SELP JOURNAL OF SOCIAL SCIENCE

(A Peer Reviewed & Refereed Quarterly Journal with ISSN: 0975-9999 (Print) 2349-1655 (Online)

Impact Factor : 3.655 (CIF), 2.78(IRJIF), 2.5(JIF), 2.77(NAAS)

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Vol : IX ***July - September 2018*** ***Issue 38***

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

ROLE OF LIBRARIAN IN APPLICATION OF RFID TECHNOLOGY IN LIBRARIES

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Abstract

RFID (Radio Frequency IDentification) is the latest technology to be used in library theft detection systems. Unlike EM (Electro-Mechanical) and RF (Radio Frequency) systems, which have been used in libraries for decades, RFID-based systems move beyond security to become tracking systems that combine security with more efficient tracking of materials throughout the library, including easier and faster charge and discharge, inventorying, and materials handling. RFID is a combination of radio-frequency-based technology and microchip technology. The information contained on microchips in the tags affixed to library materials is read using radio frequency technology regardless of item orientation or alignment and distance from the item is not a critical factor except in the case of extra-wide exit gates. The corridors at the building exits can be as wide as four feet because the tags can be read at a distance of up to two feet by each of two parallel exit sensors. Considering the importance of library security, the paper concentrates on application of RFID technology in libraries, its components, benefits and role of librarian are described.

Keywords: *RFID, Library Security, Security System, Tag, Theft detection.*

Introduction

RFID means Radio frequency identification i.e. the technology that uses radio waves to automatically identify individual items. The objective of any RFID system is to carry data in suitable transponders, generally known as tags and to retrieve data, by machine readable means, at a suitable time and place and to satisfy particular application needs

RFID is one of the most technologies being adopted by both industry and academic world. Modern academic library is a place where millions of books advanced; periodicals, CDs, DVDs and other electronic reading materials are contained. It is a challenge to manage for librarians, managing such type of huge collection. RFID technology is in use since the 1970s. RFID tags can be active, semi-passive

and passive. It is a small device that can store information. Passive tags don't have internal batteries. RFID reader is a device that can receive and transmit a radio signal. It is built to encode data stored in the tag's microprocessor. Because of the higher cost, active and semi-passive RFID tags are used for valuable asset tracking. The passive RFID tags are used in RFID library management systems.

RFID library management, using RFID tags library, is easy and convenient. A RFID library management system consists of books, each attached with an RFID tag, RFID reader, computer network and software. Library staff handle lending, returning, sorting, tagging etc. of books, using RFID tags in this library system. A person can locate RFID library books marked with a RFID tags, using the RFID reader which identifies and locates the book. When the book is carried to the counter, the library staff can either activate or deactivate the electronic article surveillance bit in the book's tag. If a book is borrowed, then the surveillance bit is deactivated.

RFID Library Management System

Using RFID in libraries saves library staff's time by automatizing their tasks. An establishment that uses RFID library management saves a book reader, precious time that he would have been spent, waiting for his turn in a queue for borrowing or returning a book. Taking care of books and making them available to the book readers are important tasks. Most of the library staff's time is spent in recording information of incoming and outgoing books.

Borrowing and returning of books can be fully automatized with the help of self check-in/out systems. This system involves installation of special software. A person using this system to borrow books, is presented with options on a computer screen. The person has to identify himself with a code, which is preferably a personal identification number, or any form of unique identity code. Books selected by the person are identified by the system's built-in RFID reader. And, the surveillance bit in the book's tag is deactivated by the system. When a book is returned, the check-in/out system activates the surveillance bit.

Application in RFID Library Management System

1. **Book Drops**: The Book Drops can be located anywhere, within or outside the library. Possible remote locations outside the library include MRT/train stations, shopping centers, schools, etc. This offers unprecedented flexibility and convenience of returning library items at anytime of the day, even when the library is closed.
2. **RFID Transponder or Tagging:** It is the most important link in any RFID system. It has the ability to store information relating to the specific item to which they are attached, rewrite again without any requirement for contact or line of sight. Data within a tag may provide identification for an item, proof of ownership, original storage location, loan status and history. RFID tags have been specifically designed to be affixed into library media, including books, CDs, DVDs and tapes.
3. **Counter Station** is a staff assisted station on services such as loan, return, tagging, sorting and etc. It is loaded with arming/ disarming module, tagging module and sorting module. Arming/Disarming module allows EAS (Electronic Article Surveillance) bit inside the tag of the library material to be set/reset so as to trigger/not trigger the alarm of the EAS gate.
4. **The Patron self check-out station:** It is basically a computer with a touch screen and a built-in RFID reader, plus special software for personal identification, book and other media handling and circulation. After identifying the patron with a library ID card, a barcode card, or his personal ID number (PIN), the patron is asked to choose the next action (check-out of one or several books). After choosing check-

out , the patron puts the book(s) in front of the screen on the RFID reader and the display will show the book title and its ID number (other optional information can be shown if desired) which have been checked out.

5. **Shelf Management:** This solution makes locating and identifying items on the shelves an easy task for librarians. It comprises basically of a portable scanner and a base station.
6. **Anti-theft Detection:** RFID EAS Gates is the anti-theft part of the Library RFID Management System using the same RFID tags embedded in the library items. Each lane is able to track items of about 1 meter and would trigger the alarm system when an un-borrowed item passed through them. The alarm will sound and lights on the gate will flash as patron passes through with the un-borrowed library material.

Important points based on RFID Library Management System

1. RFID tags replace both the EM security strips and Barcode.
2. Simplify patron self check-out / check-in.
3. Ability to handle material without exception for video and audio tapes.
4. Radio Frequency anti-theft detection is innovative and safe.
5. High-speed inventory and identify items which are out of proper order.
6. Long-term development guarantee when using Open Standard.

5.0 COMPONENTS of an RFID System

RFID system has mainly four components:

1. RFID tags / transponder that are electronically programmed with unique information
2. Readers or Sensors to query the tags.
3. Antenna.
4. Server on which the software that interfaces with the integrated library software is loaded.
5. RFID Label Printer
6. Handheld Reader
7. Self Check Unit
8. External Book Return
9. Staff and Conversion Station

1. **Tags:** RFID tag is the heart of the system is the RFID tag, which can be fixed inside a book's back cover or directly onto CDs and videos. This tag is equipped with a programmable chip and an antenna.

Each paper thin tag contains an engraved antenna and a microchip with a capacity of at least 64 bits. These are three types of tags 'read only', 'WORM', and 'read/write'. Tags are read only if the identification is encoded at the time of manufacture and not rewritable 'WORM' (write once read many) tags are programmed by the using organization, but without the ability to rewrite them later 'Read/ Write tags' which are chosen by most libraries, can have information changed or added. In libraries using RFID is common to have part of the read/write tag secured against rewriting e.g. the identification number of the item.

2. **Readers:** A receiver device called as reader detects the signal as soon it enters into its radio range and decodes the number for interpretation; Reader interrogates the tags and offers optimum reading performance enabling instant data capture when passed alongside the items in a continuance movement. The devices used within the building are usually called 'readers' while the ones used at building exits are usually called 'sensors'.
3. **Antenna:** An antenna is connected to the reader to help to process identification of the items and activate/deactivate the tag antitheft function simultaneously. Additional antenna can be added to increase the number of item processed in case of larger transactions.
4. **Server:** The server is the heart of some comprehensive RFID systems. It is the communication gateway among the various components. It receives the information from one or more of the readers and

exchange information with the circulation database. Its software include the SIP/SIP2 (session initiation protocol), APIs (Application Programming Interface) NCIP or SLNP necessary to interface it with the integrated library software

5. **RFID Label Printer:** Used to Print the labels
6. **Handheld reader:** It can be moved along the items on the shelves without touching them. It used in stock verification, used in search for book-misshelved, search for individual book on request.
7. **Shelf Check Unit:** Users identification is done with an RFID-ID card. Users can put item onto the reader surface in front of the self check unit to be registered under particular user's name. Multiple items can be checked out at the same time.
8. **External Book Return/book Drop Station:** Libraries can offer a distinct service, such as ability to return the books when library is closed. It is machine with a slot with a chip RFID Reader integrated into a wall. User identifies him or her then puts the Books into the Slot. Upon Completion of return, user gets a Receipt showing how many and which books are returned.
9. **Staff and Conversion Station:** Staff station consists of antenna, electronic Module and power supply. There are additional software windows Integrated into library management Systems.

6.0 Benefits of RFID use in Library

1. RFID improves library workflow by
2. reducing non-value added work processes
3. Improves staff productivity
4. Improves customer service
5. Assist inventory check with ease.
6. Easy book identification for shelving process
7. Assist traceability of book allocation
8. Enhance book return processes by full automation of check-in, EAS activation and system updates completed simultaneously in the self-return chute
9. Allow better accuracy in book collection management, resulting in reduced book purchase
10. More than one item can be checked out or checked in at the same time.
11. Items can be placed on reader without careful placement that it is required for line of sight system (bar code scanner)
12. Faster inventory process.
13. Ability to locate specific items.

Advantages of RFID in Libraries:

The use of RFID reduces the amount of time required to perform Circulation operations. The most significant time saving with bootable to the fact that information can be read from RFID tags much faster than form barcodes and that served items in the stack can be read at the same time.

1. Self charging discharging
2. Reliability
3. Streamlined Inventory Management
4. Longitivity of Tag life
5. Faster Circulation
6. Reduction in workplace injuries
7. Automated materials handling
8. Easy stock verification
9. Theft reduction
10. High level of security
11. Mis-shelve easy identification
12. External Book Return
13. Improved tracking of high value items
14. Reduce Shrinkage errors
15. Technology standards to drive down cost
16. Reduce materials cost and handling
17. Automated issue/return
18. Automated sorting of books on return
19. Inventory visibility accuracy and efficiency
20. Improved Production planning
21. Ability to manage the expenses over a number of years.
22. RFID tags are very simple to install/inject inside the body of animals, thus helping to

keep a track on them. This is useful in animal husbandry and on poultry farms.

23. RFID technology is better than bar codes as it cannot be easily replicated and therefore, it increases the security of the product.
24. Barcode scanners have repeatedly failed in providing security to books and journals in libraries. But nowadays, RFID tags are placed inside the books and an alarm is installed at the exit doors.
25. The RFID tags can store data up to 2 KB whereas, the bar code has the ability to read just 10-12 digits.

Disadvantages of RFID in Libraries:

1. High Cost
2. Frequency Block
3. Chances of removal of exposed tags exit gate sensor problems
4. User Privacy concern
5. Reader collision
6. Tag collision
7. Interoperability

Role of Librarian

RFID technology introduces an ethical dilemma for librarians. The technology allows for greatly improved services for patrons especially in the area of self check out, it allows for more efficient use of professional staff, and may reduce repetitive stress injuries for library workers. And yet, the technology introduces the threat of hot listing and tracking library patrons. Librarians have taken extra steps to ensure that law such as the USA PATRIOT act can not be used by government entities to invade the privacy of their patrons, and yet many of those same libraries are placing traceable chips on their patron's books. Libraries have traditionally acted to protect and defend 5the privacy of their patrons and yet some are implementing a technology before proper safeguards have been developed. Library use of RFID technology serves to legitimize the technology in the eyes of the community. Therefore, it is incumbent on the library community to ensure that the technology is developed in concert with established privacy principles and that any library use of RFID follows best practices guidelines consistent with library values.

Conclusion

RFID technology is not only emerging but also more effective, convenient and cost efficient technology in library security. This technology has slowly begun to replace the traditional bar-code on library items. The RFID tag can contain identifying information such as a book's title or material type, without having to be pointed to a separate. The information is read by an RFID reader, which replaces the standard barcode reader commonly found at a library's circulation desk. The RFID tag found on library materials. It may replace or be added to the barcode, offering a different means of inventory management by the staff and self service by the borrowed. It can also act as a security device, taking the place of the traditional electromagnetic security strip. And not only the books, but also the membership cards could be fitted with an RFID tag. The cost of the technology is main constraint.

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Available online @ www.selptrust.org/www.iaraindia.com
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Vol. IX, Issue. 38 | Julu - September 2018 © Author

CORPORATION SOLID WASTE (CSW) DUMPED ON ROAD SIDES OF TIRUNELVELI CITY – A SOCIOLOGICAL STUDY

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Abstract

Municipal solid waste management is one of the major environment is one of the major environmental problems in India cities. Improper management of municipal solid waste causes hazards to inhabitants CSW is useless unwarranted material discharge as a result of human activity. Most commonly, they are solids, semisolids, or liquids in containers thrown out of hoaxes commercial or industrial premixes. (Nyangababo and Hamya, 1980). The main objective of this study is to effectively safeguard the public health, safety, welfare and awareness. Open dumping of corporation solid waste (CSW) is observed commonly near road side, open plots, river side, drains and public places; however, it is not prohibited under law. Plastic as a major part of CSW, winds carry plastic bags to distant area sometimes found entangled on the trees and shrubs create nuisance. During rainy season, the blockage of drains and overflowing of water was observed in some areas of the Tirunelveli City. Plastic bags now constitute the biggest challenge to solid waste management in Tirunelveli City. Plastic bag waste has attracted great political and public attention, especially because the waste has myriad unique environmental problems. Tirunelveli corporation has been divided into four zones. Such as Tirunelveli, Thachanallur, Palayamkottai and Melapalayam. Besides, these zones were divided into 55 wards.

