze the collected data both descriptive and inferential statistics is used. In descriptive statistics, correlation coefficients, and Regression analysis were computed.

### Independent variables – contribution to job satisfaction

In this part, an attempt has been made to present the perceived Job satisfaction of the faculty members from Osmania University. The Job satisfaction is assessed based on independent dimensions, namely pay, Advancement, Supervision, Coworkers, Policy, Working conditions, Recognition and Achievement.

### Relationship between dependent variable and independent variables – Osmania University

In this section, an attempt has been made to present the relationship between independent variables and dependent variable job satisfaction of Osmania University. Karl Pearson's coefficient of Correlations is computed to establish the degree and direction of relationship between the above said variables. Results in this regard are presented in the table 1

It is evident from table that all the variables (except Supervision) are positively and correlated with each other indicating that the variables are concomitantly influencing each other in a positive direction and some variables also statistically such relationships are significant.

As we observe the correlation coefficients in the table from Osmania University above, it is quite clear to note that all the other dimensions of Independent variables as perceived by the faculty members are positively and significantly correlated with their job satisfaction scores except the 'Supervision' as a dimension of independent variable which yielded a negative and significant correlation with job satisfaction. All these indicate that as the improvement on the dimensions of Independent variables improve.

And reduce on 'Supervision', the faculty member's job satisfaction will increase significantly

Interestingly, as further observation of the results in the table, it is quite evident that Working Conditions as a dimensions Independent variables yielded the highest and

Positive correlation coefficient ( $r=.43410$ ,  $p=.000$ ), followed by Supervision (negative correlation  $r=-.301$ ,  $p=.000$ ), 'policy' ( $r=.102$ ,  $p=.075$ ).

All these results have given a counter support to the null hypothesis presented in the beginning of this section. However, this hypothesis needs further examination as the

Correlation coefficients were found to be statistically significant. Thus, some of the variables are

Table 1 – Correlation Matrix										
		Satis-faction	Pay	Advance-ment	Super-vision	Co-workers	Policy	Working Conditions	Recognition	Achievement
Satisfa-ction	Pearson Correlation	1	.513	.548*	-.401*	.534*	.102	.434*	.667*	.062
	Sig. (2-tailed)		.000	.000	.000	.007	.075	.000	.005	.280
	N	304	304	304	304	304	304	304	304	304
Pay	Pearson Correlation	.513*	1	.297**	-.074	.064	.289**	-.081	.016	.002
	Sig. (2-tailed)	.000		.000	.199	.269	.000	.160	.783	.971
	N	304	304	304	304	304	304	304	304	304
Advan-cement	Pearson Correlation	.548*	.297**	1	-.139*	.230*	.708*	.050	.411*	.085
	Sig. (2-tailed)	.000	.000		.015	.000	.000	.387	.000	.138
	N	304	304	304	304	304	304	304	304	304
Supervi-sion	Pearson Correlation	-.401**	-.074	-.139*	1	.011	-.168**	-.085	-.017	-.016
	Sig. (2-tailed)	.000	.199	.015		.844	.003	.138	.763	.780
	N	304	304	304	304	304	304	304	304	304
Cowor-kers	Pearson Correlation	.534*	.064	.230**	.011	1	.219**	-.004	.121*	.021
	Sig. (2-tailed)	.007	.269	.000	.844		.000	.938	.035	.710
	N	304	304	304	304	304	304	304	304	304
Policy	Pearson Correlation	.102	.289**	.708**	-.168**	.219**	1	.080	.578**	.051
	Sig. (2-tailed)	.075	.000	.000	.003	.000		.162	.000	.373
	N	304	304	304	304	304	304	304	304	304
Worki ng Condit ions	Pearson Correlation	.434**	-.081	.050	-.085	-.004	.080	1	.084	.023
	Sig. (2-tailed)	.000	.160	.387	.138	.938	.162		.144	.687
	N	304	304	304	304	304	304	304	304	304
Recog-nition	Pearson Correlation	.667*	.016	.411**	-.017	.121*	.578**	.084	1	.024
	Sig. (2-tailed)	.005	.783	.000	.763	.035	.000	.144		.682
	N	304	304	304	304	304	304	304	304	304
Achiev-ement	Pearson Correlation	.062	.002	.085	-.016	.021	.051	.023	.024	1
	Sig. (2-tailed)	.280	.971	.138	.780	.710	.373	.687	.682	
	N	304	304	304	304	304	304	304	304	304

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

positively and significantly correlated with job satisfaction. In order to Examine the influence of Independent variables in the prediction of the job satisfaction; a multiple regression analysis approach was used (Cohen & Cohen, 1975). In this way, the predictive power of independent variables can be obtained for the dependent variable. Initially, a simultaneous solution was performed in which all independent variables were entered at the same time. This allows a determination of the relative power of each independent variable among a set of them.

It is clear from the following table that all the dimensions of independent variables in combination yielded a strong and positive correlation coefficient ( $R=.869$ ,  $P=.000$ ), indicating that as these dimensions improve, job satisfaction also increases.

**Table: 2 Regression Analysis: Independent variables and Job Satisfaction**

Model		Standardized Coefficients		t B	Sig.
		Beta			
1	(Constant)			8.541	.000
	Pay	.535		.644	.002
	Advancement	.578		1.086	.000
	Supervision	-.268		5.248	.000
	Co-Workers	.375		1.455	.007
	Policy	.033		.412	.681
	Working Conditions	.412		8.164	.000
	Recognition	.530		.473	.005
	Achievement	.051		1.019	.309
	R	R Square	Adjusted R Square	Df	F
	.869	.756	.751	8,295	150.266
					.000

Further all the independent variables except Supervision, yielded positive and significant beta coefficients of with the dependent variable called job satisfaction. This further indicates that all the Independent variables are significant predictors of the job satisfaction. However, a closer examination of the table and the coefficients presented in the table suggest that Advancement emerged as the strongest coefficient of job satisfaction (beta=.578, p<.000), whereas the pay yielded the secondary stronger coefficient (beta =.535, p<.002). This followed by Recognition (beta=.530, p=.005), Working Conditions (beta=.412, p=.000) and Supervision has a negative beta coefficient (Beta=-.268, p=.000).

In other words, it could be said that as 'Opportunity for Advancement' improves by one unit, .578 units of job satisfaction could be significantly increased. Further, if one unit of 'Pay' in independent variables improves, .535 units of job satisfaction will increase significantly. Similarly if one unit of 'Recognition' in independent variables improves, .530 units of job satisfaction will increase significantly and if one unit of 'Working Conditions' in independent variables improves, .412 units of job satisfaction will increase significantly. Interestingly, if one unit of 'Supervision' decreases, job satisfaction improves by .268 units. Further observation of the table shows that the coefficient of determination is .751 which is statistically significant. This indicates that all the dimensions of independent variables have accounted for 75 percent of change in job satisfaction among faculty members in the Osmania University. This gives very strong evidence against the null hypothesis.

Thus, the correlation analysis and the regression analysis results presented in the two tables provide a strong support for the rejection of the null hypothesis relating to the relationships between independent variables and the job satisfaction. Therefore, it could be concluded that job satisfaction depends strongly on the independent variables selected for the study in the Osmania university system. These results are well in line with all the studied conducted internationally so far on the relationship analysis of independent variables and job satisfaction.

### Suggestions

1. More research should be conducted on a national level and in all types of institutions, including government and private institutions, in order to broaden the generalization of the results.
2. Further research is needed to investigate group differences by including more relevant and important groups, such as different age and minority groups.

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3. Research is needed to determine what effects faculty Job Satisfaction has on performance, productivity, and on students. For example, it would be important to find out if dissatisfied individuals are less productive researchers and less effective instructors. Similarly, it would be important to ascertain if classes taught by highly satisfied faculty differ from other classes.

### **Conclusion**

It was hypothesized that, "Faculty members of Osmania University do not differ in their perception about Job satisfaction according to their personal background variables like age, gender, educational qualifications, work experience, designation and the faculties they belong to". From the above analysis, it is clear that variations in the faculty perceptions about the job satisfaction were not statistically significant according to the selected independent variables other than supervision and working conditions i.e hypotheses of two out of eight independent variables were rejected.

It was further hypothesized that "there is no correlation between Job satisfaction (dependent variable) and independent variables (pay, Advancement, Supervision, Coworkers, Policy, Working conditions, Recognition and Achievement)." From the above correlation and regression analysis it is evident that all the independent variables are significantly correlated with job satisfaction and hence the data does not support the null hypothesis.

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## Content Analysis of Online news papers in Maharashtra

**\*Dr Vaishali Khaparde**

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### INTRODUCTION

The exponential growth of internet and the increased reliance on digital information have revolutionized online newspaper journalism with new ways and means of disseminating online newspapers to the challenge of updating and providing fresh news frequently and dramatically increased the news consumption and usage. Compared with traditional news media online newspapers have remarkable advantages including their ability to provide up to date information rapid access to a large number of newspapers and their archives without additional expenses the advantages of being interactive and paperless the possibility to bookmark print or save and edit the contents of online newspapers. News papers can provide online versions that are not mirror images of print version instead offers something extra such as interactive features or information that could not fit in print versions there are a number of online newspapers on the internet, some of these have only extracts and general information, while others being compete newspapers with archives. The important characteristics of online newspapers include hypertext, interactivity, and multimedia. Hyperlinks enable navigation through online newspapers and connect readers to related contents. News published on the online newspapers can be complimented with background information graphics photographs animations audio streams and video footage, sidebars. And links to e resources such as online archives magazines, e books, and other online newspapers. Interactivity can be made available on the online newspapers to make online editions interesting. The interactivity could be achieved by engaging readers using RSS, Blogs, Polls, Surveys, Opinions, Comments, Feedback, etc. There has been a number of studies that assess the contents and design of online newspapers, and news websites.

There is little research that focuses specifically on the contents and design of online newspapers in Maharashtra therefore a need was felt to analyses the contents and design of online newspapers in Maharashtra. This paper gives an informative preview of the contents and design of online newspapers in Maharashtra and will be useful for evaluating deploying online newspapers and news websites.

### OBJECTIVES OF THE STUDY

The main aim of the study is to analyse the contents and design of the online newspapers in Maharashtra with following specific objectives:-

- I. To evaluate the structure style and design of online newspapers in Maharashtra.
- II. To identify the contents and coverage of the online news papers in Maharashtra.
- III. To ascertain the nature of advertisements and special features that appears in the online news papers in Maharashtra
- IV. To find out the patterns of news gathering graphics and multimedia in the online newspapers in Maharashtra.

### RESEARCH DESIGN

The study was conducted using website content analysis. The review of related studies shows that research methods like surveys web server log analysis and link analysis can also be used for allying various aspects of the online news sites. The web sites of online newspapers was used to identify the news and URLs of the newspapers (Annexure 1) published daily in Maharashtra were selected for the study. A checklist was prepared as the main tools to assess and evaluate the contents and design of the online newspapers. For preparing the checklist different online newspapers were observed and the literature, relating the content analysis of online newspapers and websites were consulted.

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The checklist included general information about homepages, authority, accuracy, currency, graphics, multimedia, content, coverage, accessibility, cost, advertisement, special features, and application of Web 2.0 technologies. All the selected newspapers were carefully scanned and analyzed based on the checklist. The consolidated data were presented in tabular form using Microsoft Excel for further analysis.

## RESULTS AND DISCUSSIONS

### Homepage Features

Homepage is considered to be the most important and often visited webpage of a website it is the front page at which most web features are implemented. So it is very important that the homepage of any website should be appealing user friendly and informative to the readers. Table No 1 shows that all the online newspapers have white background with about half of these have side bar or frame. A very few newspapers have moving text or marquee in their homepage.