Keywords : *Toxic Substances, Waste Management, Solid Wastes, Corporation Solid Waste, Domestic Wastes, Construction Wastes, Electronic Wastes*

Introduction

Incinerating waste also causes problems because plastics tend to produce toxic substances, such as dioxins, when they are burnt. The solid waste management policy for Delhi, has taken feedback from over, 3,000 resident across the east, south, north and New Delhi municipal territories starting from 2015. In many cities of developing countries, waste management is poor and solid wastes are dumped along road sides, and there are several reports concerned with the roadside dumping in developing countries (Henry *et* **al** 2006). Effective solid waste management is vital to the well being of our vicinity. Road side dumping is a serious problem in Tirunelveli City and it could become more serious. Road side dumps are not only an eye sore, but pose

serious health, water and air pollution problems. Roadside dump also increases the cost of maintaining Tirunelveli City roads.

Corporation Solid Waste (CSW) contains all sources of unsorted wastes, such as domestic wastes, construction wastes, electronic wastes and garbage, etc; which are dumped indiscriminately on road sides and any available open pits irrespective of the health implication on people. Now a days roadside dumping has long been a common method of solid waste disposal in Tirunelveli City. Majority of the residents collect their household wastes in plastic bag and place them roadside on every day until it is carried away by Tirunelveli City waste collectors in the city.

Plastic as a part of CSW has played an important role in transforming the life style over the past 30 years and is increasingly used in production and consumption in all other societies, both developed and developing countries. Plastic also takes up a growing percentage of MS W stream and pose environmental challenges. Life, nowadays, is difficult without plastics. Increased use of plastics means the increase of plastic wastes in the municipal wastes. Plastic are resistant to moisture, travel long distances because of their light weight, block drains during rains and trap birds. Plastics cause visible pollution as they contribute to large volume of total CSW and are major threat to air, oceans, soil, livestock, wildlife and marine life. This study reports CSW disposal among Tirunelveli City population.

Results and Discussion

Generally, CSW dumping is regulated in the developed and developing countries. This field study has very clearly shown that present day CSW disposal by people has caused severe environmental and social problems. Considering that it is observed the CSW road side dumping is going on illegally and create several problems. Besides their visual irritation potential health threat is more intuitionally. Some dumps spread into roads right-of-way and must be routinely cleaned up to keep the roads open for traffic. Thus, illegal dumping increases the costs of road maintenance.

If the domestic drainage flows nearly public water supply maybe contaminated, drinking water quality may deteriorate leading to threat to public health. Increase in the population of pests such as rats and some insects may be promoted by uncontrolled dumps.

A recent trend of "use and throw away" towards these polythene bags is a main cause of the problem when purchases were made the plastic bags were given through packing by traders. After some years people of the Tirunelveli City will be accustomed to plastic bags use that they find it difficult to change their habits. Paper packing is slowly comes down in the city. These plastic bags contribute much in terms of volume to road side dumping CSW. Road side dumping of residential wastes including plastic is observed commonly in almost all over city. Dumping is commonly observed near road side, open plots, river side, coastal area, in drains and public places. People used plastic bags commonly for storing their wastes, which ultimately become part of CSW. Sometimes residents pack and throw the food items in the polythene bags. Open burning of waste along with plastic bags is also a commonly observed practice in the city leading to problem of air pollution with harmful gases.

Reuse and recycling are very difficult to impose, complete ban on plastic bags and plastic packing until there is fully equitable alternative available. The reuse of these plastic bags was observed among all shop keepers and rural people, who sell vegetable in the market. Even plastic bags can be used again and again so that threat to environment and life can be reduced. Creating awareness among city people on careless disposal of road side CSW and as well as the harmful effects of these wastes is a big task.

As a result, the following points should be taken into account for proper disposal of CSW across the Tirunelveli City. The first step is to increase the number of dust bins since only 450 dust bins have been placed for the total area of 15 sq.km of Tirunelveli City Corporation.

Authorities must encourage public participation and awareness regarding source and separation of solid wastes. The more public participation increase for source separation and proper disposal of CSW, the higher efficiency will be achieved. Financial support must be provided to encourage recycling of CSW by corporation and private companies. Technical and scientific management of CSW must be adopted for recycling, especially plastics.

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Vol. IX, Issue. 38 | Julu - September 2018 © Author

DIGITAL INDIA: A CRITICAL ANALYSIS

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Abstract

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. Digital India is a dream to ensure that government services are made available for all citizens electronically by improving online infrastructure and by increasing the effectiveness of Internet connectivity with one mission and one target that is to take nation forward digitally and economically. This initiative was taken to ensure that the citizens are getting engaged in the innovation process which is necessary for the economic growth and sustainable development of the country. In order to realize the full potential of this programme, it is necessary to address certain challenges in the way of its successful implementation like digital illiteracy, poor infrastructure, low internet speed, lack of coordination among various departments, issue pertaining to taxation etc. If implemented properly, it will open various new opportunities for the citizens of the country and therefore it requires a lot of efforts and dedication from all departments of government as well as private sector considering the current status of the programme.

Key Words- *Development, Digital, Infrastructure, E-governance, Government, Internet access.*

Introduction

Digital India was launched by the Prime Minister of India on 2nd July 2015 with well-defined objective of connecting rural areas with high-speed Internet networks and improving digital literacy. The vision of Digital India is inclusive growth in many areas such as electronic services, products, manufacturing and job opportunities etc. Digital India aims to provide the much needed focus on the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Each of these areas is a complex program in itself and cuts across multiple Ministries and Departments. Digital India is to be implemented by the entire Government with overall coordination being done by the Department of Electronics and Information Technology.

Literature Review

'Digital India' initiative has been an area

of interest of numerous researches from various disciplines because of its great significance and influence on the economy as a whole and particularly the technological sector.

Sundar Pichai, Satya Nadella, Elon Musk researched about Digital India and its preparedness to create jobs opportunities in the information sector. He concluded that creating new jobs should be continued with shifting more workers into high productivity jobs in order to provide long term push to the technological sector in India.

Microsoft CEO, Satya Nadella intends to become India's partner in Digital India program. He said that his company will set up low cost broadband technology services to 5lakhs villages across the country.

Prof. Singh began with the basic overview of what Digital India entails and led a discussion of conceptual structure of the program and examined the impact of "Digital India" initiative on the technological sector of India. He concluded that this initiative has to be supplemented with amendments in labor laws of India to make it a successful campaign.

Arvind Gupta intends to say that Digital India movement will play an important role in effective delivery of services, monitoring performance, managing projects and improving governance. An Integrated Office of Innovation & Technology to achieve the same, for problem solving, sharing applications and knowledge management will be the key to rapid results, given that most departments work on their own silos. Tracking and managing the projects assumes significance because India has been busy spending money in buying technology that we have not used effectively or in some cases not even reached implementation stage. Sharing learning's and best practices across departments needs to be driven by this Office of Technology.

Gupta and Arora (2015) studied the impact of digital India project on India's rural sector. The study found that many schemes have been launched in digital India to boost agriculture sector and entrepreneurship development in rural areas. Digital India programme has also set the stage for empowerment of rural Indian women.

Rani (2016) concluded that the digital India project provides a huge opportunity to use the latest technology to redefine India the paradigms of service industry. It also pointed out that many projects may require some transformational process, reengineering, refinements to achieve the desired service level objectives.

Midha (2016) concluded that digital India is a great plan to develop India for knowledge future but its improper implementation due to inaccessibility and inflexibility to requisite can lead to its failure. Though digital India programme is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we Indians should work together to shape the knowledge economy.

Research Objectives

1) To understand the concept of 'Digital India'

2) To examine the features of 'Digital India'

3) To evaluate the opportunities and challenges with special reference to 'Digital India' 4) To find out practical solutions and innovative ideas to achieve the objectives of 'Digital India'

Research Methodology

Being an explanatory research it is based on secondary data of National & International Journals, articles, government reports, books, newspapers and magazines covering wide collection of academic literature on 'Digital India'. Considering the research objectives, descriptive research design is adopted to have more accuracy and rigorous analysis of research study. Available secondary data was extensively used for the study.

Digital India: Key Areas and Major Initiatives Taken By The Government

Digital India programme is focused on three key ideas:-

- Creation of Digital Infrastructure and Electronic Manufacturing in Native India.
- Delivery of all Government Services electronically (E-Governance).
- Digital Empowerment of Native Indian People.

The three key Digital Tools as the pillars of the project are:

- A Digital Identification which will verify the end user.
- A Bank account for Immediate Benefit Transfers of subsidies and payments.
- A Mobile for worldwide access to all services.

The ambitious 'Digital India' project has always been in news for all the good reasons. The project having a total overlay of Rs 1 lakh crore aims to transform the India into a knowledge economy. It aims to ensure easy access to technology infrastructure and government services to citizens. Digital India is a dream project of the government for the citizens and Industries of India which could help in connecting the various past and present projects to bring India to a global platform. Through this project government services are available for urban and rural citizens digitally or electronically. The idea is to achieve digital innovation and create positive impact for the people living in rural and urban areas. It will certainly attract investment in all product manufacturing industries. The Digital India project aims to transform the country into a digital economy with participation from rural , urban citizens and business organizations to ensure that all government services and information are available anywhere, anytime, on any device that is easy-to-use, highly available and secured. This program can certainly remove the digital gap between the rural and urban India.

Some of the facilities provided under the initiative of Digital India are as follows:

1) **DIGI LOCKER** -The service was launched as an important facility to store crucial documents like Voter ID Card, Pan Card, BPL Card, Driving License, education certificates, etc. in the cloud.
2) **MYGOV.IN** -MyGov.in is a platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a "Discuss", "Do" and "Disseminate" approach.
3) **E-SIGN FRAMEWORK** -This initiative would enable users to digitally sign a document online using Aadhaar authentication.
4) **SWACH BHARAT MISSION MOBILE APP** -The app will enable organizations and citizens to access information regarding the cleanliness drive and achieve the goals of the mission.
5) **NATIONAL SCHOLARSHIP PORTAL** -This initiative aims at making the scholarship process easy. From submitting the application, verification, sanction and disbursal to end beneficiary, everything related to government scholarships can be done on this single portal online.
6) **E-HOSPITAL** -Online registration System under this initiative enables people to avail services like online registration, payment of fees and appointment, online diagnostic reports, checking on the availability of blood online, etc.
7) **DIGITIZE INDIA PLATFORM** -This initiative will involve digitization of data and records on a large scale in the country to make easy and quick access possible.
8) **BHARAT NET** -Under this initiative, a high-speed digital highway will connect all 250,000 gram panchayats of the country.

This is the world's largest rural broadband project using optical fiber.

9) **WI-FI HOTSPOTS** -Development of high speed BSNL wi-fi hotspots throughout the country is yet another initiative to improve digital connectivity in the country.

10) **NEXT GENERATION NETWORK** - Launched by BSNL, this service will replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.

11) **ELECTRONICS DEVELOPMENT FUND** -The fund will be set up to support the manufacturing of electronics products that would help create new jobs and reduce import. The funds will promote innovation, research and product development to create a resource pool within the country.

12) **CENTRE OF EXCELLENCE ON INTERNET OF THINGS (IOT)** -In partnership with NASSCOM, DEITY and ERNET in Bangalore, Centre of Excellence will enable rapid adoption of IOT technology and encourage a new growth strategy. IOT will help the citizens in services like transport system, parking, electricity, waste management, water management and women's safety to create smart cities, smart health services, smart manufacturing and smart agriculture, etc.

Digital India: Major Achievements and Scope

The ambitious 'Digital India' program was started with the basic idea of empowering the poor and the underprivileged. In the right direction revival of MTNL and BSNL is certainly a big step. Digital India program has exceeded all expectations and impact of the Department of Telecommunications is the perfect example in the lives of the common man. Digital India has certainly helped in increasing the awareness level about internet and employment in rural areas of the country. Majority of Indians live in rural areas and therefore the initiative will serve as a backbone for transforming India into a digitally empowered knowledge economy, by ensuring internet service to one and all. This program will enable citizens to easily access wireless internet, promote the use of digital platforms, and make e-Services available to people in the effective manner. This innovative idea will be helpful in bringing down the use of paper and will provide Internet services to the rural areas.

This will ensure the remotest communities of India are included in the digital transformation process. Information is key to development. Internet and mobile connectivity in all communities will enable them to elevate their knowledge level, awareness level and finally socio-economic status. It will also ensure the easy access of various services offered by Government & private sectors in the paper-less environment and fair and speedy delivery mode to save time and money of the citizens of the country. Central government has decided to provide the benefits of the 'Digital India' program to the country's farmers, for which a virtual platform of a national agricultural market is in the process in addition to the idea of connecting 550 farmer markets in the country through the use of technology. The 'Digital India' initiative would also help the farmers by giving them access to information on the best price offered for farm produce on their mobile phones in an instant.

According to analysts, the Digital India plan could boost GDP up to $1 trillion by 2025. It can play a key role in macro-economic factors such as GDP growth, productivity of the workers, growth in number of businesses and employment generation. As per the World Bank report, a 10% increase in mobile and broadband penetration increases the per capita GDP by 0.81% and 1.38% respectively in the developing countries. India is the 2nd largest telecom market in the world with 1.16 billion wireless subscribers and world's 3rd largest

Internet market with almost 259 million broadband users. There is still a huge economic opportunity in India as the tele-density in rural India is only 45% where more than 65% of the population lives. Future growth of telecommunication industry in terms of number of subscribers is expected to come from rural areas as urban areas are saturated with a tele-density of more than 160%.

The digital India project will be helpful in providing real-time education and partly address the challenge of lack of teachers in education system through smart and virtual classrooms. Education to farmers and fishermen can be provided through mobile devices. The high speed network can provide the adequate infrastructure for online education platforms for example Massive Open Online Courses. The GST Network, which is in charge of the technological infrastructure for the Goods and Services Tax i.e. biggest tax reform in India, is ready for translating nearly two billion invoices into digital formats from July1,2017. Services for example Aadhaar, refers to platforms designed to move India towards a paperless environment, cashless economy and a queue-less future.

The government is leveraging technologies in mobile, analytics, Internet of Things and cloud technology to ensure effective implementation of the Digital India program, which is in turn associated with program such as Smart Cities and Make in India. India has made a few achievements in e-governance projects such as Digital Locker, e-basta, the linking of Aadhaar to bank accounts to disburse subsidies.

Bharat Net (erstwhile National Optical Fiber Network), the country's digital infrastructure, has created a common service centre for each panchayat. Considering the broadband technology, India is better placed. According to a report by Akamai (a US-based content delivery and cloud service provider), India's average broadband speed is 23.5 Mbps and maximum speed is 25.5Mbps. Top executives of Tech Companies are in agreement with the vision of Digital India and are willing to invest resources for the same purpose.

Digital India: Major Challenges

Many people in rural areas have no Internet connection, and also the content in regional languages is not sufficient to keep the readers engaged. Only 15% of the households can access the Internet, and few people can access mobile broadband. This scenario is despite the increasing affordability of ICT environment in the country.

According to World Economic Forum (WEF) 2016 report, nearly 33% of Indian population is functionally illiterate, one-third of youth do not attend secondary education. There are vast differences in urban centers such as metropolitan cities and remote rural areas, where an even basic service for example electricity is unavailable to run the Digital India program. India's growing economy and digital push have caught the attention of hackers and an increasing wave of cyber attacks could soon badly impact the country.

India and other South Asian countries are now on the radar of cyber attackers. The government and corporate world need to procure state-of-the-art, New Age security solutions to thwart their plans. It is not only a technological question but also deals with the question of privacy and security. The biggest challenge faced by 'Digital India' is the slow and delayed infrastructure development. Spectrum availability in Indian metros is about a tenth of the same in cities in developed countries. Challenges are in every area right from policy making, changing the work flow up to changing the mentality of the government officers. It is technological change within the most diversified nation. Within the government there are various departments which should be integrated. There is an active involvement of various departments such as telecommunication, justice, finance and

planning, health department etc. Without a smooth teamwork between them, this mission would never be implemented to its full strength.

For digital technology to be accessible to every citizen, significant efforts are needed to customise apps and services to cater to local needs. Finding vendors who can provide such applications has become a challenge. Though there are resources with India but there is a huge capital cost which is to be invested and the fruits of the investment will be received after few years. Net neutrality is must and it is important to understand that digital India without net neutrality would be a great blow to entrepreneurs and citizens of India. India is a diversified country, in terms of language, culture, laws which vary from states to states. Complete integration, that is integration of technology and language, is one of the main challenges.

The Centre's ambitious Digital India program is facing multiple challenges in successful implementation due to lack of clarity in policies and infrastructural bottlenecks, according to a joint report by Assocham-Deloitte. For Digital India to have a large scale impact on citizens across the nation, the digital divide needs to be addressed, considering the importance of connectivity issue in remote rural areas, as currently over 55,000 villages remain deprived of mobile connectivity. This is largely due to the fact that providing mobile connectivity in such locations is not commercially viable for service providers.

Conclusion

Despite a few remarkable achievements, many more initiatives need to be undertaken. The WEF Report is a reminder to the government in this regard, and underlines the need to realize the positive impact of Digital India and other related programs. Public-private partnership models must be explored for sustainable development of digital infrastructure, as has been the case for civic infrastructure projects like roads and metro. The government should try to make additional spectrum available to telecom service providers for deployment of high-speed data networks. Moreover, startups need to be incentivized for the development of the last mile infrastructure and localized services and applications.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

MILLENNIAL CONSUMER SATISFACTION ON ONLINE SHOPPING IN POLLACHI TALUK

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Abstract

Millennial have been living their lives on the internet. These sites have become an integral part of millennial lifestyle. Online shopping of Indian Millennial is still not well researched upon, specifically in the product category of fashion apparels. Hence these studies was undertaken to millennial consumer satisfaction on online shopping in Pollachi and determine influence of online reviews and product variety on purchase intention of millennial in India. This study identified the factors effecting consumer satisfaction of Millennial on an online fashion store. The objectives of the research were to investigate the relationship between purchase intention of Millennial and their attitude towards word of mouth and product variety available on online fashion apparels shopping sites.

Key note: *millennial consumer satisfaction, products attraction, experience of online shopping,*

Introduction

The Online shopping was introduced by Michael Aldrich, he is also called as a pioneer of the online shopping in 1980's.The first online transaction was done by either Net Market or Internet Shopping network in 1994.At the term of next AMAZON.com launched its online shopping site in 1995.And after this Amazon, E-pay was also introduced in the same year. Ecommerce is the main indicator of the online shopping. After this online shopping many people are in no need of to touch and Feel in order to buy. The E-commerce which allows to directly buy the good by the in the form of consumer from the seller in a real time is called as Online Shopping. It is otherwise called as a form of E-commerce. Now a day's many people are aware in this online shopping. The people are not going to market now days. Mostly people are get preferred in this online shopping. Because it has many advantages in it. For this Online Shopping there are several and many sites are available in the mode of through Internet. By this means of purchasing goods from online shopping our country gets developed in economical status.

On the process of this online marketing people need to access to the internet and a valid method of payment. Generally educated people

and Medium level people are mainly aware of this online marketing. It reveals the status of every individual people's purchasing power. Customer will be a great difference in purchasing goods from the market and purchasing the goods from the online shopping.

Review Of Literature

Mohammad Toufiqur Rahman (2015) indicated that online shoppers are variety lovers but at the same time they are also cautious about price and time that they spent for shopping. It is obvious that online shopping consumes less time as compared to shopping in other retail stores. Maximum respondent rely on price and their own experience as the basis of quality judgment of items in online shopping. However, the greatest disadvantage of online shopping as indicated by the study is that products cannot be touched or trialed at the time of purchase. So far as payment options are concerned, online shopping offers different payment options like, cash on delivery or payment through internet banking or payment by debit card or credit card etc. But majority of the buyers preferred cash on delivery facility.

Shanthi. R and Desti Kannaiah (2015) suggested that the consumer's perception on online shopping varies from individual to individual and the perception is limited to a certain extent with the availability of the proper connectivity and the exposure to the online shopping. The perception of the consumer also has similarities and difference based on their personal characteristics. The study reveals that mostly the youngsters are attached to the online shopping and hence the elder people don't use online shopping much as compared to the younger ones. The study highlights the fact that the youngsters between the age of 20-25 are mostly poised to use the online shopping. It is also found that the majority of the people who shop online buys books online as it is cheaper compared to the market price with various discounts and offers.

Shu-Hung Hsu and **Bat-Erdene Bayarsaikhan (2012)** this study found that consumer innovativeness had a positive influenced on online shopping attitude, and millennial online shoppers are an innovator. The perceived benefits positively influenced on attitude toward online shopping, and the main reasons that millennial consumers shop online was perceived benefits. In turn, Millennial consumers accepted that online shopping was more convenience, product selection, ease/ comfort, and hedonic/enjoyment compared to other channel shopping. This study found that perceived risk negative influenced on attitude toward online shopping. Perceived risk was that the most majority barrier for consumers didn't shop online in millennial.

Sudhakar. D. and **Swarna Deva Kumari. R (2016)** suggested that online shopping is a present phenomenon which has developed a good importance in the trendy business environment. The evolution of online shopping has opened door of chance to provide a competitive advantage over firms. Online shopping has grown in popularity over the years mainly because people find it convenient for the comfort of their home or workplace. In the recent past web possesses a precious place within the economic activities. It makes the lifetime of customers prosper and sleek. Now-a-days individuals show their interest on web. They currently feel glad by getting the product online.

Zuroni Md Jusoh and **Goh Hai Ling (2012)** investigated that influencing millennial consumers attitude towards online shopping is important. From the marketer's perspective, they will more understand the attitude of the millennial consumers towards online shopping as well as the factors influencing consumers to make e-commerce purchases. They can know that e-commerce experience, product perception and customer service have significant association with attitude towards e-commerce purchases through online shopping.

On top of that, they can also know that the consumers who purchase online are more likely to buy clothes, book and make travel booking. From the young generation consumer's perspective, they will know that there are many advantages of online shopping such as it will be more convenience shopping on the internet and there is no crowd of people when shopping through online.

Objective

- The primary objective of this study is to understand the millennial consumer satisfaction on online shopping in Pollachi Taluk
- To understand products attraction when they shop online.
- To understand the experience of online shopping marketers.

Research Methodology

The nature of this research is descriptive and the goal of this research is to explore the consumer's satisfaction towards online shopping and to measure how these factors are extensive. For this reason, a survey was conducted in Pollachi area to collect primary data by using questionnaire which contains 23 relevant questions regarding online shopping. A simple random process has been used to collect data for this research. A quantitative analysis has been used to analyse the research data. All questions are closed-ended because all possible answers were given to the respondents. The Likert scale has been used for the main research question

Table 1

AGE AND PRODUCT ATTRACTION

Age	Product Attraction				Total
	Computer Product	%	Clothing	%	
18-25	5	10	5	10	10
26-30	7	14	10	20	17
31-34	4	8	13	26	17
Above 40	1	2	5	10	6
Total	17	34	33	66	50

Source: Primary data

The above shows that the age and product attraction. 34 % of respondents are product attraction with computer product; 10% of respondents are 18-25 age groups; 14% of respondents are26-30 age group; 8% of respondents are 31-34 age group and 2% of respondents are above 40 age. Majority of 66 % of respondents are preference to clothing materials buying in online shopping were as 10% of respondents are 18-25 and above 40 ages; 20% of respondents are 26-30 age group. The majority of product attraction and buying in online shopping holders 26% of respondents are 31-34 age groups.

Table 2

QUALIFICATIONS AND PRODUCT ATTRACTION

Qualification	Product Attraction				Total	%
	Computer Product	%	Clothing	%		
Primary	5	10	15	30	20	40
Secondary	2	4	15	30	17	34
UG	6	12	1	2	7	14
PG	3	6	2	4	5	10
Professional	1	2	0	0	1	2
Total	17	34	33	66	50	100

Source: Primary data

Table no.2 shows that the qualification and product attraction. 34% of respondents are computer product attraction. 66% of respondents are choosing the clothing products; 30% of respondents are primary and secondary qualification. Qualification wise 40% respondents are primary education and minimum of 2% of respondents are professional education. Majority of 30% of respondents are preference to clothing product attract with primary and secondary education group.

Table 3

QUALIFICATION AND LAST ONE YEAR

Qualification	Last One Year				Total	%
	1 Time	2-4	5-7	More than 7		
PRIMARY	17	2	0	1	20	40
SECONDRY	12	1	1	3	17	28
UG	7	0	0	0	7	14
PG	4	1	0	0	5	10
PROFESSIONAL	1	0	0	0	1	2
Total	41	4	1	4	50	100

Source: Primary data

The above table reveals that qualification and last one year online product purchasing.

40 % of respondents are primary education; 28% of respondents are secondary education; 14% respondents are UG level and minimum of last one year online purchasing in 2% of respondents are professional education. The majority of 41 respondents are buying the product with one time in a year at the same time of maximum buying the primary education group.

TABLE 4

MONTHLY INCOME AND PRODUCT ATTRACTION

Monthly income	Product Attraction			
	Computer product	Clothing	Total	%
10000	9	20	29	58
10000-25000	3	4	7	14
25001-40000	4	9	13	26
40001 ABOVE	1	0	1	2
Total	17	32	50	100

Source: Primary data

The above table shows that the monthly income and product attraction; 58% of respondents are 10,000 monthly income; 14% of respondents are 10,000-25,000 income level; 26% of respondents are 25001-40,000 income level and minimum respondents are 2% of above 40,001. 20 respondents are choosing clothing preference of 10,000 income level. Majority of 32 respondents are choosing the clothing product attraction.