Most of the online newspapers have provided links for contact address and copyright in their homepage. All the newspapers have advanced search facility. Majority of the newspapers

**Table No-1. Homepage features of online news papers in Maharashtra**

Characteristics	<i>MAHARASHTRA TIMES</i>	<i>LOKMAT</i>	<i>SAKAL</i>	<i>TARUN BHARAT</i>	<i>PUDHARI</i>	<i>LOKSATTA</i>	<i>DESHONNATI</i>	<i>NAVABHARAT</i>	<i>Desh Doos</i>	<i>Hari Bhoomi</i>	<i>Dainik Bhaskar</i>	<i>Mid day</i>	<i>Indian Time</i>	<i>Afternoon Dispatch &amp; Indian Age</i>	<i>Lokmat Times</i>	<i>Mumbai Mirror</i>	<i>Financial Express</i>	<i>Business Line</i>	<i>The Economic Times</i>	<i>Urdu Times</i>	
E-mail	✓ ✓	-	-	-	✓	-	✓	✓	-	✓	-	✓	-	-	-	✓	✓	✓	-	✓	✓
Mobile Alert	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	-	-	-	-	-	✓	✓	
News letter	✓	-	-	-	-	-	✓	✓	-	-	✓	✓	-	-	-	✓	✓	-	✓	-	
Feedback	-	-	✓	-	-	-	✓	-	-	✓	✓	✓	-	-	✓	-	✓	-	✓	✓	
Opinion Poll	✓	-	-	✓	-	✓	-	✓	✓	-	-	-	✓	✓	✓	✓	-	✓	✓	-	
Site map	-	-	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	✓	-	✓	✓	✓	-	✓	
Comment	-	✓	-	✓	-	-	✓	✓	-	-	✓	-	-	✓	✓	-	✓	✓	✓	-	
Advanced search	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E-paper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Sudoku	-	-	-	✓	-	✓	-	-	-	✓	-	✓	-	-	-	✓	✓	-	-	-	
Contact	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Copyright	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Background	W	W	W	W	W	W	W	W	W	W	W	W	W	W	w	W	W	W	W	W	
Side-Bar/frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Moving text/marquee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	

Have sign in facilities also (Table 1). Even though The Times of India offers a wider range of services to its readers, the online versions of the Indian Express are most users friendly.

#### Authority, Accuracy, and Currency

The authority and accuracy of information should intelligently be ascertained. Who is the author and what is his/her reputation, experiences, professional status, qualifications, etc, are required to be checked.

**Table No-2. Authority, accuracy, and currency of online newspapers in Maharashtra**

Characteristics	MAHARASHTRA TIMES	LOKMAT	SAKAL	TATKARIN BHARAT	PUDHARI	LOKSHATTI	DESHONNATI	NAVRA BHARAT	Desh Darog	Hari Bhoomi	Dainik Bhaskar	Mid-day	India Today	Afternoon Dispatch	The Asian Age	Lokmat Times	Mumbai Mirror	Financial Express	Razmac	Business Line	The Economic Times	Times of India	The Economic Times	India Today	Urdu Times
E-mail	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mobile Alert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
News letter	✓	-	-	-	-	✓	✓	-	-	-	✓	✓	-	-	-	-	✓	✓	-	-	✓	-	-	-	-
Feedback	-	-	✓	-	-	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓
Opinion Poll	✓	-	-	✓	-	✓	-	✓	-	-	-	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	-	✓	-
Site map	-	-	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
Comment	-	✓	-	✓	-	✓	✓	✓	-	-	✓	-	-	✓	-	✓	✓	✓	-	✓	✓	✓	✓	✓	-
Advanced search	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E-paper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sudoku	-	-	-	✓	-	✓	-	-	-	-	✓	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-
Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copyright	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Background	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	
Side-Bar/frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moving text/marque	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	-

Accuracy describes information that is factually irrefutable and complete. It should be assessed whether the information found on the online newspapers is accurate. Most of the WebPages are self published and self edited. So the chances of inaccurate information are more. Table 2 shows that all the online newspapers are published by authorized and well recognized professional newspaper companies. It was found that all the online newspapers chosen for the study met the basic requirements like clear and comprehensive information and the contents followed the essential rules of grammar and composition. Usually the currency of online newspapers depends on the type of information it holds. Missing data not only mean that the document probably has not been updated recently. It can also be an indication that it was not written by professionals. From the Table 2, it was observed that all the online newspapers gave

importance to the currency of their contents and most of them have valid links except the Mumbai mirror. All the newspapers meet its objective of informing the people about the daily happenings around the world. There are separate sections for debate, forum or opinion poll on all the online newspapers.

**Table No- 3 Graphics and multimedia design of online news papers in Maharashtra**

Characteristics	<i>MAHARASHTRA TIMES</i>	<i>LOKMAT</i>	<i>SAKAL</i>	<i>TARUN BHARAT</i>	<i>PUDHARI</i>	<i>LOKSATTA</i>	<i>DESHONNATTI</i>	<i>NAVABHARAT</i>	<i>Desh Pravat</i>	<i>Hari Bhoomi</i>	<i>Dainik Bhaskar</i>	<i>Mid day</i>	<i>Indian Time</i>	<i>Afternoon Dispatch</i>	<i>The Asian Age</i>	<i>Lokmat Times</i>	<i>Mumbai Mirror</i>	<i>Financial Express</i>	<i>Razac</i>	<i>Business Line</i>	<i>Indian Express</i>	<i>Times of India</i>	<i>The Economic Times</i>	<i>Inqilab</i>	<i>Urdu Times</i>
E-mail	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mobile Alert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
News letter	✓	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feedback	-	-	✓	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Opinion Poll	✓	-	-	✓	-	✓	-	✓	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Site map	-	-	✓	-	-	✓	✓	✓	-	-	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-	✓	✓	✓	✓
Comment	-	✓	-	✓	-	-	✓	✓	-	-	✓	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	-	✓
Advanced search	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E-paper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sudoku	-	-	-	✓	-	✓	-	-	-	✓	-	✓	-	✓	-	-	-	-	✓	✓	-	-	-	-	-
Contact	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copyright	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Background	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	w	W	W	W	W	W	W	W	W	w
Side-Bar/frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moving text/marque	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-

#### 4.2 Graphics And Multimedia

Graphics and multimedia supported information may attract the readers but it should not be the sole criteria for determining the quality of online newspapers. If the audio video or other effects are used, then it must be appropriate to the purpose of the source. Table 3 shows how graphics and multimedia were used effectively by the online newspapers. All the newspapers had photos and videos in their sites and about half of these have photos and videos gallery. All the newspapers have separate link to the homepage.

**Table No-4. Contents and coverage of online news papers in Maharashtra**

Characteristics	MAHABALI BHARAT TIMES	LOKMAT	SAKAL	TARUN BHARAT	PODISHARI	LOKSAFTA	DISHONNATHI	NAHA BHARAT	Desh Doot	Hari Bhoomi	Dainik Bhaskar	Mid day	Indian Time	Afternoon Dispatch & Current Affairs	The Asian Age	Lokmat Times	Mumbai Mirror	Financial Express	Rajnac	Business Line	The Indian Express	Times of India	The Economic Times	Inquilab	Urdu Times
<b>Editorials</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Columnists</b>	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Most read</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Most commented</b>	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	✓	-	-	-	-	-	-	-	-	-	
<b>Astrology</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Business</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Entertainment</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Environment</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Health</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Life style</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>National</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>International</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Matri monial</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Politics</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Stock</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Sports</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Technology</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Weather</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>World</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Majority of the newspapers are flash enabled and about half of the newspapers provided interactive facilities such as blogs, RSS, feedback, polls, etc. A very few newspapers provided cartoons in their websites. The online versions of The Mumbai mirror Midday and Inquilab and analysis provided cartoons.

#### Contents and Coverage

The validity, uniqueness, novelty, and purpose of information are some of the major points on which the contents of online newspapers are to be analyzed. Table 4 shows that the online newspapers in Maharashtra have a common pattern of contents, coverage, and design. Contents availability and access to the contents are the most prevalent options in these newspapers.

While all the online newspapers provided editorials, most of these also provided most commented news and articles. Coverage of online newspapers gives an indication of the context to the areas the news pertains Table 4 reveals that most of the online newspapers cover news from the areas like business, entertainment, environment, sports, health, lifestyle, politics, science and technology, weather, etc. it was found that all the newspapers provide links to business and sports news. Most of the newspapers provide

links to entertainment, environment, lifestyle, and weather news. A few newspapers have links to astrology also.

#### **Accessibility, Advertisements, and Special Features**

The question of accessibility is to be taken into account. It should be assessed whether the newspapers are freely accessible or not. Generally, it is perceived that news websites are free of cost. There are certain websites, which require an agreement between the publisher and the subscriber to access the sites freely. Table 5 indicates that all the newspapers are freely accessible and browser independent. About half of newspapers provide online subscription facility. Tarun Bharat Hari Bhoomi Deshonnati Loksatta Pudhari Afternoon Dispatch & Courier online subscription facility. Majority of the newspapers provide links to access the online. There is no special cost of intellectual property of the contents of the online newspapers in Maharashtra and all of these are public domains. Advertising can be categorized in many ways the common mode of classifying various forms of advertising is terms of product or service. It was found that all the newspapers have banners to publish advertisements and majority of these use top frame for the banners. All the newspapers have links to classfields. Pop ups are present only in the newspapers which provide the facility to post information for the readers. About half of the newspapers provide links to online shopping horoscope, and job advertisements.

#### **Application of Web 2.0 Technologies**

The applications of web 2.0 technologies in online newspapers have great importance as these increases the interactivity with the audience. The investigators assessed the extent of use of web

**Table No-5. Accessibility advertisements and special features of online news papers in Maharashtra**

Characteristics	MAHARASHTRA	LOKMAT	SAKAL	TARUN BHARAT	PUDHARI	LOKSATTA	DESHONNATI	NAVABHARAT	Desh Doot	Hari Bhoomi	Dainik Bhaskar	Mid day	Indian Time	Afternoon Dispatch & Courier	The Asian Age	Lokmat Times	Mumbai Mirror	Financial Express	Razac	Business Line	The Indian Express	Times of India	The Economic Times	Inqilab	India Times	
Accessibility	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	
Browser dependency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Online subscription	-	-	-	<	<	<	<	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Archive facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indexed in search engines	-	-	-	-	-	-	-	<	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Free of cost	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Banners (Advt.)	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Classifieds/Jobs	<	<	-	<	<	<	<	<	-	<	-	<	-	<	-	-	-	<	<	<	-	-	-	-	-	-
Links to commercial sites	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
User send/share information	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Online e shopping	<	-	-	-	-	-	-	<	-	-	<	-	<	-	<	-	-	<	<	-	<	-	-	-	-	<
horoscope	<	<	-	-	-	-	<	-	<	-	<	-	<	-	<	-	-	-	-	-	<	-	-	-	-	-

2.0 technologies in the online newspapers in Maharashtra Table 6 show the use of web 2.0 technologies such as Blogs, RSS, Face book, and so on. The use of web 2.0 technologies by the online newspapers in Maharashtra is very low. Among the web 2.0 technologies used by the newspapers, RSS, Blogs, and face book area the most used technologies. The online versions of The Times of India, Maharashtra times, Lokmat, Sakal, Tarunbharat, Pudhari, Loksatta, Deshonnati, Hari bhoomi, Dainik bhaskar, midday, Afternoon Dispatch and courier, The Asian Age, Lokmat times, Mumbai Mirror and The Indian Express provide links to Twitter in also their sites.