Table 5

MONTHLY INCOME AND LAST ONE YEAR

Monthly Income	Last One Year				Total	%
	1Time	2-4	5-7	More than 7		
10000	26	1	1	1	29	58
10000-25000	5	0	2	0	7	14
25001-40000	9	0	1	0	10	20
40001 ABOVE	1	3	0	0	4	8
Total	41	4	4	1	50	100

Source: Primary data

The above table reveals that the monthly income and last one year online shopping preference. 58% of respondents are last one year online shopping in monthly income from 10,000; 20% of respondents are 25,001-40,000 monthly income; 14% of respondents are 10,000-25,000 monthly income and 8% of respondents are above 40,001 monthly income. Last one year majority of shopping in 1 time 41respondent were as 26 respondents are 10,000 monthly income; 9 respondents are 25001-40,000 monthly income. Minimum of last one more than7 time shopping respondents are only one.

Factor Analysis

Table 6

OVERALL SATISFACTION WITH YOUR EXPERIENCE OF ONLINE SHOPPING

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.586
Bartlett's Test of Sphericity	Approx. Chi Square	110.312
	df	45
	Sig.	.000

Communalities		
	Initial	Extraction
EASIER	1.000	.654
QUICK	1.000	.777
LOWRISK	1.000	.828
PERSONALINFOR	1.000	.690
AFTERSALES	1.000	.725
SECUREDSHOPING	1.000	.861
OFFERLOWPRICE	1.000	.582
TIMESAVING	1.000	.640
ONTIMEDELIVERY	1.000	.585
CONVENIENT	1.000	.539

Extraction Method: Principal Component Analysis.

Total Variance Explained						
Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.755	27.551	27.551	2.755	27.551	27.551
2	1.565	15.646	43.197	1.565	15.646	43.197
3	1.476	14.760	57.957	1.476	14.760	57.957
4	1.084	10.844	68.800	1.084	10.844	68.800
5	.898	8.975	77.775			
6	.655	6.553	84.328			
7	.483	4.831	89.160			
8	.465	4.653	93.813			
9	.355	3.550	97.363			
10	.264	2.637	100.000			

Rotated Component Matrix[a]			
	Component		
	1	2	3
Easier		.530	
Quick		.795	
Low risk		.861	
Personal shopping			.794
After sales			.835
Secured shopping			
Offer low price	.751		
Time saving	.723		
On time delivery	.762		
convenient	.514		

The above table indicates that KMO measure of sampling adequacy is an index to examine the appropriateness of factor analysis. High values between 0.5 and 1.0 indicate that factor analysis is appropriate. Values below 0.5

imply that factor analysis may not be appropriate.

From the above table, it is seen that Kaiser-Meyer-Olkin measure of sampling adequacy index is 0.586 and hence the factor analysis is appropriate for the given data set. Bartlett's Test of Sphericity is used to examine the hypothesis that the variables are uncorrelated. It is based on chi-square transformation of the determinant of correlation matrix. A large value of test statistics will favor the rejection of null hypothesis. In turn, this indicates that 100 factor analyses are appropriate. Bartlett's test of Sphericity chi-square statistics is 110.312, showing the sixteen statements are correlated and hence as inferred in KMO, factor analysis is appropriate for the given data set.

Requesting principal component analysis and specifying interpretation obtained output of factor analysis. There are three stages in factor analysis.

Stage I is the factor extraction process, wherein the objective is to identify the number of component analysis in satisfaction of coir business.

In stage II, there is also a true of thumb based on the computation in eign value, to determine how many factors to extract. The higher the eign value of a factor, the higher the amount of variance explained by the factor. The three factors were extracted as 58.6 per cent of the variance.

The next issue of measurement was to examine the 10 adaptive satisfactions of millennial consumer satisfaction on online shopping indicators. A principal component analysis with varimax rotations was undertaken.

Three factors emerged. All factors loading were over 0.5 with the exception of three which were below 0.5.

Factor I consisted of four (1) offer low price, (2) Time Saving (3) On time delivery and

Factor II consisted of three (1) Easier, (2) Quick responsibility and (3) Low risk.

Findings

The majority of product attraction and buying in online shopping holders 26% of respondents are 31-34 age groups.

Majority of 30% of respondents are preference to clothing product attract with primary and secondary education group.

The majority of 41 respondents are buying the product with one time in a year at the same time of maximum buying the primary education group.

Majority of 32 respondents are choosing the clothing product attraction.

Last one year majority of shopping in 1 time 41respondent were as 26 respondents are 10,000 monthly income; 9 respondents are 25001-40,000 monthly income. Minimum of last one more than7 time shopping respondents are only one.

Conclusion

Millennials' purchasing power will soon exceed that of every other generation, yet the key factors that influence their purchasing decisions are sometimes a mystery to merchants. Selling to Millennial consumers requires knowing these factors – and acting upon them. This article will help explain these factors and provide valuable actionable tips to help you succeed in converting Millennials to loyal customers. Consumer satisfaction with online shopping to their in-store shopping experiences. As of the third quarter of 2018, 58.6 per cent of respondents in Pollachi were satisfied with their online shopping experiences.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

INSTITUTIONAL FINANCE FOR DEVELOPMENT OF MSMES: A COMPARATIVE STUDY OF YSR KADAPA DISTRICT AND CHITTOOR DISTRICT OF ANDHRA PRADESH

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Abstract

Micro, small and medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help industrialization of rural and backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socioeconomics development of the country. MSMEs (Micro Small Medium Enterprises) are shifting slightly from low technology base products to higher end, and in spite of this drift, it represents a vast technological diversity. Indian MSMEs happen to be the significant contributor for the nation's economy. It is highly contributing towards Indian GDP growth by creating high employment and also manufacturing and exporting products. MSMEs are identifying niche markets and there by reach to a wide market space. It is also able to minimize the gap between urban and rural developments. Hence government of India is also interest bringing out several initiatives to boost up the MSME sector. This paper focuses on "A Comparative study of Institutional Finance for Development of MSMEs in YSR Kadapa District and Chittoor District of Andhra Pradesh".

Key Words: *MSMEs, Employment, Opportunities, Development, Institutional Finance.*

Introduction

The Small and Medium Enterprises sector and businesses are left completely to private enterprises. Of late, development of the MSMEs has become extremely important to achieve all round development in the country. Consequently, many MSME opportunities are emerging in fields like electric goods and applications, medicine, engineering, agriculture, communication, atomic-energy, telecommunications, food technology, packing and the like. These opportunities have been increasing rapidly. A robust and vibrant MSME sector can derive benefits from the new

opportunities in both public and private modes. In recent years both government and private agencies have initiated strategies and programmes for developing the skills to run MSMEs among people. The MSMEs produce a wide range of industrial products such as food products, beverage, tobacco and tobacco products, cotton textiles, wool, silk, synthetic products, jute, hemp & jute products, wood and wood products, furniture and fixtures, paper and paper products, printing, publishing and allied industries, machinery, machines, apparatus, appliances and electrical machinery. MSMEs also include a large number of service industries.[1]

Development of Financing Institutions

The 'District Industries Centre' (DICs) programme was started by the central government in 1978 with the objective of providing a focal point for promoting small, tiny, cottage and village industries in a particular area and to make available all necessary services and facilities at one place. The District Industries Centre is the institution at the District level, which provides all the services to them and support facilities to the entrepreneur for setting up Micro, Small and Medium Enterprises. This included identification of suitable schemes, preparation of feasibility reports, arrangements for credit facilities, machinery and equipments, provision of raw materials and development of industrial clusters etc. This Centre caters for Promotion of MSMEs as also Registration and Development of Industrial Cooperatives. The functioning of DICs and their achievement is monitored by the Additional Chief Secretary (Industries) and Director Of Industries & Commerce. The Review of the General Managers is organized frequently to evaluate the performance and also help in resolving difficulties in implementation of different schemes.[2]

State Financial Corporation Act 1951 was brought into force to enable all the state governments (except Jammu and Kashmir) to set up State Financial Corporations as regional development banks. State Financial Corporations provide long term finance to industrial entrepreneurs, subscribing equity and debentures of industrial entrepreneurs, providing financial assistance to small and medium enterprises engaged in service sector and provide working capital loans and meeting various short term needs of their clients.[3]

Scheduled commercial bank is a different type of bank that provides a mort services such as accepting deposits, making business loans and also offering basic investment products. Scheduled commercial bank is a public sector bank it can be refer to the bank or a division of a bank that deals with deposits and loans from corporations or large business.[4]

Objective

The main objective of the present study deals Institutional Finance for Development of MSMEs: A comparative study of YSR Kadapa District and Chittoor District of Andhra Pradesh.

Statistical Tools and Techniques

The data gleaned from different sources are processed, tabulated, analyzed and interpreted with the help of various tools and techniques such as various statistical tools like Mean, Standard Deviation, Co-efficient of variation and Linear Growth Rate are applied in appropriate contexts to analyze the data.

Review of Literature

Ms. Jahnavi K. Dubal (2015), had examined the major issues in the financing of SMEs in the Indian context, such as the information asymmetry facing banks and the efficacy of measures such as credit scoring for SMEs; whether transaction lending would be adequate to address the information issues or would lending have to be based on a relationship with the SME, using both 'hard' and 'soft' information; and whether the size and origin of the bank affect the availability of credit to SMEs.[5]

MSME Report on Skill Development, Government of India (2015), the report mainly focuses on various skill development

initiatives that the government of India is trying to implement with the help of different stakeholders. As the government is trying to give more focus more on this sector, the sectoral policy shows certain improvements in terms of skill development. The programmes are meant to benefit the individual labour forces as well as entrepreneurs as both the groups are getting equal weightage in terms of this initiatives.[6]

Anup KR. Das (2015), the paper identified the effectiveness of two programmes, viz. National Skill Development Mission and National Rural Livelihood Mission to uplift the skill development initiatives of government for the benefit of the urban as well as the rural poor. These skill development initiatives basically help them to come out of poverty by introducing various sector specific skill development programmes. The diversification of job orientation other than agriculture and informal sector will push up the earning and reduce the social and economical imbalance that exists in the society. These are the programmes that can be implemented with the help of PPP model as government alone may not be in a position to implement the same with the help of its existing resources. Considering the future market, these initiatives prove to be effective if planned accordingly.[7]

Credit Rating Information Service of India Limited (2016), studied the problems of MSMEs The study pointed out that finance issues pose the biggest challenge among a host of factors hindering the growth of MSMEs in the country, apart from issues like infrastructure, government policy, marketing and technology. MSMEs also experience cash flow problems due to slow moving or excessive stock, which gives rise to poor stock or inventory management, too generous credit terms, cash watered on unprofitable products or services and unnecessary expenditure (money spent on buildings, houses, luxury cars) as well as drawings. The study suggested cash-flow management of MSMEs which mainly includes action related to cash payment, collection management and liquidity management, to help them maintain an optimal cash balance that is neither excessive nor deficient.[8]

Gujarat Chamber of Commerce & Industry (2016), to support 'Make in India' campaign, the Gujarat Chamber of Commerce & Industry (GCCI) will take the help of PSUs to revive the closed Small and Medium Enterprises (SMEs) in the state."Under 'Make in India', government insists on developing ancillaries of defence and other sectors at home rather than importing them. If units, which were shut down for some reasons can be revived, they can contribute to the programme.[9]

Institutional Finance for Development of MSMES in Ysr Kadapa District and Chittoor District

Details of percentage achievements of District Industries Centres in YSR Kadapa district during the period 2006-07 to 2015-16 are presented in table 1

Table 1 : Percentage Achievements of District Industries Centre in YSR Kadapa district during the period 2006-07 to 2015-16

Year	Percentage of MSMEs Units	Percentage of Credit Deployed	Percentage of Employment
2006-07	94.11	62.12	106.56
2007-08	97.49	90.26	99.71
2008-09	100.08	83.47	99.52
2009-10	98.56	116.99	108.52
2010-11	97.30	96.41	96.26
2011-12	104.46	83.22	122.42
2012-13	109.13	90.22	[illegible]
2013-14	107.57	95.75	135.58
2014-15	105.75	117.80	128.94
2015-16	97.49	105.42	112.38
Mean	**101.23**	**94.36**	**110.74**
SD	**5.17**	**16.93**	**10.74**
CV (%)	**5.10**	**17.94**	**9.69**
LGR	**5.29**	**7.20**	**6.25**

Source: District Industrial Centers in YSR Kadapa district 2015-16

Table 1 show that the percentage of achievements against targets during the study period of MSMEs units recorded was above 94.11 per cent. The achievement percentages were the highest at 109.13 per cent in 2012-13

and the lowest at 94.11 in 2006-07. The achievement percentage to target credit deployment recorded the highest at 117.83 per cent in 2014-15 and the lowest at 62.12 per cent in 2006-07. When it comes to achievement percentages of employment recorded, a high of with 120.91 per cent in 2014-15 was recorded and the lowest was 96.26 per cent recorded in 2010-11. The LGR for percentage of achievement recorded for credit development was a high of with 7.28 per cent followed by employment at 6.21 per cent and MSMEs units 5.29 per cent. Percentage of achievements by district industries centres in Chittoor district during the period 2006-07 to 2015-16 is presented in table 2.