**Table No-6. Application of Web 2.0 technologies by online news papers in Maharashtra**

Characteristics	MAHARASHTRA	LOKMAT	SAKAL	TARUN BHARAT	PUDHARI	LOKSATTA	DESHONNATI	NAVA BHARAT	Desh Doos	Desh Dar	Mid day	Indian Time	Afternoon Dispatch &	The Asian Age	Lokmat Times	Mumbai Mirror	Financial Express	Razac	Business Line	The Indian Express	Times of India	The Economic Times	Inqulab	Urdu Times
Blogs	✓	-	✗	-	-	-	-	✓	-	-	-	-	✓	✓	-	-	✓	-	✓	-	-	-	-	-
RS S Fees	✓	-	-	✗	-	✓	✓	✓	-	-	✓	✓	-	-	✓	-	-	✓	-	-	-	-	-	✓
Prd cast s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Twi ter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Face book	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## CONCLUSION

The online newspapers in Maharashtra have a common pattern of contents, coverage and design. Contents availability and access to the contents are the most prevalent options in these newspapers. All the newspapers are more or less similar in their design and structure with few exceptions. All the newspapers are using photos and videos gallery. Dead links can be found in The Economic Times. This is a very interesting feature and can be adopted by all other online newspapers in Maharashtra. All the online newspapers have presented news with different headings like business, Entertainment, environment, health, lifestyle, weather etc. The online news papers designers should try to arrange news in more appealing manner. The online versions of The Times of India, the Indian Express provided information about the most read, commented and e mailed news which helps the readers to assess the value and importance of the news. This facility may be provided by all the online newspapers in Maharashtra. Similarly all the online newspapers have news grouped in editorials and headlines which is innovative and should be given due attention. Even though majority of the newspapers have RSS, Blog and Face book facilities the potentialities of these tools are not exploited fully. The authors found that the online versions of the newspapers were initially formed as a complement to the existing print versions of the news papers looking at the increasing capability of ICT the online newspapers should try to attract and engage more readers by delivering their products and services in real time increasing the quantity of information upgrading news with photographs, audios and videos enhancing the richness and timeliness of news and application of web 2.0 technologies to engage readers. Online newspapers in India can exploit email, blogs, RSS, web postings, live chat rooms, online polls and surveys, discussion forms etc. to engage their readers. These tools and utilities will provide interactive communication in the way to make the online newspapers a public sphere of discussion. Email cab used as easiest way of interpersonal communication between journalists and readers. Online discussion forums are one of the most effective ways to turn the online newspapers can also use mobile platforms to expand their audiences and connection with readers using social media such as Twitter and face book. The time spent on social networking sites is growing three times faster than that spent on the internet and represented a strong channel to connect with readers. The online newspapers in India should exploit the emerging Internet and mobile platforms especially the web 2.0 technologies to attract and increase their readers.

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## **Social Responsibility of Hospital Administrator with emphasis on Adolescent Health Education**

**\*Dr. Milind Deshpande**

**\*\*Dr. Chaitali Sarwade**

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### **INTRODUCTION**

Today a hospital administrator needs to have complete knowledge about the management of health services in a hospital as well as in the society not only as a part of hospital working but also as the social aspects or responsibility. A hospital administrator is a part of the society and he should perform the social duties towards the society in the field of health. An administrator if plans in good way to educate the adolescent age group, he can guide the adolescence in scientific way. This is his social responsibility and not a compulsion. Furthermore, not only the cure to various diseases but also their prevention is an important aspect. The main focus is over the various sexually transmitted diseases like HIV, HBsAg, etc. The best age where we can educate is the teenage and peripubertal age. Along with the practice of use of non-sterile syringes and needles, drug abuse as well as transmission of infected blood and blood products, the curiosity in teenage about the body, mind and natural attraction between opposite sexes is another causative factor for spread of such infections. Youth is most neglected part of our society and the major due to freedom in urban areas and ignorance in rural areas. To educate them in proper and scientific way is the duty of the society and hospital administrators also play a major role.

Sexual exploitation has increased in today's world which can be considered as result of youth's mentality, extra freedom, carelessness about everything, ignorance, yellow journalism, open internet, electronic media, etc. The topic of adolescent health education and in particular sex education is an important aspect, but unfortunately it is not given much importance in our social setup. Hence, the adolescent age group and youth are not aware about the ill effects of the irresponsible behavior and misuse of freedom. This is the prime duty of all members of the society including health care providers (hospital administrators) to provide the proper education.

### **AIM AND OBJECTIVES**

1. To educate the upcoming generation in respect of physical and mental health.
2. To educate them in such a way that they should be prevented from unwanted (suffered) situation in further life.
3. To help the nation to build a healthy generation who will be capable of protecting our nation.
4. To render the hospital services for social purpose.

### **Objectives of the study**

1. To educate the teenage group in such a way that their ideas should be cleared about:
  - a) Physical Health
  - b) Mental Health
  - c) Spiritual Health
2. To educate the pre-pubertal age group about careless behavior, various sexually transmitted diseases (STDs) and also side effects of over use of oral contraceptive drugs.
3. To educate the youth of rural background meticulously, as they lack the access to internet education and electronic media.
4. To make the subjects as well as their families aware of the various teenage changes and the related problems.
5. To introduce various preventive methods against such diseases.

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## METHODS AND MATERIAL

To achieve the various objectives we have conducted:

1. Lectures at – School level (Std. 6<sup>th</sup> to 10<sup>th</sup>)  
–Jr. College level (11<sup>th</sup> to 12<sup>th</sup>)  
–Rural youth as NSS camps  
–General public at NSS camps
2. Special lectures at areas where school dropouts were taken into consideration.
3. Conducted Paediatric Psychologist's lectures for school going children, peri-pubertal age group children and for differently-abled children at special clinics by Dr. Arvind Bondekar (Paediatrition).

In the above mentioned sessions we have tried to enlighten them with the help of following material aids like:

- a) Interactive lectures
- b) PowerPoint presentations
- c) DVD's of National Adolescent Health Education Committee, FOGSI.

After showing these AV aids we preferred to have interactions with the subjects separately (boys and girls). This was followed by questionnaire sessions for both the groups.

## RESULT:

This study was conducted to educate the upcoming generation in respect of physical and mental health, with special focus on the social responsibility of hospital administrator on adolescent health education. It is a general observation that the youth is most neglected part of our society and is majorly due to freedom in urban areas and ignorance in rural areas. Following observations were recorded after conducting the study:

- 1) The subjects from all the sections included in this study took interest in the promotion of the study.
- 2) It was observed that the subjects of teenage and pre-pubertal age group showed more enthusiasm in the demonstrations and the AV aids which were projected during the study.
- 3) There was a large section of the studied subjects namely the school drop-outs, few local leaders as well as parents of a few subjects who opposed to the study due to certain cultural myths and taboos.
- 4) The general observation included that the girl population was initially hesitant to take part in the questionnaire. But with the guidance of their parents as well as the teachers there was improvement in the interactive sessions.
- 5) The mode of transportation as well as the conditions of the roads was sometimes a major drawback to get access to interiors of the rural setups.

To educate them in proper and scientific way is the duty of the society and hospital administrators also play a major role.

## DISCUSSION:

As on today a hospital administrator need to have complete knowledge about the management of health services in hospitals as well as in the society as a whole. To prevent the disease occurrence a hospital administrator must plan to guide the specific sector of the society (teenage and pre-pubertal subjects). Help from other health care personnel and specialists should also be considered for better inculcation of the knowledge. All areas of the society were considered including urban sectors, rural sectors, schools, colleges also school dropouts, general public and families of the concerned subjects. We took help of certain organizations like NSS camps, Sarpanch of the villages, local leaders, teachers while organizing demonstrations.

At certain instances there were problems faced including rejection from families of the subjects to send them for such demonstrations, lack of basic amenities like electricity supply and improper transport facilities. On the contrary, at certain sessions the village sarpanch and parents also took interest in the

sessions. They were allowed to sit thru the demonstrations but were not included during the questionnaire session which was held in their absence.

It can be concluded that as the youth are the future of any nation, it is the need of today that the generation next should be well educated and well informed about sensitive topics such as Sex Education. Use of various AV aids and questionnaire sessions should be extensively promoted for this motive. Along with the related health issues, the cultivation of scientifically and socially acceptable behavior should be of prime concern of healthcare providers and especially of the hospital administrators.

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## Environment and sound management system of E-waste in India

**\*Dr. Lomte S.S.**

**\*\*Rasal G. B.**

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### **INTRODUCTION**

Waste Electrical and Electronic Equipment (WEEE) or e-waste is the term used to describe unwanted old electronic parts and discarded appliances using electricity.

#### **Classification of e-waste**

E-waste encompasses ever growing range of obsolete electronic devices such as computers, servers, main frames, monitors, TVs & display devices, telecommunication devices such as cellular phones & pagers, calculators, audio and video devices, printers, scanners, copiers and fax machines besides refrigerators, air conditioners, washing machines, and microwave ovens, e-waste also covers recording devices such as DVDs, CDs, floppies, tapes, printing cartridges, military electronic waste, automobile catalytic converters, electronic components such as chips, processors, mother boards, printed circuit boards, industrial electronics such as sensors, alarms, sirens, security devices, automobile electronic devices.

The major source of e-waste is the disposal of the hardware and electronic items from formal and informal sectors like Government offices, public and private sectors, academic and research institutes. Household consumers are also contributing significant volume of end-of-life electronics products.

**Table No.-1.1**  
**Penetration of Consumer Durables**  
**(No. of Households Owning Goods per thousands of Households)**

Particulars	1995-96	2001-02	2005-06	2009-10 (E)
Cars	16.1	30.0	50.2	91.4
Motocycles	29.3	70.8	147.6	282.6
Colour TV	72.0	145.6	213.0	314.0
Refrigerators	86.1	134.0	160.7	224.9
White Goods	149.4	247.1	319.1	451.7

Source: NCEAR

### **Indian Scenario**

Throughout the world electronic industry is largest and fastest growing manufacturing industry (Radha, 2002; DIT, 2003). In India domestic generation which is the imported e-waste volume is growing substantially, though, import is prohibited. Like as throughout the world, India is also facing serious crisis due to growing generation of e-waste. In India main challenge is to create awareness of the environmental, social and economic aspects of e-waste among the public, consumers, producers, institutions, policy makers and legislators.

In India there is no separate collection of e-waste, there is no clear data on the quantity generated and disposed of each year and the resulting extent of environmental risk

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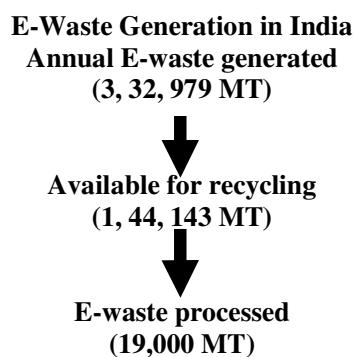
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. The management of solid waste, which is already enormous task in India, is becoming more complicated by the attack of e-waste, particularly computer waste and upgrading electronic technology.

The situation is not so unattractive in the developed countries, as the laws are adequate to take care of the stocking, disposal and land filling of the discarded electronics products. The availability of skilled recyclers and adequate technologies in those countries make the e-waste recycling a profitable business. The business sector is estimated to account for 78% of all installed computers in India (Toxics Link, 2003). It is estimated that the total number of obsolete personal computers emanating each year from business and individual households in India will be around 1.38 million. According to a report of Confederation of Indian Industries, the total waste generated by obsolete or broken down electronic and electrical equipment in India has been estimated to be 1,46,000 tons per year (CII, 2006).

E-waste also contains valuable materials including metal, plastics and glass, which are of the 95% of the total e-waste by weight. The populated PCBs/ connectors are of 3 - 5% of the total e-waste (Gao et al., 2004; <http://www.ewasteindia.in/environment.asp>) contain valuable metals like gold, silver, copper, and other precious metals like palladium, tantalum etc. In developed countries, well established processes are available for processing PCBs to extract the precious metals with highest yields (Gao et al., 2004; Xuefeng et al., 2005; Mou et al., 2004; Hanapi and Tang, 2006; Hyunmyung and Yong-Chul 2006). In India estimated that 95% of the e-waste recycling has been carried out in non-formal units (Report on "E-waste Inventorisation in India", MAITGTZ Study, 2007).



(Source: MAIT; <http://www.ecoreco.com>)

At present Bangalore alone generates about 8000 tons of computer waste annually and in the absence of proper disposal, they find their way to scrap dealers (Joseph K., 2007). The E-Parisara, an eco-friendly recycling unit on the outskirts of Bangalore plant which is India's first scientific e-waste recycling unit will reduce pollution, landfill waste and recover valuable metals, plastics & glass from waste in an eco-friendly manner. India as a developing country needs simpler, low cost technology keeping in view of maximum resource recovery in an environmental friendly methodology.

## E-WASTE RECYCLING

Environmentally sound recycling of e-waste requires sophisticated technology and processes, which are not only very expensive, but also need specific skills and training for the operation. Guidelines are to be developed for environmentally sound recycling of E Wastes. Many discarded machines contain usable parts which could be salvaged and combined with other used equipment to create a working unit. It is labor intensive to remove, inspect and test components and then reassemble them into complete working machines. Institutional infrastructures, including e-waste collection, transportation, treatment, storage, recovery and disposal, need to be established, at national and/or regional levels for the environmentally sound management of e-wastes. These facilities should be approved by the regulatory authorities and if required provided with appropriate incentives. Establishment of e-waste collection,

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exchange and recycling centers should be encouraged in partnership with governments, NGOs and manufacturers.

### **Recovery and reuse**

This technique could eliminate waste disposal costs, reduce raw material costs and provide income from a salable waste. Waste can be recovered on-site, or at an off-site recovery facility, or through inter industry exchange. A number of physical and chemical techniques are available to reclaim a waste material such as reverse osmosis, electrolysis, condensation, electrolytic recovery, filtration, centrifugation etc. The recycling of hazardous products which has little environmental benefits by the processes the hazards into secondary products that eventually has to be disposed of. Unless the goal is to redesign the product to use nonhazardous materials, such recycling is a false solution.

### **Current recycle steps in India**

The accrued electronic and electric waste in India is dismantled and sorted manually to fractions printed wiring boards (PWB), cathode ray tubes (CRT), cables, plastics, metals, condensers and other, nowadays invaluable materials like batteries, LCDs or wood. The valuable fractions are treated in refining and conditioning processes

The dissimilar e-waste fractions are processed to directly reusable components and to secondary waste materials in a variety of refining and conditioning processes. Final Disposal of the e-waste is deposited and disposed with solid waste with a municipal landfill. In India e-waste “recycling” involve small enterprises that are numerous, widespread, and difficult to regulate. The advantage of low labor cost high unemployment rates, internal migration of poor peasants, and the lack of protest or political mobilization by affected villagers who believe that e-wastes provide the only viable source of income or entry into modern development pathways. Sometimes educational institutes or charitable institutions receive old computers for reuse.

**Benefits of Recycling:** The end-of-life electronics recycling raw material is the most effective solution to the growing e-waste problem. Metal materials from electronic devices can be recovered. By segregation and providing reuse possibilities, intact natural resources are conserved and air and water pollution caused by hazardous disposal is avoided. Additionally, recycling reduces the amount of greenhouse gas emissions caused by the manufacturing of new products. It simply makes good sense and is efficient to recycle and to do our part to keep the environment green.

**Management system of e-waste:** Despite a wide range of environmental legislation in India there are no specific laws or guidelines for electronic waste or computer waste (Devi et al., 2004). But the electronic waste is included under List-A and List-B of Schedule-3 of the Hazardous Wastes (Management & Handling) Rules, 1989 as amended in 2000 & 2003. The import of this waste therefore requires specific permission of the Ministry of Environment and Forests.

## **CONCLUSION**

Electronic and electrical waste management, which is already a huge task in India, is becoming more complicated by the incursion of e-waste, particularly computer waste. There exists an urgent need for a detailed assessment of the current and future scenario including quantification, characteristics, existing disposal practices, environmental impacts etc. At the formal and informal level like institutional and commercial sector including e-waste collection, transportation, treatment, storage, recovery and disposal, need to be established, at national and regional levels for the environmentally sound management of e-wastes.

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## A Study of Brand Preference of Mobile Phone Users in Aurangabad City

**\*Dr. Ramesh Sardar**

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### **INTRODUCTION**

Exchange of information becomes the necessity of life to a common man. In the modern world an individual tends to communicate anything to everything right from the place where he/she stands. Even while riding vehicle he / she wants communicate within a fraction of second at quick speed with clear voice, without any disturbance. Like line crossing, out of order, etc. most of which lack in the connection given by the department of telecommunication. Mobile phones emerges as a boon quench such a thirst, by providing facilities, which a common man cannot imagine. The handset or Mobile Phone is in fact an own private radio transmitter and receiver, very similar to the Walkie-talkies used by Police and Security Personnel. The key difference is that a cellular phone network is connected to the fixed line or conventional telephone system allowing additional access to the telephone world. Mobile Phone can be used to make and receive STD and ISD calls. Now e-mailing message is also possible. Some cellular phones have the capacity to send and receive faxes and data when attached to a personal computer. The sole purpose of branding is to distinguish the branded product from those of the competitors. A well-promoted brand name, which has earned reputation in the market, is very difficult to compete with. Branding describes the establishing of brand name, make and trade names for a product.

#### **Review of literature**

The references for the literature review used for the problem in hand are as follows:

Seth et al (2008) analyzed that there is relative importance of service quality attributes and showed that responsiveness is the most importance dimension followed by reliability, customer perceived network quality, assurance, convenience, empathy and tangibles. Liu (2002) found that the choice of a cellular phone is characterized by two attitudes: attitude towards the mobile phone brand on one hand and attitude towards the network on the other. Samuvel (2002) observed that most of the respondents consider size, quality, price, instrument servicing are an important factors for selecting the handset while majority of the respondents are satisfied over the payment system, quality of services, coverage area and the process of attending the complaints regarding their mobile service provider. Nandhini (2001) examined that attitude of the respondents using cell phones was not influenced by either education or occupation and income. Kalpana and Chinnadurai (2006) found that advertisement play a dominant role in influencing the customers but most of the customers are of opinion that promotional strategies of cellular companies are more sale oriented rather than customer oriented. Haque et al (2007) suggested that price, service quality, product quality & availability, and promotional offer play a main role during the time to choose telecommunication service provider.

### **STATEMENT OF THE PROBLEM:**

A lot of brands of Mobile Phone are available in the market. But the consumers prefer a particular brand of Mobile Phone. In the modern business world, due to the development of science and technology, many new brands have been introduced in the market every year.

### **OBJECTIVES OF THE STUDY**

The important objectives of this study are

1. To study the origin and growth of Mobile Phone industry.
2. To study the importance of branding and its influence on consumers buying behavior.
3. To study the awareness and attitude of consumers towards Mobile Phone.
4. To study the factors influencing the brand preference of Mobile phones.

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**AREA OF THE STUDY**

This study has been conducted in Aurangabad city as the suitable area due to the people of belongs to various levels.

**PERIOD OF THE STUDY**

The data has been collected by the researcher through interview schedule from the consumers of mobile phone users during the period Nov 2011.

**RESEARCH METHODOLOGY**

This is based on collection of primary data through interview schedule from 100 respondents of mobile phone uses in Aurangabad city. In this study the consumer preference relating to mobile phone were described with the help of percentage analyses were made.

**SAMPLING DESIGN**

The researcher has adopted the convenient sampling and it was much careful to ensure that the sample represents the whole area of the study. A sample of 100 consumers has been selected for the study by using convenient sampling method.

**STUDY RESULTS AND INTERPRETATION****Table No. 1: Analysis on the basis of age**

<b>Age Groups</b>	<b>No. of Respondents</b>	<b>Percentages</b>
Less than 25	30	30
25-35	25	25
35-45	15	15
45-55	20	20
Above 55	10	10
<b>Total</b>	<b>100</b>	<b>100</b>

Source: - field survey (2010-11)

Thirty per cent of the total respondents are in the age group of less than 25 years, followed by 25 per cent in the age group of 25-35 years of age. Ten per cent of the totals are above 55 years. This reveals that maximum respondents are in the age group of less than 25 years.

**Table No. 2: Analysis on the base of Educational Qualification**

<b>Qualification</b>	<b>No. Of respondent</b>	<b>Percentage</b>
Metric	10	10
Hsc	20	20
Graduate	30	30
post graduate	15	15
professional degree	25	25
<b>Total</b>	<b>100</b>	<b>100</b>

Source: - field survey (2010-11)

Table No.2 shows the analysis of respondents on the basis of education qualification.

Thirty per cent of the total respondents are graduate, and almost equal twenty five per cent of the respondents are professionals. Similarly a handful of 10 per cent of the total are Metric.

**Table No. 3 : Duration of using Mobile Phone**

<b>Duration</b>	<b>No. of respondent</b>	<b>Percentage</b>
Up to 2 years	75	75
2-5 years	15	15
Above 5 years	10	10
<b>Total</b>	<b>100</b>	<b>100</b>

Source: - field survey (2010-11)

The above Table.3 exhibits shows that majority (75%) of respondents are using Mobile Phone for less than 2 years, followed by 15 per cent between 2-5years and 10 percent above 5 years.

**Table No. 4 : Sources of Awareness**

<b>Source of awareness</b>	<b>No. of respondents</b>	<b>Percentage</b>
Advertisement	15	15
Friends	40	40
Relatives	30	25
Retailer	10	10
<b>Total</b>	<b>100</b>	<b>100</b>

Source: - field survey (2010-11)

The above Table.4 exhibits shows that People come to know about the brand of their Mobile Phone through various sources. It is evident from the above table that friends are the main source of information through whom the respondents get information about the brand of their Mobile Phone as 40 per cent hold this view, followed by 25 per cent of the respondents through information through relatives, 15 percent get the information through advertisement and 10 per cent of the respondents got through retailers.

**Table No. 5 : Average talk time (Dialing)**

<b>Talk time per day (minutes)</b>	<b>No. of respondents</b>	<b>percentage</b>
Less than 30	42	42
30 – 60	40	40
Above 60	18	18

Source: - field survey (2010-11)

The average talk time with respect to dialing (Out going calls) is analyzed by the researcher and the same is shown in the above table, It is depicted in the above table No.5 that 42% of the total respondents use their Mobile Phone for less than 30 minutes (Dialing) in a day, followed by 40 per cent between 30-60 minutes and the rest 18 per cent above 60 minutes.

The researcher has made an attempt to analyze the average talk time (receiving) of the respondents. The following table deals with the same.

**Table No. 6 : Average talk time (Receiving)**

Talk time per day (minutes)	No. of respondents	percentage
	22	22
Less than 30	31	31
30 – 60	47	47
Above 60		

Source: - field survey (2010-11)

The researcher has made an attempt to analyze the average talk time (receiving) of the respondents. The above table deals with the same, from the table it is clear that 47% of the total respondents have an average talk time (Receiving) of above 60 minutes in a day, followed by 31 percent between 30-60 minutes per day and 22 per cent less than 30 minutes per day.