Table 2 : Percentage of Achievements by District Industries Centre in Chittoor district during the period 2006-07 to 2015-16

Year	Percentage of MSMEs Units	Percentage of Credit Deployed	Percentage of Employment
2006-07	99.26	60.33	102.90
2007-08	97.87	79.33	99.51
2008-09	99.30	105.02	98.23
2009-10	99.57	101.56	100.72
2010-11	97.98	95.86	98.46
2011-12	99.34	91.32	100.52
2012-13	99.34	102.94	110.80
2013-14	103.14	100.70	113.14
2014-15	95.03	100.51	114.31
2015-16	96.02	102.54	111.30
Mean	98.67	93.83	107.89
SD	2.25	13.92	6.76
CV (%)	2.23	14.85	6.30
LGR	4.42	6.97	5.75

Source: District Industrial Centre in Chittoor District 2016.

Table 2 shows the percentage of achievements against targets during the study period. The achievement percentage to targeted MSMEs units recorded was above 94 per cent. The achievement percentages were the highest at 103.14 per cent in 2013-14 and the lowest at 96.02 per cent in 2015-16. The achievement of targetted credit deployed recorded was the highest at 105.02 per cent in 2008-09 and the lowest at 60.33 per cent 2006-07. When it comes to achievement percentage of employment recorded was as high as 114.31 per cent in 2014-15 and the lowest recorded was 99.51 per cent in 2007-08. The LGR for percentage of achievement recorded for credit development was the highest at 6.97 per cent followed by employment 5.75 per cent and MSMEs units 4.42 per cent. Distribution of Micro, Small and Medium Scale Industries according to the Activity in YSR Kadapa and Chittoor Districts 2015-16 is presented in table 3.

Table 3 : Distribution of Micro, Small and Medium Scale Industries according to the Activity in YSR Kadapa district and Chittoor district during the year 2015-16

Source: District Industrial Centres in YSR Kadapa district and Chittoor district 2015-16.

Table 3 depicts the distribution of Micro, Small and Medium Scale Industries according to the activity in YSR Kadapa and Chittoor districts 2015-16. There are 1049 MSMEs in YSR Kadapa district. Among 1049 MSMEs Mineral based industry occupied major units with 291(27.75 per cent) with the investment of Rs.1242.35 lakhs and providing employment to 2841 members. Next to mineral based industries is other category MSMEs with 247 (23.54 per cent) units with the investment of Rs. 14251.26 lakhs and they providing employment to 961 (4.59 per cent) members. Agro based industry MSMEs stood third place with 110 units and the investment is Rs. 1134.86 lakhs which is providing employment to 2541 members. Rubber, plastic & petro based industrial MSMEs stood fourth place with 111(10.58 per cent) units and having investment of Rs. 2122.96 lakhs which were providing employment to 3651 members. Other category of industrial units account to below 100 units and paper and paper products units occupies lest number of MSMEs with 28 with the investment of Rs. 280.01 lakhs and providing employment to 59 members.

Whereas in Chittoor district, the total number of MSMEs are 1627. Among 1627 MSMEs, other category MSMEs occupies major share with 491 (30.18 per cent) units with the investment of Rs. 16923.41 lakhs and they are providing employment to 9004 persons. Mineral based industries stood second position with 240 (14.76 per cent) units with the investment of Rs. 2465.26 lakhs and they are providing employment to 3131 persons. Agro based industry occupies third position with 210 (12.91 per cent) units with the investment of Rs. 11234.32 lakhs and they are providing employment to 2654 persons. Textile based industry stood fourth place with 190 (11.67 per cent) units with the investment of Rs. 978.32 lakhs and they are providing employment to 2682 persons. Forest based industry stood fifth position with 131 (8.05 per cent) units with the investment of Rs.18.23 lakhs and they are providing employment to 87 persons. Engineering (Other than steel and iron) industry stood sixth position with 101 (6.21 per cent) units with the investment of Rs. 13235.26 lakhs and they are providing employment to 5680 persons. Financing for MSMEs by APSFC in YSR Kadapa district and Chittoor District during the Period from 2006-07 to 2015-16 is presented in table 4.

Table 4 : Financing for MSMEs by APSFC in YSR Kadapa district and Chittoor district during the period from 2006-07 to 2015-16 (Rs. In thousands)

Year	YSR Kadapa district		Chittoor district	
	Micro, Small and Medium Enterprises		Micro, Small and Medium Enterprises	
	Sanctioned	Disbursement	Sanctioned	Disbursement
2006-07	105897	56741	104656	55790
2007-08	65894	47541	54584	74635
2008-09	98741	65146	153687	67863
2009-10	112587	78745	357595	176829
2010-11	114587	85654	124900	111400
2011-12	108951	76753	406000	84000
2012-13	97174	76489	253300	173400
2013-14	145259	92568	268256	182546
2014-15	117652	98459	315478	298125
2015-16	120526	102487	322154	301897
Mean	**108726.80**	**78058.30**	**236061.00**	**152648.50**
SD	**20217.20**	**17758.49**	**119278.40**	**90932.22**
CV (%)	**18.59**	**22.75**	**50.52**	**59.56**
LGR	**7.37**	**9.73**	**12.87**	**17.39**

Source: APSFC, YSR Kadapa district and Chittoor District2015-16

Table 4 depicts the financing for MSMEs by APSFC in YSR Kadapa district and Chittoor district over a ten period from 2006-07 to 2015-16. The sanctioned amount for MSMEs by APSFC has been fluctuating during the study period and it has been increased from Rs. 105897 thousands in 2006-07 to Rs120526 in 2015-16. Whereas the disbursement amount is less than the sanctioned amount and the disbursement amount in 2006-07 was Rs. 56741 thousands and it has been increased to 102487 thousands in 2015-16. On an average the sanctioned amount is Rs. 108726.80 thousands and disbursement amount is Rs. 78058.30 thousands during the study period. The LGR for sanctioned amount is 7.37 per

cent whereas the LGR for disbursement amount is 9.73 per cent. The sanctioned amount for MSMEs by APSFC has been fluctuating during the study period. The sanctioned amount increased form Rs. 104656 thousand in 2006-07 to Rs. 322154 thousands in 2015-16. On an average the sanctioned amount during the study period was 236061.00 thousands. Whereas the disbursement amount increased from Rs. 55790 thousands in 2006-07 to Rs. 301897 thousands in 2015-16. On an average the disbursement amount recorded was Rs. 152648.50 thousands in the study period. The LGR for sanctioned amount during the study period was 12.87 per cent; whereas the LGR for disbursement was 17.39 per cent. Bank-wise growth of Deposits with Regard to MSMEs in YSR Kadapa district and Chittoor District during the Period from 2007-2016 is presented in table 5.

Table 5 : Bank-wise growth of deposits with Regard to MSMEs in YSR Kadapa district and Chittoor district during the period from 2007-2016 (Rs.in lakhs)

Year (End of March)	YSR Kadapa district			Chittoor district		
	Public Sector Banks	Private Sector Banks	All Commercial Banks	Public Sector Banks	Private Sector Banks	All Commercial Banks
2007	342110.83	31634.51	482617.91	563210.43	51026.26	677591.16
2008	445249.61	42136.36	553210.35	523495.35	63480.13	713214.82
2009	531767.52	49321.81	602013.67	542156.13	68154.92	750841.49
2010	569541.68	51247.68	618245.68	695831.87	57678.53	788621.37
2011	590547.69	55475.62	710258.65	759740.04	58971.67	818711.71
2012	610159.86	61245.68	755987.69	837755.86	58797.08	896553.66
2013	654654.87	69458.68	789218.69	1075925.62	78596.33	1154521.95
2014	692457.68	71157.59	811879.59	1282125.36	81425.99	1242526.21
2015	711547.69	79456.81	910258.61	1191258.69	84581.25	1324187.58
2016	785456.87	81256.76	925158.68	1258715.22	90698.12	1418720.58
Mean	**593349.4**	**59239.15**	**715885**	**873021.50**	**69341.03**	**978549.1**
SD	**130877.8**	**16244.47**	**149512.5**	**303985.80**	**13523.63**	**277896.8**
CV(%)	**22.05**	**27.42**	**20.88**	**34.81**	**19.50**	**28.39**
LGR	**9.86**	**11.28**	**9.68**	**12.80**	**8.70**	**11.32**

Source: Lead Bank Office in YSR Kadapa district and Chittoor district 2007-16.

Table 5 depicts the bank wise growth of deposits with regard to MSMEs in YSR Kadapa district and Chittoor district over a ten year period from 2007-2016. All the commercial banks, public sector banks, private sector banks deposits in YSR Kadapa district show an increasing trend during the study period. The deposits of public sector banks have been increased from Rs. 342110.83 lakhs in 2007 as against Rs. 785456.87 lakhs in the year 2016, whereas the deposits of private sector banks in Kadapa district have increased from Rs. 31634.51 lakhs in 2007 as against Rs. 81256.76 laksh in 2016. The LGR of Public sector banks in YSR Kadapa district was 9.86 per cent and private sector banks, 11.28 per cent. The public sector bank's deposits in Chittoor district have increased from Rs. 563210.43 lakhs in 2007 as against 1258715.22 lakhs in 2016. The LGR of public sector banks in Chittoor district was recorded was 12.80 per cent. The private sector bank deposits have increased from Rs. 51026.26 lakhs in 2007 as against Rs. 90698.12 lakhs in 2016. The LGR for deposits of private sector banks record was 8.70 per cent. All commercial bank deposits in YSR Kadapa district deposits have increased from Rs. 482617.91 lakhs in 2007 as against Rs. 925158.68 lakhs in 2016. The LGR for all commercial banks deposits was recorded 9.68 per cent. All the commercial banks deposits in Chittoor district increased from Rs. 677591.16 lakhs in 2007 as against Rs. 1418720.58 lakhs in 2016. The LGR for all commercial banks deposits was recorded as 11.32 per cent. Bank-wise growth of Advances with Regard to MSMEs in YSR Kadapa district and Chittoor district during the Period from 2007-2016 is presented in table 6.

Table 6 : Bank-wise growth of advances with regard to MSMEs in YSR Kadapa district and Chittoor district during the period from 2007-2016 (Rs. In lakhs)

Year (End of March)	YSR Kadapa district			Chittoor district		
	Public Sector Banks	Private sector banks	All Commercial Banks	Public sector banks	Private sector banks	All Commercial Banks
2007	232603.32	14331.20	385311.18	425689.07	41287.06	439879.30
2008	294665.65	16387.18	445123.52	436692.73	42302.96	478995.69
2009	345639.43	18254.26	584621.10	449210.40	43047.7	492258.1
2010	432159.12	18795.26	675154.26	626775.14	47947.48	674722.62
2011	452218.69	19157.54	682114.27	612417.26	48871.64	682524.62
2012	478179.54	21218.47	714287.46	634129.24	51845.69	712187.58
2013	541597.62	23589.47	816987.69	653589.22	55467.51	728887.59
2014	618221.81	26741.58	848981.89	698128.69	59258.69	789218.69
2015	691887.21	29854.65	914287.99	712218.62	62187.61	812157.69
2016	721741.56	32187.59	924781.25	745587.68	71219.24	849158.69
Mean	**480891.4**	**22051.72**	**699165.10**	**599443.8**	**52343.56**	**665999.10**
SD	**164282.1**	**5904.52**	**185821.10**	**119309.9**	**9728.96**	**146369.70**
CV (%)	**34.16**	**26.77**	**26.57**	**19.90**	**18.58**	**21.97**
LGR	**12.96**	**11.01**	**10.99**	**9.21**	**9.02**	**9.80**

Source: Lead Bank Office, YSR Kadapa district and Chittoor district, 2007-16

Table 6 shows the bank wise growth of advances with regard to MSMEs in YSR Kadapa district and Chittoor district over a ten year period from 2007 to 2016. All the commercial banks, public sector banks, private sector banks advances in YSR kadapa district show an increasing trend during the study period. The advances of public sector banks increased from Rs. 232603.32 lakhs in 2007 as against Rs. 721741.56 lakhs in the year 2016. The LGR of public sector banks advances received was 12.96 per cent. Whereas the advance of private sector banks in kadapa district has increased from Rs. 14331.20 lakhs in 2007 as against Rs. 32187.59 laksh in 2016. The LGR for private sectors banks advances recorded was 11.01 per cent. The public sector banks advances in Chittoor district have increased from Rs. 425689.07 lakhs in 2007 as against 745587.68 lakhs in 2016. The LGR of public sector banks in Chittoor district recorded was 9.21 per cent. The private sector bank deposits increased from Rs. 41287.06 lakhs in 2007 as against of Rs. 71219.24 lakhs in 2016. The LGR for advances of private sector banks recorded was 9.02 per cent. All commercial banks advances in YSR Kadapa district increased from Rs. 385311.18 lakhs in 2007 to Rs. 924781.25 lakhs in 2016. The LGR for all commercial bank advances recorded was 10.99 per cent. All the commercial bank advances in Chittoor district advances increased from Rs. 439879.30 lakhs in 2007 Rs. 849158.69 lakhs in 2016. The LGR for all commercial banks advances recorded was 9.80 per cent.