**Table No. 7: Brand preference**

Brand	No. of respondents	percentage
Nokia	54	54
Samsung	14	14
Sony Ericsson	06	6
LG	10	10
Panasonic	04	4
Motorola	12	12
Total	100	100

Source: - field survey (2010-11)

Many brands of cell phones are available in the market. People prefer a particular brand. The preference differs from person to another for various reasons. Hence, the researcher has made an attempt to analyze the brand used by respondents, as shown in Table 7. From the above table it is clear that of the total 100 respondents 54% of them use Nokia brand mobile phones. Samsung is used by 14%, Motorola is used by 12%, LG is used by 10%, Sony Ericsson is used by 6% and Panasonic is used by 4%.

**Table No. 8: Prime objective behind using of Mobile Phone**

Category name	No. of respondents	percentage
To contact family members	25	25
To contact friends	40	40
To contact relatives	15	15
To contact business clients	20	20
total	100	100

Source: - field survey (2010-11)

Table.8 shows the prime objective of using mobile phones by the respondents as follows. 40% of the total respondents use mobile to contact friends, followed by 25% to contact family members and 15% per cent to contact relatives.

**Table 9: Level of brand loyalty**

Change in Brands	No. of Respondents	Percentage
yes	600	60
No	400	40
<b>Total</b>	<b>1000</b>	<b>100</b>

Source: - field survey (2010-11)

Table No.9 shows the status of the respondents towards the brand loyalty of using mobile phones. The response shows that 60 per cent of the respondents do change their brands often, while 40 per cent of the respondents said they do not change their brands.

### **IMPORTANT FINDINGS**

1. It is found that the maximum number of mobile users is in the age group of less than 25 years.
2. It is found that sixty per cent of the respondents change their brands frequently while forty percent of the respondents do not change their brands.
3. As far as brand preference for mobile is considered majority of the mobile users (54%) prefer brand of nokia mobiles.
4. It is found that the prime objective of using mobile phone is to contact friends.
5. It is found that friends are the main source of information through whom the respondents get information about the brand of their Mobile Phone as 40 per cent hold this view.
6. It is noted from the analysis that majority of the respondents are opined that the sales of Mobile products was affected by the price factor.

### **IMPORTANT SUGGESTIONS**

1. The company also take promotional measures of festival offer like exchange offer, discount etc. to increase sale.
2. Advertising campaigns focusing on family members and friends should be aggressively aired so that they can create new customers for the company among their family members, relatives and friends.
3. Customer care services play an important role in retaining consumers. Therefore, customer care services should be improved and there should be provisions of taking feedback from consumers so that necessary steps can be taken in this direction.
4. As most of the consumers are unaware of the value added services offered by mobile phone companies, aggressive advertisements and schemes should be launched to create awareness and promote the use of these Services.

### **CONCLUSION**

Marketing plays an important role in the modern world. Therefore the development of marketing has always kept pace with economic growth of the country. Now, the consumer is the king of the market. Hence there is a need to fulfill the needs of the consumer by the marketer. Competition is to the order of the day. Businessmen have started realizing it. Earning profit is possible through consumer's satisfaction. In order to create a satisfaction, the marketer should give more quality products with apt price. That's why our modern marketing is a consumer oriented marketing. It begins with consumer and ends with consumer.

The design of the study reveals about the consumers brand preference on Mobile products. Comparatively Mobile has a high brand preference among the consumer than other company products in respect of quality, price, technology and durability. Therefore the company which satisfies the consumer's need in the competitive market has high preference on brand among the consumers.

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## Empowering Rural Women through Entrepreneurship in Marathwada Region

\*Dr. Dapke Vilas G.

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### Introduction

Rural women play a vital role in farm and home system. She contributes substantially in the physical aspect of farming, livestock management post harvest and allied activities. Her direct and indirect contribution at the farm and home level along led to increase in family income. She performs various farm, livestock, post harvest and allied activities and possesses skills and indigenous knowledge in these areas. This is in spite of her being the socially suppressed educationally at a disadvantageous positions and having a little say in the decision making process due to lack of independent income source in hand. Hence it becomes imperative to empower them technically so as to cope with the changing times and productively use her free time and existing skills of setting and sustaining enterprises. This will not only generate income for the family but also improve the decision making capabilities of the rural women leading to overall empowerment.

The Indian economy needs to generate a large number of jobs in the decentralized rural non farm sector comprising to small, tiny, cottage, village industries in order to arrest the rising unemployment and urban migration in the country. The rural economy in recent years has been showing clear positive signs for the micro enterprise opportunities especially for women. The prospects of micro entrepreneurship are very high in a few sub sectors such as trade, transport, construction and service.

### Rural Women Entrepreneur

A rural women entrepreneur is a woman or group of women who undertake to organize and run an enterprise in a rural area.

The Government of India: "An enterprise owned and controlled by women saving a minimum financial interest of 15% of the capital and giving at least 51% of the employment generated in the enterprise to women."

### Role of rural women for the development of nation:

These days' women are playing a vital role in socio-economic development of the country. However a developing country like India, marriage is the only career for most of the rural women. But the Rural women can play a major role in developing the economy and to participate in all stages. They have been the invisible contributors to the production process. There has been a lack of proper organization. Women were endowed with entrepreneurial skills, particularly in Agro based business. Women's status in the society was not satisfactory. The credit facilities were not extended to women. They were uneducated and they depend upon their husbands and parents. These are the reason why women did not enter into business. Business entrepreneurship provides economic independence and social status to rural women. Ultimately it leads to future economic prosperity of the nation.

**Emerging Women Entrepreneurs:** A large number of micro, small scale and cottage industries have been identified where women entrepreneurs played an important role. The emergence of women entrepreneurs and their contribution to the national economy is quite visible in India.

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The number of women entrepreneurs has grown over a period of time, especially in the 1990s. Women entrepreneurs need to be lauded for their increased utilization of modern technology; increased investments, findings a niche in the export market, creating a sizable employment for others and setting the trend for other women entrepreneurs in the organized sector. While, women entrepreneurs have demonstrated their potential, the fact remains that they are capable of contributing much more than what they already are. In order to harness their potential and for their continued growth and development, it is necessary to formulate appropriate strategies for stimulating, supporting and sustaining their efforts in this direction. Such a strategy needs to be in congruence with field realities, and should especially take cognizance of the problem women entrepreneurs face within the current system.

Women entrepreneurs are motivated by internal factor such as the family background, education background, and the desire to do something independently. Except those women from upper and middle classes i.e. the women from economically lower classes have worked on farms and also taken to other occupation involving physical work. The present study highlighted in this direction. The study focused on the socio-cultural educational and legal barriers to rural women's

### **Entrepreneurship in India.**

### **Entrepreneurship: They way of development of rural women**

Now the scenario is fast changing with modernization, urbanization and development of education and business. Thus, the opportunities of employment for rural women have increased drastically. It is found that the percentage of unemployment among educated and qualified rural women is increasing. Thus, it is necessary to increasing the opportunity of self-employment for educated unemployed rural women through the development of entrepreneurship. It is stated here that the self-employment entrepreneur creates not only her employment but also creates employment opportunities to other.

### **Picture of Marathwada Region**

The backwardness of Marathwada region is not a result of poverty only. There are social, economical, geographical and entrepreneurial reasons behind it. The importance of the industrialization is over looked. In the absence of industrialization in rural area of Marathwada the region's economy cannot be developed as compare to the other regions of the state. In future, women's participation is very necessary for the development of Marathwada region.

### **Rational behind the study**

In Marathwada, women entrepreneurs are emerging in various fields namely Tailoring and Garment, Handicrafts, Beauty Parlors, Dairy Farming, Job works and the like. Since most of the women entrepreneurs are running micro organization, the up to date data regarding the number of women entrepreneurs are not available in the Government department.

The phenomenon of women entrepreneurship is largely confined to big towns in Marathwada. Women confined their activities to selected profession such as education, nursing, medicine, office work, etc. In olden days, very few women enter profession like industry, trade and business. But in recent years women have made their mark in different occupations and are competing successfully with men. This has been possible due to Education, Urbanization, Legal safeguards, Social reforms, Special Government Schemes, etc. In business, the entry of women is a relatively new phenomenon. She may start her own business. The participation of rural women in the economic life of a country, it is necessary for national development. This study highlighted selected rural units run by

women with low investment, simple technology and high profitability. Specially compiled for enterprising women and moderating price to help them in selecting the right project.

### **Objectives of the Study**

The study planned with the following objectives:

- To know the qualities of rural women entrepreneurs and search for potentialities amongst women for empowering them.
- To study the problems of rural women entrepreneurs in promoting their units at various stages.
- To evaluate the existing policies, programs, institutional network and the involvement of Support agencies in promoting rural women's entrepreneurship.

**Research Methodology:** The present research work is mainly exploratory and descriptive in nature. The study is based on primary data collected from women entrepreneurs in Marathwada through structured questionnaires and interview schedule. The study also covers the secondary data which is collected from the various Government and non Government organizations/Agencies, Libraries and related websites.

**Sample selection:** Marathwada region has eight districts. Primary data was collected from rural areas of eight districts. For the study purpose 100 women entrepreneurs from rural area are selected by randomly for the detailed study. A sample of 100 rural women entrepreneurs were selected from various districts in Marathwada region as per the table given below.

**Table No.1**  
**Selection of Samples**

Sr. No.	Name of District	No. of Samples	Taluka's	Villages
1.	Aurangabad	14	5	14
2.	Jalna	14	5	14
3.	Beed	12	4	12
4.	Osmanabad	12	4	12
5.	Latur	12	4	12
6.	Parbhani	12	4	12
7.	Nanded	12	4	12
8.	Hingoli	12	4	12
	Total	100	34	100

Field Survey (2010-11)

Total 100 rural women entrepreneurs were selected for detailed study and personal interview from the eight district of Marathwada. From every district except Aurangabad and Jalna, Four taluka's were selected and from Aurangabad and Jalna district five taluka places were selected.

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Out of the selected taluka places 14 villages from Aurangabad and Jalna district and 12 villages from another district were selected. One women entrepreneur was selected randomly from one village.

### **Several hi-lights of the Study**

Women's entrepreneurship must be examined both at the individual level and at the firm level in order to fully understand the differences between men's and women's entrepreneurship.

Women's entrepreneurship depends on both the situation of women in society and the role of entrepreneurship in that same society. Both the factors that affect the gender system and the factors that affect entrepreneurship in society are involved.

Specific obstacles to women's entrepreneurship are education. Lack of role models in entrepreneurship, gendering of entering demands, on time and access to resources.

Women entrepreneurs are security oriented rather than growth oriented.

Gender discrimination is encountered at every stage of business development.

Women's hard work is generally responsible for the launch and sustainability of the business.

Many women become entrepreneurs out of economic necessities of their families.

Women's entrepreneurship depends on both the situation of women in society and the role of entrepreneurship in that same society. Both the factors that affect the gender system and the factors that affect entrepreneurship in society are involved.

Support systems do not effectively handle their important need for vision and confidence building and also for developing better business orientation and skills.

A majority of rural women entrepreneurs are married.

Unmarried women face difficulties in getting financial support to launch their enterprises.

Many women entrepreneurs belong to the low income groups.

A large number of women with little or no education enter into business without undergoing any training. Most of these practicing women entrepreneurs lack vocational education. working capitals is limited and profit margins are low of their units.

Women prefer diversification to specialization. in the field of technology women have made a conscious decision to set up technology based enterprises.

The emergence and development of Rural Women Entrepreneurship depends on a number of socio-economic factors often termed as supporting conditions for the development of entrepreneurship. Age has been found to be one of the important factors associated with the success of entrepreneurs. It has been found that, at the time of starting the enterprise, the highest number of entrepreneurs were in the age group of 25-30 years. This shows that majority of entrepreneurs started their ventures relatively at an early age. It has also been found that the level of technical education, apprenticeship or previous job experience in the same line of activity helped the entrepreneurs to run their units smoothly and successfully.