Conclusion

MSMEs will definitely continue to contribute towards its role in development of overall economy of the country. MSMEs are addressing to major challenges of Indian economy those are unemployment and poverty. By providing employment opportunities rural India MSME sector has played a crucial role in reducing unemployment and poverty. It has provided scope for regional development and demolishing imbalances. So policy makers should give due consideration for designing good policies for the sector and equally for

policy implementation. So far Financial Institutions like DIC, APSFC, Public sector banks, Private sector banks and Commercial banks have played an important role in support and development of MSMEs in YSR Kadapa district and Chittoor district, focus should be given for more financial inclusion of MSMEs. Government should act on the recommendations of various committee reports appointed for MSME sector analysis.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

FARMER AND MARKET FUNCTIONARIES RESPONSE ON ROLE OF ITC IN TURMERIC PROCUREMENT IN CHAMARAJANAGAR DISTRICT, KARNATAKA

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Abstract

In the competitive world of commodity trading, India has two distinct advantages - the largest arable land and diverse climatic conditions, favorable for a wide range of agri products. It was in such a scenario that ITC's Agri Business Division was created to offer the world the best of India's produce.ITC Agri business Development Started in 1990, ITC-ABD today holds a prominent position among the exporting community in India. It contributes over 60% of ITC Group's total foreign exchange earnings.ITC-ABD attributes its leverage in the industry, to a focused approach on strengthening its core competencies in select commodities. Today, ABD continues to deliver the pick of India's agri commodities like Feed Ingredients - Soyameal; Foodgrains - Rice (Basmati); Coffee & Marine products like Shrimps and Prawns,Processed Fruits - Mango, Papaya and Guava Products and Spices. This paper highlights the role of ITC in Turmeric Procurement in Chamarajanagar District.

Keywords: *ITC, Procurement, Turmeric, Agri Commodities, Feed Ingredients - Soyameal; Foodgrains*

Introduction

India is the largest producer, consumer and exporter of turmeric. Other producers in Asia include Bangladesh, Pakistan, Sri Lanka, Taiwan, China, Burma (Myanmar), and Indonesia. Turmeric is also produced in the Caribbean and Latin America: Jamaica, Haiti, Costa Rica, Peru, and Brazil. The use of the spice spread widely in Oceania, but it is not used as a condiment in Melanesia and Polynesia. Major importers are the Middle East and North African countries, Iran, Japan and Sri Lanka. These importing countries represent 75% of the turmeric world trade, and are mostly supplied by the Asian producing countries. Europe and North America represent the remaining 15%, and are supplied by India and Central and Latin American countries. Taiwan exports mostly to Japan. The United States imports of turmeric come from India at 97%, and the rest is supplied by the islands of the Pacific, and Thailand..

Indian scenario

India has 185.32 lakh hectares under turmeric cultivation with a total production of 701.66 lakh tones. Andhra Pradesh topped both in area and production with 73.93 lakh hectares

and 375.77 lakh tones respectively. Tamil Nadu follows with 33 lakh hectares with 158.64 lakh tones (As per latest Statistics). Productivity was highest in Tamil Nadu 6118 Kg/ha.

Turmeric is a seasonal product which is available in the market mainly in two seasons, commencing in mid February to May and second season is mid August to October.

The important varieties used in India are: 'Alleppey Finger' (Kerala) and 'Erode and Salem turmeric' (Tamil Nadu), 'Rajapore' and 'Sangli turmeric' (Maharashtra) and 'Nizamabad Bulb' (Andhra Pradesh). In Tamilnadu, the important varieties cultivated are Erode local, BSR-1, PTS-10, Roma, Suguna, Sudarsana and Salem local.

Some of the important turmeric varieties exported from India are Allepey Finger Turmeric, Rajapuri, Madras and Erode variety. The processed forms of turmeric exported are dry turmeric, fresh turmeric, turmeric powder and oleoresin.

Importance of the study

In chamarajanagara district farmers are facing so many problems in production and marketing of turmeric. the situation of the commission agents, traders is also critical in purchasing the turmeric.

ITC is procuring turmeric in chamarajanagara distirct directly at farm gate but most of the farmers are not aware of the services provided by ITC to farmers.

I am really interested to study the farmers perception towards ITC company and the procurement system of ITC and also to understand problems faced by both farmers and market functionaries

Objectives of the study

- To know the perception of farmers towards ITC company in procurement of turmeric.
- To study the Turmeric marketing problems in the study area.

Methodology

The present study on "the role of ITC in procurement of turmeric - Case study in chmarajanagara district" is based on both primary and secondary data.

The studies on topic like this require not only the secondary data but also the primary data, the primary data is crucial to understand the problems faced by the farmers otherwise the appropriate conclusions and proper suggestions cannot be made therefore the present study used both primary and secondary data.

The priary data will be collected by deferent catogaries producer, commission agent, traders it helps to analyse the perception towards ITC Company. These information will be collected through questionnaire. In addition to this other information's required to understand the subject through several officers in ITC Company to analyse their turmeric procurement in study area.

The secondary data will be gathered from Agricultural produce market committee (APMC) chamarajanagara to make use of such data it helps to analyse the present situation of the turmeric study area.

Sample Design

There are 4 taluks in Chamarajanagara District I will select 4 taluks namely 1.Chamarajanagara 2. Gundlupet 3. Yelandur 4. Kollegala

Taluks	village	no.of farmers	Total
Chamarajanagara	2	10*2	20
Gundlupet	2	10*2	20
Yelandur	1	10*1	10
Kollegal	1	10*1	10
Total	6		60

The total sample size will be 60 farmers Apart from this the Trader,Commission agent,will also be interviewed in Chamarajanagara Disrict.

Traders	4
Commission agent	6
Total	10

Results and Discussions

Regarding to analyzing the primary data which I got in from questionnaire and some secondary data from ITC company this following features can be discussed about the ITC procurement in turmeric in Chamarajanagara District.

1. procurement of Turmeric by ITC
2. Marketing of Turmeric by ITC

ITC Agribusiness has helped the farmers in many ways, such as encouraging among the farmers to access the latest technology for knowledge in the Agricultural sector, sustainable income levels and skill development for improving productivity and ITC can buy the output from the farm to the processor unit,polishing,cleanig,storage,and then to transfer it for concern factory.

As a view of the study area only 43% of the farmers were aware of the ITC procurement in turmeric, rest of them 57% will not aware of the ITC procurement and their produced turmeric sell APMC only.

ITC is an one of the trader, The APMC in study area All the farmers, omission agemt,Traders are facing many problems while marketing, such as Basic facilities, Infrastructure facilities, Management problem, problems in turmeric Auction procedure,labour problem,transporatation problem etc.

Data analysis

Education	No. of farmers	Percent
Literate	40	66.67
Illiterate	20	33.33
Respondents awareness about the ITC's procurement facility		
Opinion	No. of farmers	Percent
Yes	26	43.33
No	34	56.67

Decide growing area for next year		
Opinion	No. of farmers	Percent
Market price	13	21.67
Water availability	23	38.33
Availability of seed	5	8.33
Finance	4	6.67
Both 1-2	2	3.33
Both1-3	7	11.67
Bth 3-2	2	3.33
Both 3-4	4	6.67

Mode of payment		
Mode of payment	No. of farmers	Percent
Cash	51	85
Credit	9	15

Respondent awareness about the crop management practice		
Opinion	No. of farmers	Percent
Yes	8	13.33
No	52	86.67

sale of turmeric commodity		
Opinion	No. of farmers	Percent
Direct sell	14	23.33
Intermediates	40	66.67
Contracts	6	10

whom to sell the turmeric commodity		
Place	No. of farmers	Percent
Erode	20	33.33
APMC	24	40
ITC	14	23.33
Others	2	3.33

Perception about marketing to ITC		
Opinion	No. of farmers	Percent
No response	35	58.33
Good	11	18.33
Poor	14	23.33

How long selling to ITC		
Opinion	No. of farmers	Percent
Not selling	35	58.33
1-2 Year	14	23.33
2-3 year	9	15
above 3 year	2	3.33

Getting any backward linkages		
Not aware of ITC	36	60
Yes	5	8.33
No	19	31.66

Farmers Marketing problems		
Problems	No. of farmers	Percent
Lab our	5	8.33
Transportation	8	13.33
Price variation	10	16.67
Competition	4	6.67
Both 2-3	7	11.67
Both 1-3	17	28.33
Both 1-4	3	5
Both 3-4	2	3.33
Both 1-2-3	4	6.67

commission agent opinion for the market		
Opinion	No. of commission agent	Percent
Good	2	33.33
Bad	4	66.67

Commission agent attend the market		
In Year	No. of commission agent	Percent
2-3Year	2	33.33
3-5Year	4	66.67

Commission agent opinion for stall		
stall is useful	No. of farmers	Percent
Yes	2	33.33
No	4	66.67

Turmeric arrivals come from to APMC		
District	No. of commision agent	Percent
Chamarajanagara	2	33.33
Yelandur	0	0
Gundlupet	4	66.67
Kollegala	0	0

Cleanness of the market		
Opinion	No. of farmers	Percent
Good	1	16.67
Poor	4	66.67
Very poor	1	16.67

Opinion to APMC procedure		
Opinion	No. of farmers	Percent
very Good	0	0
Good	3	50
Poor	2	33.33
Very poor	1	16.67

Trader opinion for the market		
Opinion	No. of farmers	Percent
Satisfied	1	25
Not satisfied	3	75

Trader opinion for services in the market		
Opinion	No. of farmers	Percent
Good	1	25
Average	2	50
Poor	1	25

Trader opinion for the cleanness of the market		
Opinion	No. of farmers	Percent
Average	1	25
Good	0	0
Poor	3	75

Source: Primary Data – 2018

In this study Out of 60 farmers, 66.67% farmers are literate and rest of 33.33% farmers are illiterate. It shows that majority of the farmers are literate and they can easily understand the changes in the market and they can easily adopt new development in the field of production and marketing of agricultural commodity.

In this study 56.67% of farmers are not aware of the ITC procurement facilities and the rest of 43.43% of farmers are aware of ITC procurement. It shows that majority of farmers are not aware about the ITC. It shows that ITC procurement department comity did not took proper steps to make aware of its procurement facility to farmers.

In this study out of 60 farmers 38.33% them are deciding the growing area for next year based on availability of water and 21.67% of farmers decide based on the market price and 11.67% of farmers decision based on the both market price and availability of seed and 6.67% of farmers decide based on the finance. It shows that majority of the farmers pre-planned based on market price, water availability and seed availability.

In this study out of 60 farmers 85% of the farmers are getting payment through cash and rest of 15% of the farmers are getting through credit payments. It shows that transaction in the marketing majority happen Through cash mode of payment.

In the study the 86.67% of farmers were not aware of the crop management practice and rest of 13.33% of farmers aware of the crop management practice.it shows that majority of the farmers don't know the crop management practice they are adapt traditional pattren.

The 66.67% of farmers selling their produced turmeric through intermediaries and 23.33% of the famers sell directly and rest of the 10% farmers selling through contractors. It shows that majority of the farmers selling their commodity through intermediaries, because of reducing the risk in the marketing and minimize the marketing cost.

The 40% of the farmers are selling their produce turmeric commodity to APMC and 33.33% of the farmers are selling Erode and 23.33% of farmers selling to ITC rest of 3.33% of farmers are selling in other local market. it shows that majority of the farmers selling to APMC, compare to APMC and Erode, farmers selling to ITC is low, because of farmers are not aware the ITC procurement. And 59% of the farmers are not responded to this question because they are aware of the ITC procurement and their work. Rest of 23% of farmers who are selling to ITC their opinion to ITC is poor. It shows that ITC procurement in the study area not give the satisfaction services to the farmers.

The 58.33% of farmers not responded to this question because they don't know the ITC procurement. Rest of that 23.33% of the who are know the ITC procurement they are selling from 1-2 years and 15% of the farmers are selling 2-3 year. It shows that majority of the farmers are not selling to the ITC only rest of

the farmers are selling to minimum 3 years.

In this study out of 60 farmers 60% of the farmers are not responded to this question because they don't know the ITC procurement and they don't get any backward linkages. Rest of them 31.33% of the farmers who are already Having interaction with the ITC they are not get any backward linkages through ITC,rest of 8.33% of the farmers will get the information and sufficient help through ITC.

In this study represent the problems faced by the farmers while marketing. Out of 60 farmers 28.33% of the farmers are facing lab our problem and price variation problem. Rest of the 13.33% of farmers is facing problems in the study area. It shows that in the study area all the farmers are facing problems by the time of marketing majority of the farmers facing lab our, transportation, price variation in the market.

In this study represent the opinion of the commission agent in the market towards market facilities. Out of 6 commission agent 4 members are not satisfied with the market structure and rests of 2 of the members are satisfied with the market. It shows the majority of the commission agents are not satisfied with the current market Layout.

In this study represent that of 6 commission agent. Out of this 67% of the commission agent are attend the market more than 3 years. Rests of them are attending below 3 years in the market. It shows that majority of the commission agent are attend the market more than 3 years. They are all the license holder and they are involved in the other marketing activities in the market.

In the study represent that opinion of the commission agent towards the place provide in the market. Out of 6 commission agent 67% of the members are not satisfied with the current market provided place and rest of them are accept the market place. it shows that majority of the commission agent are not satisfied with the place because of the basic facilities are not available in that place.

In the study represent that commission agent opinion towards Turmeric arrivals to the market. 67% of the commission agent were tell to gundlupet taluk and rest of them opinion are chamarajanagar. It shows that majority of the turmeric arrivals come in to the Gundlupet taluk because high productions of turmeric take place in Gundlupet.

In the study represent that opinion of the commission agent towards their business income. Out of 6 members 83.33% of the commission agent will not get the sufficient income from their business and rest of the 16.67% of the members get sufficient income from the business. It shows that average number of commission agent will not get the income because of the price fluctuation, marketing cost is high, and this is the opinion of the commission agent.

In the study represent that opinion of the commission agent towards cleanliness of the market in study area. Out of 6 commission agent 66.67% of the members are the opinion that cleanness maintenance is poor, rest of the members 16.67% were satisfied the market cleanness and rest of 16.67% of members very poor satisfaction give to the cleanness of the market. It shows that average members are not satisfied the overall cleanness of the market.

In this study represent that the opinion of the commission agent towards the APMC procedure in the marketing. 50% of the members are satisfied the marketing procedure, rest of the members will give poor satisfaction to the APMC procedure because of the late process and management problem.

In this study out of 4 traders, 75% of the traders are not satisfied compare to other market rest 25% of the traders are satisfied the market. It shows that majority of the traders are not satisfied with the market environment, because of the marketing problem and other

activities.

In this study out of 4 trader 50% of the traders get average satisfaction from the market and 25% of the traders will get the good satisfaction from the market. It shows that majority of the trader are not satisfied with the market services because of the late process in the market and in proper facilities.

In this study out of 4 traders 75% of the traders are not satisfied with the cleanliness of the market and 25% of the traders are get average satisfaction from the market services. It shows that majority of the trader are not satisfied with market services because of the no infrastructure facilities and auction problem.

Findings of the study

- The majority of the farmers are not aware of the ITC procurement in turmeric in the study area.
- Farmers are not aware about ITC services and the farmers who are aware of ITC services are not satisfied with the service provided by the ITC.
- As the awareness regarding ITC is very less among farmers so they sell their commodity through the village traders and five farmers sell directly to the APMC.
- ITC don't have the strong linkages with the farmers, as they are not providing any kind of backward linkages such as inputs, credits, and etc.to build the better relationship.
- Awareness about the ITC is more among farmers in Gundlupet, so majority of the turmeric arrivals to ITC are coming from Gundlupet taluk.
- Pre-plan of production of turmeric totally depend on availability of water, if the farmers gets the good irrigation facilities they are ready to produce the turmeric in the study area.
- Farmers do not follow any crop management practices such as inter cropping, Growing pattern and proper harvesting management etc.
- Commission agent in the markets are not gaining sufficient income through turmeric sale because of high lab our cost which is reducing their income and also problem in proper market facilities such has e-trading problem, basic facilities like infrastructure facilities, storage etc.

Suggestions

- ITC should provide awareness program me to farmers in order to aware procurement services provided by ITC.
- ITC should provide a backward linkage such has Inputs, credit benefits, and storage facilities to the farmers in order to create awareness.
- ITC should provide crop management practices to farmers in order to help them in taking out better output.
- Market should provide basic facilities such has infrastructure facilities, storage facilities, Effective management of e-tendering,

Conclusion

ITC shares a century long relationship with the farming community reaching directly to the farm gate, linking the farming community to the global business circuits and international best practices. **A spice is** a part of ITC's Agri-Business which is one of India's largest exporters of agricultural products. In the study area turmeric arrivals come to ITC in Gndlupet,chamarajanagara taluk. Because in study area all the farmers are not aware of the ITC procurement in turmeric. And the major turmeric production come from Gundlupet taluk.in study area turmeric farmers facing many problems such has No crop services management practice, not getting better seeds, finacial problem etc.In order to provide these services through ITC, it help to the farmers going with the good production way and also it help to the ITC to more aware of their company

In the study area, it helps to extend their procurement in big way. In turmeric marketing farmers, commission agent, and also traders facing problems in the market such as basic facilities, e-tendering process, management problem ,storage problem etc.Market will provide necessary facilities to the turmeric marketing all the farmers, commission agent to get the good environment to marketing.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

STUDY ON SELECTED FOOD GRAIN PRODUCTION IN TAMIL NADU

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Abstract

Agriculture is the livelihood for every farmer and consequently the economy of the State is primarily focused on agriculture. The role of agriculture in shaping the economy could be reflected from the large proportion of population that depends on agriculture for their livelihood and the significant contribution of agriculture to the State's income. The present study focused on secondary data. The study suggested that Success of Agriculture depends very largely on optimum usage of water and assured irrigation. Hence, the Government is taking intensive efforts to popularize the Micro Irrigation system which helps in bringing more crops per drop.

Keywards: *Land, Water and Food Grain Production, Micro Irrigation System, GDP, Water Resources*

Introduction

Agriculture is the livelihood for every farmer and consequently the economy of the State is primarily focused on agriculture. The role of agriculture in shaping the economy could be reflected from the large proportion of population that depends on agriculture for their livelihood and the significant contribution of agriculture to the State's income. Tamil Nadu is one of the well developed states. It is the second largest state in economic activity after Maharashtra and the fifth largest contribution to India's GDP. Tamil Nadu is the eleventh largest state in India by area and the seventh most populous state. It is the second largest state economy in India as of 2012. But the case of the agriculture sector Tamil Nadu is one of the water starved states in India: it is endowed with three percent of water resources in India. The efforts of the Government to introduce bouquet of frontier technologies, quality seeds, bio-fertilizers helped to achieve a quantum jump in food grain production and the State was honoured with "Krishi Karman" award for having attained total food grain production of 101.52 Lakh Metric Tonnes by Government of India (GoI) during the year 2011-12. Since the food grain production surpassed 100 Lakh Metric Tonnes, the Government of Tamil Nadu (GoT) was given "Krishi Karman" award for

the best performance in pulses production of 6.14 Lakh Metric Tonnes during 2013-14 and for coarse cereals production of 40.79 Lakh Metric Tonnes for the year 2014-15.

Issue

The role of agriculture sector in the Indian economy is major andneeds no emphasis. There have been important developments in Indianagriculture, especially, in the context of farm mechanization, use of hybrid andgenetically modified seeds and adoption of market driven cropping patternsthereby, leading to increase in crop yields and emerging of new cropping patterns. Demographically, agriculture sector is the broadest economicsector and play a significant role in the overall socio-economic fabric of thecountry. It accounted for around 18 percent of the Gross Demotic Product (GDP) at current prices in 2015-16. However,the share of this sector is showing a declining trend except in the year 2013-14. Slowing down of agriculture growth, decline in the number of operational holdings from 11.17 lakh during 1990-91 seven lakhs during 2000-07 indicated that large portion of the rural masses in now seeking job opportunities outside the agricultural sector (Vatta Kamal and Garg, 2008).The present study focuses the bold objectives of to study land use pattern and selected food grain production in Tamil Nadu

Methods

The study based on secondary data. The secondary data collected from agriculture censes agricultural statistics at glance year book from 2011 to 2018.

Analysis and discussion

Tamil Nadu is geographically located between8°5' and 13°35' North latitude and between76°15’ and 80°20' East longitude. As a resultof this geographical position, Tamil Nadu enjoyssemi-arid to dry sub humid climate, whichpermits higher crop productivity under irrigation.Tamil Nadu is one of the most waterstarved states endowed with only three per cent ofthe nation’s water resources putting high stresson irrigation water availability and vulnerable toseasonal fluctuations causing uncertainty inagriculture production.140 million hectares of land is used as agriculture area, as of 2012-2013(Agricultural statistics at Glance, 2015). Over the years, this area has been fragmented into smaller pieces of land. The Tamil Nadu land use pattern as per thelatest statistical report (2016-17) is given below

Table- 1: Land Use Pattern in Tamil Nadu

Sl No	Details	Area (lakh Ha)	% With Reference to Geographical Area
1	Forest	21.57	16.55
2	Net cropptedarea (*)	43.47	33.35
3	Area under Misc. Tree crops	2.32	1.78
4	Permanent pastures	1.08	0.83
5	Current fallow	13.61	10.44
6	Other fallow	18.47	14.17
7	Cultivable waste	3.23	2.48
8	Land put to non-agricultural use	22.01	16.89
9	Barren and uncultivable land	4.58	3.51
	Total Geographical Area	**130.33**	**100.00**
	Cropping intensity (%)	**118**	-

(*) Difference between Gross Cropped Area (51.29 Lakh Hectare)

and Area sown more than once (7.82 Lakh Hectare)

The number of marginal land holdings (less than one hectare) increased from 36 million in 1971 to 93 million in 2011 (Agriculture Censes, 2010-11). Of the total agriculture area under operation, 10 percent of land has been given out on agriculture leases with the percentage of leased out land varying across states (NITI Aayog, 2016). According to the Agriculture censes 2010-11,the number of operational land holders in theState is 81.18 lakh, operating cultivable landof 64.88 Lakh Hectare. Small and Marginalholders account for 92 percent of the total holdingsoperating 61 percent of the area occupied.The average size of the land holding in the Stateis 0.80 hectare which is lesser than the averagesize of land holding of the country(1.15 hectare).

The average annual rainfall of the State

isaround 921 mm which is less than the Nationalaverage of 1,200 mm. The quantum of rainfallreceived during Winter (January - February),Summer (March - May), South-West Monsoon(June – September) and North-East Monsoon(October - December) is three percent, 14 percent, 35 percent and48 percent respectively. The per capita availability ofwater is 750 cubic meters per year as comparedto the all India average of 2,200 cubic meters.About 51 percent of the agriculture are cultivating food grains is covered by irrigation (Ministry of Agriculture and Famers Welfare, 2015). There is a need to improve the efficiency of water use, especially in agriculture. Irrigation currently consumes about 84 percent of the total available water in the country (NITI Aayog, 2015).The details of net area irrigated using varioussources of irrigation across the state (2016-17)are as follows:

Table – 2: Water Source Wise Net Area Irrigated

Source	Availability (Nos)	Net Area Irrigated (LHa)	% with Reference to Net Area Irrigated
Canals	2239	5.27	22.10
Tanks	41127	3.02	12.66
Wells	1872088	15.54	65.16
Others		0.02	0.08
Total		**23.85**	**100.00**

The area irrigated by wells accounted for65 percent followed by Canals (22 percent) and Tanks(13 percent). Out of Gross Cropped Area (GCA) underirrigation (28.45 Lakh ha.) 77 percent is broughtunder food crops and 23 percent under non-foodcrops in the State.Tamil Nadu is the only State across the countrywhere 100 percent subsidy is extended for Smalland Marginal farmers and 75 percent subsidy forother Farmers. As of now, the coverage of microirrigation is one per cent of total irrigated areaand hence the Government is taking variousinnovative measures to expand the area undermicro irrigation in Tamil Nadu with higher fundallocation.It leads to save the production of food grain crops in Tamil Nadu.

During 2016-17, due to various naturalimpediments such as failure of South West aswell as North East Monsoon, non-release ofCauvery water from Karnataka, poor storageposition in all major reservoirs, Vardah cyclone,and most importantly severe drought, the Statewitnessed lesser area under major crops besidesdamage to the standing crops and hencefood grain production reached a low level of52.38 Lakh Metric Tonnes in 2016-17.