- Promotion of enterprises is not only a long process but also difficult phase of entrepreneurship. Entrepreneurs have to take crucial decision at various stages. It has been found that successful entrepreneurs devoted more than 12 hours per day to their enterprises. The support of family member and other was also found to be one of the important elements in the promotion of the enterprise.
- Most of the entrepreneurs did not avail of subsidies, incentives or concession provided by Central or State Governmental either because of lack of knowledge and information about those facilities or they could not go through the procedures and formalities of different government agencies. Although majority of the entrepreneurs reported their awareness of organization such as DIC, SIDBI, SFC and their assistances programmes, quite a large number of them have no knowledge of the institutions such as SISI, SIDO etc. To conveys the fact that, there is lack of constructive participation of the promotional institutions in the development of small scale industries.
- It is also found in the study that the small scale entrepreneurs faced problems on different Areas of business operations. It has been observed din the study that in case of majority of the units, the percentage of capacity utilization was less that 60 inordinate delay in the supply of raw material, shortage of skilled laborers, and shortage of working capital lead to interruption in production process. The drawbacks in the managerial practices adopted by the small scale enterprises have also contributed for a few operational problems.

#### **Suggestion for empowering rural women:**

- **Creating Awareness:** Awakening of rural women to the possibilities of the easily accessible micro-enterprises is the foremost task. The government, semi-government and non government organization should create awareness among the most productive age group of rural women. The printed media can be effectively put to use for the purpose.
- **Motivating Entrepreneurs:** Psychological stimulation is the prerequisite for putting any idea virtually into action. For proper motivation of rural women, the economic, social and health benefits of various possible enterprises should be highlighted. The use of farm visits, video film shows, dramas, puppet shows, group meeting etc. Will help in motivating the potential groups.
- **Expertise Development :** After awakening and motivated the next step in development and success of an enterprise is the acquisition of knowledge and skill up -gradation and polishing of existing knowledge and skills in production processing, packaging and marketing techniques are the basic requirements. It also emphasized the need of value addition as to ensure high premium to the producer. He stated that India ranks second in food production but only two percent of the produce is processed. In addition to this, knowledge regarding accessibility to loans, various finding agencies, procedures regarding certification etc. should be provided. Lectures, printed material, discussion, institutional and non institutional skills trainings for imparting first hand technical knowledge in production. Processing procurement and management should be provided to rural women who are interested or already engaged in various enterprises. Education in direct and indirect marketing of the produce and finance management should be in-built component of future training programmes for women.
- **Continuous Follow-up:** Constant follow up should be ensured for the sustainability of micro-enterprises. During this phase various constraints such as personal, social economic, marketing etc. faced by entrepreneurs should be addressed. Possible help in The form of knowledge, technical skills and inputs should be provided to enable them to solve their problems.

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## Critical Analysis of Issues and Challenges in Patenting Nanotechnology Inventions

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### INTRODUCTION

Intellectual property is the foundation of all technology ventures, yet the laws governing and protecting Intellectual property rights are unfamiliar territory for most scientists. At international level, Intellectual Property Rights (IPRs) have traditionally been governed by several conventions- most prominently the Paris Convention for Patents and Trade Marks (1883) and the Berne Convention for Copy Rights (1886)- which are administered by the World Intellectual Property Organization (WIPO). The Trade Related Aspects of Intellectual Property Rights Agreement 1994 represents the most far reaching agreement towards global harmonization of Intellectual Property Rights. Nanotechnology is a young field that focuses on basic research and material science product. This paper will provide an insight to the laws in India governing Intellectual property rights in the field of science and technology especially nanotechnology and the issues and challenges surrounding nanotechnology inventions in patent law.

Intellectual property is the creative work of human intellect. The main motivation of its protection is to encourage and reward creativity. According to Article 2(viii) of the 'Convention Establishing the World Intellectual Property Organization (WIPO) 1967', intellectual property includes rights relating to-

- (i)Literary, artistic and scientific works;
- (ii) Performance of performing artists, phonograms and broadcasts;
- (iii) Inventions in all fields of human endeavour;
- (iv) Industrial designs
- (v) Scientific discoveries
- (vi) Trademarks, service marks and commercial names and designations;
- (vii)Protection against unfair competition; and all rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

Intellectual property thus, includes copyright, trademarks, service marks, geographical indications, patents, utility models, plant varieties, industrial designs, trade secrets, layout design of integrated circuits, etc. Nanotechnology is the engineering of functional systems at the molecular scale.

When K.Eric Drexler popularized the word 'nanotechnology' in the 1980s, he was talking about building machines on the scale of molecules, a few nanometers wide motors, robot arms and even whole computers for smaller than a cell. Nanotechnology has now emerged as the most effective fields with respect to Intellectual property rights. In the field of nanotechnology Intellectual Property protection is available in manufacturing methods and computational techniques.

### APPLICABILITY OF NANOTECHNOLOGY

Nanotechnology is applicable in the areas of:

**Electronics**- eg.the flat panel TV or Computer monitors are products of nanotechnology

**Space** – eg. nanomaterials are adopted as alternative materials in place of conventional materials such as Nanoparticles-based solar cell arrays

**Defense**- eg. Nanotechnology may play an important role in detection of harmful biological weapons.

**Environment**- eg. Use of nanomaterials as hydrogen storage or efficient oil filters may reduce vehicle pollution.

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**Energy**- eg. some metal hydride nanoparticles like nickel hydrides or high surface area, ultra light weight materials like aerogel are better options in improved batteries.

**Sports** – eg. Tennis ball using nano clay is able to fill pores in a better way and trap the air pressure inside.

**Toys**- eg. Eye movement of dolls, robot movements etc.

**Textile**- special threads and dyes used in textile industry are products of nanotechnology, use of silver nano particles in washing machines makes cloths germ free, nanotech fabrics, self cleaning necktie.

**Cosmetics**- eg. Nanoparticles based creams, nano based dyes.

**Domestic Appliances**- eg. Silver nano particles are used in refrigerators, air purifiers, water purifiers, washing machines.

**Automobiles**- eg. Nanoparticle paints for cars provide smooth, thin, attractive coating; using nano particle clay, better, light weight, less rubber consuming tyres are possible.

**Biotechnology and Medical field**- eg. Early detection of cancer is possible due to nanotechnology based analysis, biological labeling using fluorescent semiconductor nanoparticles or quantum dots.

The applicability of nanotechnology is spread over diverse fields such as physics, material science, engineering, chemistry, biochemistry, medicine and optics. As nanotechnology is applicable to other already established fields, there are challenges and issues surrounding the acquisition of intellectual property rights in the field of nanotechnology.

## INTELLECTUAL PROPERTY RIGHTS LAWS AND NANOTECHNOLOGY

Over the past two decades the role of Intellectual Property in all fields of technology has exploded globally due to rules prescribed by Trade Related Aspects of Intellectual Property Rights Agreement (TRIPS). The TRIPS Agreement requires member countries to make patents available for inventions, whether products or processes, in all fields of technology, without discrimination, subject to the standard patent criteria of novelty, inventiveness and industrial applicability. Article 27.3(b) of the TRIPS Agreement states that plants and animals as well as essentially biological processes may be excluded from patentability. However, World Trade Organization members must offer protection for plant varieties either by patents or by effective sui-generis system. Today, nanotechnology issues focus primarily on patents, with additional issues relating to trade secrets, copyrights, and semiconductor and integrated circuits layout designs.

### PATENT

Patent law is all about inventions. An invention is what an inventor produces through his creative efforts as new knowledge in the form of a product or a process to make a product that did not exist at all till the time of his invention.

The grant of patent in India is governed by the *Patents Act*; 1970. The definition of a patent under the *Patent Act* 1970 is “patent means a patent for any invention granted under this Act”. Section 2(1) (j) of the Act, “invention” is a new product or process involving an inventing step and capable of industrial application. ‘Inventive step’ means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and makes the invention non-obvious to a person skilled in the art.(section 2(1)(ja)). “Capable of industrial application”, in relation to an invention, means that the invention is capable of being made or used in industry (section 2(1) (ac)). A ‘new invention’ means any invention or technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification.

To be patentable, invention must be new, non-obvious and useful. The element of newness /novelty in an invention is dependent upon the state of prior art (the existing knowledge and similar inventions already known in the particular field). The invention must be non-obvious to a person skilled in the art to which the invention relates. The invention besides being new and non-obvious must also be useful.

### **Inventions not patentable under Patent Act 1970**

Sections 3 and 4 of the Act state the inventions which cannot be patented. As per section 3, the following are not inventions within the meaning of this Act:

- a) An invention which is frivolous or which claims anything obviously contrary to well established natural laws
- b) An invention the primary or intended use or commercial exploitation of which would be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment
- c) Mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substances occurring in nature.
- d) The mere discovery of a new form of known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use of a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

An explanation is provided for the purpose of this clause, stating that salt, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance, unless they differ significantly in properties with regard to efficacy.

This section was introduced as it was considered necessary to prevent pharmaceutical companies from 'ever greening' expiring or expired patents that has fallen into public domain, by adding insignificant and minuscule changes to the composition of their original compounds.

- e) A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance
- f) The mere arrangement or rearrangement or duplication of known devices each functioning independently of one another in a known way
- g) Omitted(2002)
- h) A method of agriculture or horticulture
- i) Any process for the medicinal, curative, prophylactic. Diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their product
- j) Plants and animals in whole or any part thereof other than micro organisms but including seeds, varieties and species and essentially biological processes for the production or propagation of plants and animals.

This is in compliance with TRIPs Agreement which provided that protection for plant varieties may be provided either by patents or by an effective *sui-generis* system or by any combination thereof. India has chosen *sui-generis* system and enacted the *Protection of Plant Varieties and Farmers' Rights Act, 2001*.

Under this sub-section of the 1970 Act, micro-organism may be patented. Bio-technology research involves the use of micro-organisms. India does not have any specific legislation regarding biotechnological inventions, much less, micro-organisms. The *Biological Diversity Act, 2002* governs applications for any intellectual property rights, in or outside India, for any invention based on any research or information on a biological resource obtained from India. Section 2(c) of the *Biological Diversity Act, 2002* defines a biological resource as meaning plants, animals and micro-organisms or parts thereof, their genetic material and by-products( excluding value added products) with actual or potential use or value, but does not include human genetic materials.

- k) A mathematical or business method or a computer programme per se or algorithms.

Since computer programme is governed by the Copyright Act 1957, it is excluded from the patent Act 1970. It was noted in the Copyright Act that computer implemented invention could be the subject of a patent. It states that a computer programme per se is not patentable; it would be patentable if the computer programme is part of a patentable process.

l) A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions.

m) A mere scheme or rule or method of playing game

n) A presentation of information

o) Topography of integrated circuits

The Semiconductor Integrated Circuits Layout-Design Act, 2000 deals with the layout design of integrated circuits.

p) An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component/s.

Section 4 of the Act denies patents for inventions relating to atomic energy.

No patent shall be granted in respect of an invention relating to atomic energy falling within subsection (1) of section 20 of Atomic Energy Act, 1962.

The general principles applicable to working of patented inventions as mentioned in Section 83 of the Act is that patents are granted to encourage inventions and to secure that inventions are worked in India on a commercial scale and that the protection and enforcement of patent rights contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

### **COPYRIGHT**

Protect the right of creators of literary and artistic works to communicate, display, or perform those works in some medium, plus the right to make and sell the copies. Copyright is a bundle of exclusive rights which means that the right owner can prevent all others from copying his work, or doing any other acts which according to copyright law can only be done by him. Copyright subsists for a limited period. After the expiry of the copyright term the work falls into public domain.

The scope of copyright which was restricted only to the protection of literary and artistic works in the earlier days, has now been broadened to include not only literary and artistic works, but also dramatic and musical works, cinematograph film, and sound recording. In addition, neighboring rights which consist of the rights of the performers, the rights of producers of phonograms and the rights of broadcasting organizations are also covered by the copyright law. The reason why scope of the copyright has become so vast is the technological innovations which took place in the last two centuries. Technological innovations eg, computers, audio recording, video recording, reprography, cable television, satellite broadcasting and most recently Internet have posed challenges to copyright laws from time to time, and forced the nations to amend their laws.

The copyright law, today, not only protects the rights of the copyright owner and neighboring rights, but also deals with the subject of public interest and tries to strike balance between the two in this digital environment. The Intellectual Property right in respect of the work created is subject to the provisions of the *Copyright Act, 1957* which is India's law on copyright. Copyrights are much more expensive and expediently obtained than patents, and are valid for the author's lifetime plus 50 years. A longer period of protection applies if the creation was work made for hire, which is generally the case in nanotechnology industry.

### **TRADE MARKS**

Trade marks refer to a distinctive sign which identifies certain goods or services as those produced or provided by a specific person or enterprise. Legal protection is not offered to the technology, rather to the company goodwill and quality associated with the use of recognized name or symbol. In India, the Trademarks Act 1999 deals with the registration of Trademarks. Trademarks Act provides exclusive right to the registered trade mark owner for a period of 10 years which may be renewed indefinitely.

**TRADE SECRETS**

Trade secrets protect any technical or business information that gives the business a competitive advantage. It need not be completely novel or exclusive, but it must have a derived or potential economic value from being unknown. Legal protection under trade secret no longer applies when the information is disseminated publicly. There is no formal filing procedure to register trade secrets to obtain protection.

**LAYOUT DESIGNS OF INTEGRATED CIRCUITS**

Covers the layout designs of integrated circuits, the chips on which they are masked, and products that incorporate the chip. TRIPs specifically permit reverse engineering of integrated circuits. Semiconductor Integrated Circuits means a product having transistors and other circuitry elements which are inseparably formed on a semiconductor material and designed to perform an electronic circuitry function. The *Semiconductor Integrated Circuits Layout-Design Act 2000* provides for the protection of semiconductor integrated layout designs in India. The purpose of the legislation is to protect the right in the creator of an electronic circuit on a semiconductor material for a period of 10 years. The term 'layout-design' means a layout of transistors, and other circuitry elements, and includes lead wires connecting such elements and expressed in any manner in a semiconductor integrated circuit. The Act defines 'registered layout-design' to mean a layout-design which is actually on the register.

Some of the current issues and challenges encountered in nanotechnology intellectual Property is briefly discussed below:

**PROBLEMS IN PATENTING NANOTECHNOLOGY INVENTIONS**

Nanotechnology have posed more problems and caused number of complex situations in patenting. The lack of expertise, capabilities and resources pose difficulties for the patent applicants and officials of patent office. Nanotechnology innovations are of multidisciplinary nature and multi-industry applications like physics, chemistry, biology, electronics, communication, energy etc. e.g. Carbon nanotubes have applications in electronics, energy, medicines etc. while Dendrimers are useful for medical, electronic and chemical industries.

The multidisciplinary and multi industry application of Nanotechnology fosters creativity and new approaches to technical challenges, the same poses challenges to the court and officials in determining patentability of Nanotechnology inventions.

The patent office's need to address which context is appropriate across many disciplines and industries incorporate all of them in decision making.

**BROAD CLAIMS AND PATENTS ON BASIC INVENTIONS**

An analysis of Nano patents show that many of them contain claims that are too broad, some very broad claims have been with respect to carbon nanotube patents- carbon nanotubes are tiny structures made up of rolled up layers of interconnected carbon atoms which may be classified as multiwall or single walled carbon Nano tubes.

Fall out of such broad claims has been patenting of inventions bordering closely on discoveries and patent on basic inventions or building block patents. This may lead to growth of patent thickets impeding downstream research in Nanotechnology which may lead to fragmentation of patent landscape. For country like India, the existence of such thickets and high licensing costs will have to be paid to the multiple patent holders would be a serious road block in developing domestic capacity.

**DIFFICULTIES IN FULFILLING THE PATENTABILITY**

In India patent is a product or process involving an inventive step and capable of industrial application. Inventive step is a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention non-obvious to a person skilled in the art. It is generally accepted that the properties of matter and other fundamental scientific discoveries are not patentable. An initial challenge for patent strategies is to determine how to obtain patent coverage that is based on discovery of inherent properties of materials. Simply submitting a

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smaller version of a known structure would not be considered patentable without additional novelty or utility. Section 3(d) of Patent Act, 1970 and the explanation attached to it deals with the same. In India section 3(d) is likely to be problematic for Nanotechnology patents. Policy intervention will be needed in future to deal with Nanotechnology patents exclusively.

### CHALLENGES IN REGULATING NANOTECHNOLOGY

Patent law is the primary area of law concerning technology. Patent system face great challenges in handling inter-disciplinary nanotechnologies consistent with their traditional core mission. These difficulties make it likely that any attempt to protect against uncertain human health and environmental risk, a task no patent system has ever successfully accomplished is likely to be particularly futile in case of Nano technological inventions. Potentially dangerous nanotechnology inventions raise a slightly different issue. Nanotechnology generally does not implicate immoral or illegal activity but whether an invention presents a safety risk, either to human health or to the environment. Although precedent in this area is sparse, such issues have been raised in patent cases occasionally. There are some statements in a couple of opinions indicating that the safety of an invention could raise utility concerns theoretically which is one of the basic requirements for grant of patent. *[Regulating nanotechnology through Intellectual Property rights- Gregory N. Mandel, see reference no.7]*

Nanotech products have come to market in the absence of public awareness and regulatory oversight. One concern is that the increased reactivity of nanoparticles could harm living tissue, perhaps by giving rise to "free radicals" that may cause inflammation, tissue damage or growth of tumours. Nanoparticles can be inhaled, ingested or pass through the skin. Once in the blood stream, nanoparticles can elude the body's immune system such as the blood-brain barrier. The very same properties that make engineered nanoparticles so attractive for development of targeted drug delivery systems- namely, their mobility in the blood stream and ability to penetrate cell membranes could also be qualities that make them dangerous.

The most important questions in the short term will be issues relating to patents. Biotechnology and pharmaceuticals are two segments of the industry that stand to gain a great deal from nanotechnology because treatments or even cures for many of the virulent illness may be possible through nanotechnology. Generic drug makers can cut a huge amount of cost by avoiding this and going directly to market, creating unfair competition if a patent does not block them.

Generic drug manufacturers such as Cipla in India produced the drugs for a fraction of cost, making it possible for Brazil to implement anti-AIDS programme. The patent-holders objected and tried to block generic makers. They claimed that they could not continue to research new drugs if they were not allowed to recover their costs. The question that arises is, if ever, public health and benefit should be prioritized above patents and other restrictions. If nanotechnology starts to deliver treatments for cancer or even all purpose frameworks for anti-viruses, these questions will be become paramount.

Nanotechnology has already excited many with its defense and weapons applications. But the flip side of super strong nanomaterials such as nanotubes is predominately carbon based. This means that they cannot be detected using metal detectors or chemical "sniffers". The only way to catch a person smuggling such a weapon would be exhaustive personal searches.

Futurist concerns arise from Nano-computation such as quantum computing, DNA computing and Nano-electronic computing may help unlock true artificial intelligence. But then the questions that will arise out of it will be how to treat artificial intelligence? The problem of self replication, if interfaces between humans and computers improve to a stage where they are hard to differentiate, the result it will have on human civilization and so on. The implications for national security and for personal privacy cannot be overstressed.

All these questions need to be tackled through discussion and debate by involving not only scientists and engineers but also thinkers, ethicists, lawyers, theologians and politicians as well.

## CONCLUDING REMARK

As an emerging science, nanotechnology promises the Nano-scale manufacture of materials and machines made to atomic specifications. It is a field at the junction of chemistry, physics, biology, computer science and engineering. The impact of nanotechnology on our way of life is believed to reach profound and unimagined levels in the coming decades. The cross fertilization of technology is likely to lead to greater co-operation in the form of alliances and acquisitions among academic institutions, private companies and government. Science and Technology Policy 2003, reiterates India's commitment to participate as an equal and vigorous global player in generating and harnessing advances in science and technology for the benefit of all human kind. Therefore efforts should be to ensure that the Intellectual Property rights granted to the innovator's through various legislations relating to Intellectual Property Rights regime should be utilized so that science and technology uplifts the Indian people in particular and indeed all humanity in general.

The issue of control and ownership of nanotechnology is a vital issue because a single nano-scale innovation can be relevant for widely divergent applications across all industry sectors. In nanotechnology, current issues in patenting such as broad claims, basic inventions, and patentability criteria arises applications. This creates technical challenges to the officials of patent office, which at times results in refusal to the grant patent to nanotechnology innovations. The impact of which might be reduction in R& D Activities relating to nanotechnology based innovations. Moreover, the issue of emerging nanotechnologies and the potential impacts on the health, safety, environment and bio-diversity need to be studied. The regulatory discussions should include apart from the above issues, the broader socio-economic impacts, control and ownership of nanotechnologies.

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## Social Exclusion and Economic Perspectives in India

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### **Introduction**

The origin of the term “Social Exclusion” goes back to mid-1970s when René Lenoir first developed the expression of ‘Social Exclusion’ as a complement to the framework of market discrimination conceptualized by Gary Becker during 1960s (Sen., 2004). However, the phenomenon of social exclusion in the Indian context is not similar to the experience of excluded groups in other countries. In the Indian context, social exclusion differs from other countries mainly on three counts. One, the basis of the social exclusion in Indian context is birth and continues till the death. The birth of an individual in a particular *Varna* (a term that represents groups of castes) decides the socio-economic status in the society. Two, exclusion of an individual is not caused due to the individual characteristics, but could be attributed to societal phenomenon in the sense that an individual can be excluded not due to his characteristics, but due to the reason that he belongs to a certain social group. And thirdly, the notion of impurity is attached to the exclusion and religious sanctions which are continued historically.

This differential treatment has been initially conceptualized by Sukhadeo Thorat through the concept of social exclusion to understand the problem of all marginalized groups in India. The main objective of this research paper is to understand the nature of social exclusion concept in Indian context basically in economic perspective. For this, to understand this concept I have used writings of Prof. S.K. Thorat about this concern. According to Thorat, “in India, exclusion revolves around the societal institution that exclude, discriminate, isolate and deprive some groups on the basis of, gender and others” (Thorat and Sadana, 2004). Further, he simplifies that the concept of exclusion is related to the societal institution which exclude, discriminate, isolate and deprives some groups on the basis of group’s identity like caste, ethnicity, religion, gender etc. Social exclusion describes a process by which certain groups are systematically discriminated against because of their caste, religion, gender, disability or other factors. Social exclusion keeps a social group outside power centers and resources. It takes the form of segregation from the social, political, economic, cultural, educational and religious domains of society. It thus imbues a sense of superiority and inferiority in members.

### **The Nature of Social Exclusion in Indian Context: Economic Perspective**

Exclusion on the basis of race, color, religion, ethnic background, national or social origin exists in many nations under diverse social, economic and political system, and India has been no exception. The concern about exclusion at the policy level is primarily because of its consequences on economic growth, inequality and deprivation that it particularly brings to the excluded and discriminated groups. He said that social exclusion has been defined as “the process through which individuals or groups are wholly or partially excluded from full participation in the society within which they live.” Two defining characteristics of exclusion are particularly emphasized, firstly the societal relations (or institution) that causes exclusion and secondly its consequences in terms of deprivation in multiple spheres –coming mainly through denial of equal rights (Thorat 2005). The concept thus focuses attention on social relations and the institutions underlying the process of exclusion and its adverse consequences in multiple spheres on the excluded groups.

The application of the concept of social exclusion in the Indian context is developed on the basis of the formulations provided by Amartya Sen and Buvinic. Thorat points out two major distinctions of the concept given by Sen (2004). One, there is a distinction between the situation where some people are being kept out, and where some people are being included in deeply unfavorable inclusion.

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The unfavorable inclusion with unequal treatment may carry the same adverse effect as “unfavorable exclusion”. Two, differentiation between “active and passive exclusion” for the casual analysis and policy response, as it is important to distinguish between “active exclusion” fostering of exclusion through the deliberate policy interventions by the government, or by any other willful agents to exclude some people from some opportunity, and passive exclusion which works through the social process in which there are no deliberate attempts to exclude, but may result in exclusion from a set of circumstances.

Besides, there is another distinction Sen provides, which Thorat discusses, is the “constitutive relevance” of exclusion from that of “instrumental importance”. The former have an intrinsic importance of their own. For instance not being able to relate to others and to take part in the life of the community can directly impoverish a person’s life, which may further generate further deprivation. This is different from social exclusion of “Instrumental importance”, in which the exclusion in itself, is not impoverishing, but can lead to impoverishment of human life.

In the approach of Thorat, these developments in social science literature indeed enable us to comprehend the meanings and manifestations of the concept of social exclusion, and its applicability to caste and ethnicity based exclusion in India. Thus, the manner in which it has been developed in social science literature, the concept of social exclusion in general and economic exclusion in particular, essentially refers to namely the “Societal institutions” (of exclusion), and their “outcomes” (in terms of deprivation). In order to understand the dimensions of exclusion, therefore, it is necessary to understand the social relations, which lead to exclusion of certain groups causing deprivation in multiple spheres i.e., civil, cultural, political, and economic. For a broader understanding of the concept of exclusion the insights into the societal process and institutions of exclusions are as important as the outcome in terms of deprivation for certain groups (Thorat 2005).

Thorat emphasizes on recognizing the group characteristic of exclusions and economic exclusion or discrimination is independent of income, productivity or merit of individuals in the group. Often people do get excluded from the market due to lack of income or unemployment due to low productivity/skill or no admission due to lower level of so called merit. In these cases, low income, productivity and merit are direct cause of exclusion. In the case of group based exclusion on the other hand, the basis of exclusion is group identity and not the economic characteristics of a group. The focus of exclusion is social group and not individual. It is a different matter that exclusion may necessarily lead to denial of economic opportunities and powerlessness. But low income, productivity or less merit are not the original sources, it is the outcome of exclusion associated with group identity. This group characteristic needs to be recognized when we discuss the policy and remedies against discrimination. It is also possible that some individuals in the discriminated group may be economically better off and they may have some advantage in overcoming the effect of discrimination compared with their poor counterpart. But since exclusion has group focus they would also suffer from discrimination- though may be not with the same degree and magnitude as the poor member of their group (Thorat 2005).

Buvinic also provides concept of social exclusion which emphasizes that, “...inability of an individual to participate in the basic political, economic and social functioning of society”, and it involves, “the denial of equal access to opportunities imposed by certain group in society upon others.” Above the definition, Thorat said, this definition captures three distinguishing features of social exclusion. One, it affect culturally defined group; two, it is embedded in social relations between them; and three, it results in deprivation or low income for those excluded. It is critical to take note of the particular form of exclusion in the Indian context where inscriptive rather than achieved characteristics are the basis of exclusion. The former are not amenable to alteration as a consequence of individual’s agency and cannot, therefore, be regarded in any fashion as a matter of personal responsibility (Thorat 2007).

Exclusion in the Indian case revolves around the societal interrelations and institutions that exclude, discriminate against, isolate and deprive some groups on the basis of group identities like caste and ethnicity or religion. The nature of exclusion revolving around the caste system, particularly, needs to be understood and conceptualized. Caste-based exclusion has formed the basis for various anti discriminatory policies in India. Add to this, Thorat said that the practice of caste-based exclusion and discrimination thus, necessarily involves failure of access and entitlements, not only to economic rights,

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but also to civil, cultural and political rights. It involves what has been described as “living mode exclusion”, exclusion in political participation, and exclusion and disadvantage in social and economic opportunities. The caste/untouchability and ethnicity based exclusion thus reflect in inability of individuals and groups like former untouchables, adivasi and other similar groups to interact freely and productively with others and to take part in the full economic, social, and political life of a community. They have incomplete citizenship or denial of civil rights, political rights and socioeconomic rights.(Thorat 2005-a).

In social science literature, there is general agreement on the core features of social exclusion, its principle indicators and the way it relates to poverty and inequality. Social exclusion is the denial of equal opportunities imposed by certain groups on others which leads to inability of an individual to participate in the basic political, economic and social functioning of a society (Thorat 2005-b).

Thorat discusses diverse ways in which social exclusion can cause deprivation and poverty. The consequences of exclusion thus depend crucially on the functioning of social institutions, and the degree to which they are exclusionary and discriminatory. Social exclusion has a considerable impact on an individual's access to equal opportunity if social interactions occur between groups in a poor –subordinate relationship. The focus on groups recognizes the importance of social relations in the analysis of poverty and inequality (Thorat and Haan 2008-a)

The outcomes of social exclusion in terms of low income and high degree of poverty among the excluded groups depend crucially on the functioning of social and economic institutions through a network of social relations, and the degree to which they are exclusionary and discriminatory in their outcome. Social exclusion has a sizeable impact on an individual's access to equal opportunities if social interactions occur between groups in power/subordinate relationship. The groups focus on social exclusion recognizes that people are excluded because of described rather than achieved features, beyond individual agency or responsibility (Thorat 2005-c).

One of the important arguments, Thorat puts, is the individual exclusion versus group exclusion. The concept of social exclusion essentially refers to the process through which groups are wholly or partially excluded on the basis of group identities from full participation in the society, economy, and polity in which they subsist. It involves two crucial dimensions, namely, ‘societal relation’ (causing exclusion) and their ‘outcomes’ (causing deprivation). Therefore, for understanding the nature of exclusion, insights into societal relations and institution of exclusion is an important as delineating their outcomes in terms of deprivation for excluded groups (Thorat and Newman 2010).The concept of social exclusion clearly draws distinction between group exclusion and exclusion of an individual. In case of ‘group exclusion’, all persons belonging to a particular social/cultural group are excluded because of their group identity and not due to their individual attributes. Exclusion of an ‘individual’ is fundamentally different from the exclusion of a ‘group’. Individual (both from excluded and non-excluded group) often get excluded from access to economic and social opportunities for various reasons specific to them (and not because of their group social/cultural identity). For instance, individuals may be excluded from employment due to the lack of requisite education and skills. On the other hand, in case of the exclusion of a social group variables associated with social and cultural identities –such as social origin like caste, ethnicity, religion, gender, colour and race – become important and exclude all persons belonging to them from access to capital assets, business, employment, education, civil and political rights, and other social needs. Thus, the group characteristics of exclusion are based on social and cultural identity, and are irrespective of individual attributes (Thorat and Newman 2010).

### **Concept of Economic Discrimination –Market and Non-market Discrimination**

Within social science literature, a more precise elaboration of the concept of discrimination has come from the discipline of economics in the context of race and gender. Mainstream economics literature throws market and non-market transactions, and some develops the concept of market discrimination with some analytical clarity. In the market discrimination framework, the discrimination of a group may operate through restrictions on entry to markets and/or through ‘selective inclusion’, with unequal treatments in market and non-market transactions.

Labor market discrimination, as Thorat argues, can occur in hiring –for instance, when two persons with similar employment experience, education, and training apply for employment, but because they differ in some non-economic characteristics, they face denial in hiring (Thorat and Newman 2010). The differences are thus, correlated with certain non-economic (social origins like caste, origin, ethnicity, and religious backgrounds) characteristics of an individual. He also said that, there are very few theoretical attempts at the economic interpretation of the caste system, but nevertheless, they do recognize that caste as a system of social and economic governance is determined by certain religious ideological notion, and customary rules and norms, which are unique and distinct. The economic organization of the caste system is based on the division of the people in social groups (or castes), in which the social and economic rights of each individual caste are pre-determined or ascribed by birth and made hereditary. The entitlement to economic rights is, however, unequal and hierarchical (graded). The economic and social rights are unequally assigned and, therefore the entitlement to rights diminishes as one move down the caste ladder. The system also provides for a community-based regulatory mechanism to enforce the system through the instruments of social ostracisms (or social and economic penalties), and is reinforced further with the justification from and philosophical elements in Hindu religion (Thorat and Newman 2010).

Caste/untouchability –based exclusion is reflected in the inability of individuals from the lower castes to interact freely and productivity with others and this also inhibits their full participation in the economic, social, and political life of community. Incomplete citizenship or denial of civil rights (freedom of expression, rule of law, right to justice), political rights (right and means to participate in the exercise of political power), and socio-economic rights (right to property, employment, and education) are the key dimensions of an impoverished life. From this perspective, Thorat gives the concept of caste and untouchability –based on market and nonmarket discrimination is defined.

1. Complete exclusion or denial of certain social groups such as the lower caste by higher castes in hiring or sale and purchase of factors of production, (like agricultural land, non-land capital assets, and various services and inputs required in production process) consumer goods, social needs like education, housing, health services, and other services transacted through market and non-market channels, which is unrelated to productivity and other economic attributes.
2. Selective inclusion but with differential treatment to excluded groups, reflected in differential price charged or received (different than market prices). This may include price of input factors involved in production such as wages to human labor, price for land or rent on land, interest on capital, and rent on residential houses. This may also include price or fee charged by public institutions for services such as water, electricity and other goods and services.
3. Unfavorable inclusion (often forced) bound by caste obligations and duties reflected, firstly, in over-work loss of freedom leading to bondage, and attachment and secondly, in differential treatment at the place of work.
4. Exclusion in certain categories of jobs and services of the former untouchables or scheduled castes who are involved in so-called ‘unclean or polluting’ occupations (such as scavenging, sanitary jobs, leather processing, etc.). This is in addition to the general exclusion or discrimination that persons from these castes would face on account of being low-caste untouchables (Thorat and Newman 2010).

### **Concluding remark**

Social Exclusion revolves around the societal interrelations and institutions that exclude, discriminate against, isolate and deprive some groups on the basis of group identities like caste and ethnicity or religion. In the case of untouchables the exclusion revolves around the caste system and another source of exclusion is linked with ethnic identity from which groups like Adivasis suffer. Exclusion in civil, educational and economic sphere is, thus, internal to the system and a necessary outcome of its governing principles. In the market –economy framework, occupational immobility would operate through restriction in various markets, and may include land, labor, capital, credit, other inputs, and services necessary for pursuing any business or educational activity. Economic discrimination

generally generates consequences, which adversely affect overall economic efficiency and thereby economic growth. The market discrimination leads to failure of market mechanism, which in turn induces inefficiency due to misallocation of labor and other factors among firms and economy. We understand that, the manner in which the customary rules and norms regarding right to property, occupation, employment, wages, education, social status, occupation, dignity of labor, are framed and defined they involved exclusion and exploitation and hence the poverty of the low caste untouchable and other marginalized groups.

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5	Editorial board member	<b>ISSN-</b> Osmania Journal of international business studies Hyderabad (2011)
6	Chief Editor	<b>ISSN-</b> Excel journal of Engineering , technology and Management (2011)
7	Member, Editorial board	<b>ISSN-</b> An international multidisciplinary quarterly research journal of Management, Commerce, Economics and Banking.(2012)