Table -3: Food Grain Production in Tamil Nadu

Crop	Food Grain Production (lakh metric tones)						
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rice	74.59	40.50	71.15	79.49	73.75	35.54	65.92
Millets	23.24	13.42	32.73	40.79	34.25	13.45	37.36
Pulses	3.69	2.13	6.14	7.67	5.85	3.39	6.09
Total Food Grains	**101.52**	**56.05**	**110.02**	**127.95**	**113.85**	**52.85**	**109.37**

Majority of the farmer did not have marketable surplus. Major problems faced by the farmer paddy grower were lack of capital or fund, weak market infrastructure, limited transport facilities and fluctuating market prices (Vijay Kumar et al., 2008). The National Food Security Mission for rice is implemented with an objectiveto increase the production of Paddy through areaexpansion and productivity enhancement,enhancing the farm level economy and to restore the soil fertility and productivity at theindividual farm level in eight identified districtsviz., Pudukkottai, Tiruvarur, Nagapattinam,Ramanathapuram, Sivagangai, Thanjavur,Tiruvannamalai and Cuddalore. During 2017-18,the components such as Cluster demonstrations,cropping system based demonstrations,distribution of certified quality seeds of HighYielding Varieties (HYV), hybrids, production enhancinginputs, integrated nutrient and plant protectionmeasures, farm machineries and resourcesconservation techniques besides croppingsystem based trainings were implemented with abudget outlay of Rs.14.84 Crore. The schemewill be continued during 2018-19 also.

Millets are multigrain gluten free small seedsoften called poor man's cereals which gained theprivilege of farmers to change in

consumers' preference resulting in inclusion of milletspoignant from Traditional Foods Basket (TFB) toCommercial Food Baskets(CFB)in Tamil Nadu. Milletsare providing multiple securities such as foodsecurity, fodder security, health and nutritionalsecurity and livelihood security. Millets such asMaize, Sorghum, Cumbu, Ragi, Thinai, Varagu,Samai, Kudiraivali etc., are cultivated in TamilNadu with a normal area and production of8.013 Lakh Ha and 28.88 Lakh Metric Tonnesrespectively. Considering the importance of millets and itsconsumption, in order to increase the milletproduction, various efforts were taken thusresulted 9.17 lakh ha has been broughtunder Millet cultivation during 2017-18.This resulted in increased coverage of 1.157 lakh ha more, when compared tonormal area.

The cereals and pulses occupy about 3/4th of the gross cropped area under cultivation. Millets and pulses registered an increase in productivity to the extent of 30-35 percent increase (Agriculture Statistics at a Glance, 2014). The millets are commonly cultivated in thedistricts of Villupuram, Cuddalore, Salem,Namakkal, Tiruppur, Erode, Perambalur,Ariyalur, Theni, Dindigul, Virudhunagar,Tirunelveli, Thoothukudi, Tiruvannamalai,Dharmapuri and Krishnagiri.Sensitizing the farmers on various local andindigenous technologies, supply of critical inputs,generating consumers' demand for millet basedfood products through awareness creation andprocessing and value addition techniques areimplemented in a massive way under variousongoing and new programmes.

Pulses are the important sources of dietaryprotein and play a vital role in improving the soilfertility. Red gram, Black gram, Green gram and Horse gram are the major pulses cultivated inTamil Nadu covering a normal area of 7.53 lakhha. Pulses being a short duration, less waterconsuming and less input intensive crops, it iscultivated in all the seasons throughout TamilNadu. In order to attain the self sufficiency inpulses production by bridging the yield gap andto increase the cropping intensity for creatingadditional income to the farmers, constantefforts are being taken by the GoT in a mission mode approach foryears.As a result, the area which was 6.37 Lakh Hain 2010-11 has increased to 8.84 Lakh ha in2014-15 and production which was only2.45 Lakh Metric Tonnes in 2010-11 hasescalated to insurmountable record of 7.67 LakhMetric Tonnes in 2014-15.

The productivitywhich was hovering around 385 Kg/Ha alsoincreased to 868 Kg/ha in 2014-15 and set anew bench mark in the production & productivityof pulses in Tamil Nadu. The efforts werecontinued during 2015-16 and 2016 – 17 and as aresult, the pulses area was sustained to anextent of eight Lakh Ha despite severe occurrence offlood and drought.The innovative activities were being carriedout in a mission mode approach to bring an areaof 9.4 Lakh ha and a production of six Lakh MetricTonnes with a productivity of 632 Kg/ha during2017-18 and covered 8.78 Lakh ha area.Besides, farmers are being integrated intogroups to form Farmer Producer Organisation(FPO) through various programmes such asMission on Sustainable Dryland Agriculture andCollective (MSDLAC) farming for ensuring easy access toinputs and services at lesser price and as well as facilitate them to get additional income throughvalue addition.

Conclusion

Agriculture growth has been fairly volatile over the past decade, ranging from 5.8 percent in 2005-06 to 0.4 percent in 2009-10 and -0.2 percent in 2014-15. Overcoming the constraints faced by the agricultural sector in Tamil Nadu, and accelerating growth in agricultural production and the rate of rural poverty reduction will require appropriate policies and investments in four priority areas: improving

the efficiency of water use, increasing the effectiveness of public expenditure and agricultural extension, spurring the development of agricultural markets, and maximizing the real income growth of the rural poor. Success of Agriculture depends very largelyon optimum usage of water and assuredirrigation. Hence, the Government is takingintensive efforts to popularize the MicroIrrigation system which helps in bringing morecrops per drop.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

CUSTOMER PERCEPTION MODEL FASHIONED WITH REFERENCE TO THE MARUTI SUZUKI BRAND

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Abstract

"Customer Perception" is very important concept that every marketer has to analyze for their own development of the product. Knowledge of the marketers in the area of "Customer Perception" enables them to handle the customers by knowing, what they expect and how they perceive the product and how it reflects in the market space. The customer handling is a very interesting task and also it needs some special care.. The model shown in this research is a conceptual model which depicts the importance and intervention of the customer perception in the purchase-decision making process of the customers. The three factors "Satisfaction drivers", "Customer Perception" and "Customer Intention" shown in the model are interrelated and complementary to each other. We can find the statistical evidence in the analysis part of this article for proving the relation among the above said factors.

***Key Words**: Customer Perception, Model, Maruti Suzuki, Purchase decision*

Introduction

India is the second most populated country in the world and the growth rate of Indian economy is also high as compared to developed countries, which attracts the presence of huge demand in the Automobile Small Car Industry. India is becoming emerging market for worldwide auto giants. For most of the people, purchasing a car is the second most important and expensive decision, next to purchase of a house; for the automotive manufacturers, first-time car buyers give them the opportunity to create positive brand image which definitely could be reflected in next coming years because consumers could make repeat car purchasing. The concept of **"Buying Behavior"** is of prime importance in marketing and has evolved over the years. It is very important to understand consumer buying behavior as it plays a vital role while purchasing products. Day to day human wants are growing, expectation is growing. Car models are no exception to this behavior. Consumer behavior is fairly complex as car purchase implies a high level of social and psychological involvement. Consumer buying behavior is a blend of economic, technological, political, cultural, demographic and natural factors as well as Customer's own characteristics which is reflected by his attitude, motivation, perception, personality, knowledge

and lifestyle. This leads to constant modifications of car models and its features in terms of their size, capacity, styling etc. and today we see a new model coming into the market practically every quarter. Market has become very competitive and has become very ***'important place'*** to study the behavior of consumers and also provides useful insights what a consumer requires in a product in a dynamic environment.

Need for The Study

Customer satisfaction is fundamental to the success of any organization. Without satisfied customers, no business or agency can survive for long. Therefore, in this context, the study on ***"customer perception towards Maruti"*** Suzuki brand becomes vital. According to the Consumer Reports' annual Car-Brand Perception Survey, consumers perceive each brand in seven categories: quality, safety, performance, value, fuel economy, design/style, and technology/innovation. Combining those factors gives us the total brand-perception. It is only through research that a company will be able to study the buying behavior of consumers. With better understanding of factors that influence the consumer preference for selecting the automobile brand will help the companies to take necessary actions required to meet the customer's need. They can identify their own strengths and weaknesses, where they stand in comparison to their competitors, chart out the future progress path and improvement. The passenger car market changed very rapidly due to the fierce competition and advance technology, therefore, it requires the automotive manufactures to understand the consumer's preference on time and take fast actions to reflect market changes quickly. So it would be very interesting to know consumer's preference in today's fast-changing passenger car market and how is the customer buying process.

Scope of the Study

The Study aims to find out the factors that influence the customers to select the automobile brands with special reference to Maruti Suzuki Brand. Without knowing the factors, we cannot measure exactly in what way the customer is selecting the automobile brand. So Satisfied Customers able to create new customer effectively through their word of mouth. One mistake can have far- reaching effects on future as well as current customers. So it is essential to find out the customer satisfaction and their expectation towards Automobile brands with special reference to Maruti Suzuki Brand. If any dissatisfaction exists so that remedial measures can be taken by the Company to improve their products and services.

Statement Of Problem

Consumer behavior consists of all human behavior that goes in making before and post purchase decisions. One can succeed in the competitive market only after understanding the complex consumer behavior. An understanding of the consumer enables a marketer to take marketing decisions which are compatible with its consumer needs. Due to the emergence of globalization and liberalization there is a stiff competition among the Automobile industries which are focusing attention in capturing the Indian markets and automobiles are no more considered as luxury once, now occupies a part of day-to-day life and has become a necessity. Customers have now changed their attitude that yesterday's luxuries are today's necessities. To be a successful marketer it is absolutely essential to study the factors that influence the prospective buyers and track them in an effective way.

Objectives of The Study

- To analyze the customer intentions for the purchase of cars.
- To find out the satisfaction drivers, in the perception of the customers.
- To analyze the perceived quality of the Maruti Suzuki brand according to the customers of Coimbatore District.
- To analyze the post - purchase behavior of the Maruti Suzuki customers.

Review of Literature

Dr. Krishnan Kumar (2010) in his paper presented in the conference held in Canada, paper titled, **"Maruti Automotive Center for Excellence"**, he explained, Maruti Suzuki to upgrade their performance in terms of defect reduction, productivity improvement, delivery performance and energy conservation. In the beginning before starting the projects, a two day training program on Lean Manufacturing is given to staff from vendors. Sufficient details are provided about the SMED and how each vendor should attempt to reduce changeover time in order to improve the availability of machines. Chronic problems which are difficult to resolve on day to day basis are also taken up for detailed process observation, data collection and further analysis is carried out to find out real root causes of existing problems.

RuchiMankad, Dr. A.V Vedpuriswar (2006), in his case study titled, **"Maruti-Suzuki's Swift Move"**, The case describes the Indian Passenger car industry and the presence of Maruti in each of the categories. It traces the origin, growth and evolution of Maruti and the role played by Suzuki in enabling it to achieve dominance. The case highlights the global strategy of Suzuki and the marketing strategy of Maruti in launching Swift. It describes the 5 P's of marketing around the launch of Swift in an endeavor to change the image of Maruti as a manufacturer of fuel-efficient but non-stylish cars only. The case finally talks about the plans of other competitors and their strategy to gain dominance and the plans of Maruti to sustain its dominance in all segments.

WasimChauhan, **"Customer Satisfaction Survey for Maruti Suzuki"** is the project conducted for Maruti Suzuki Automotive Pvt.Ltd in the city of Amravati. Today Companies are facing toughest competition ever. The intense competition makes the companies to take the necessary steps. To retain their existing customer as well as attract new once. In the environment of advancement of the technology the companies are trying hard to keep the pace with latest development. This survey will help the company to know the customers satisfaction level and feedback of customers at the product in Amravati. It will also help company to know about the competitors. This will help company to know about wants and expectation of customers.

Balakrishnanmenon, Jagathy Raj V.P (2012), in his paper titled, **"Dominant Partial Least Square Factors of Consumer Purchase Behaviour of Passenger Cars"**, the main purpose of this paper is to develop a model with major variables, which influence the consumer purchase behaviour of passenger car owners in the State of Kerala. Though there are innumerable studies conducted in other countries, there are very few thesis and research work conducted to study the consumer behaviour of the passenger car industry in India and specifically in the State of Kerala.

Sagar at al. (2004), in his paper titled, **"Technological Change in the Indian Passenger Car Industry"**, discussed, as to how the Indian car industry has advanced technologically, driven by a confluence of factors such as intense competition, demanding consumer preferences, government policies (especially tightening emission standards), and the global strategies of the various players. They elaborate that cars manufactured in India are based on designs, incorporating advanced technologies, that are often comparable with those available globally and Indian car exports are also growing.

Research Methodology

Research Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.

Empirical Study

Empirical research relies on experience or observation alone, often without due regard for system and theory. It is data-based research, coming up with the conclusions which are capable of being verified by observation or experiment. We can also call it as experimental type of research. It is necessary to get facts at the firsthand, at their source, and actively to go about doing certain things to stimulate the production or desired information. Here the researcher must set the working hypothesis and should get enough facts for proving or disproving his hypothesis.

Sampling Unit

A decision has to be taken concerning a sampling unit before selecting sample. It may be geographical, construction unit or it may be a social unit. Here the researcher has selected the Coimbatore district as the sampling unit.

Sample Size

This refers to the number of items to be selected from the universe to constitute a sample. In this project 460 Respondents are selected to get optimum result.

Sampling Technique

The researcher must decide the type of sample he will use. i.e., he must decide the technique to be used in the items for the sample. Quota sampling technique is applied here.

Data Collection

Construction of The Questionnaire

A detailed questionnaire consisting of 5-point scale was constructed for the purpose of the study. A pilot study was conducted. Based on the observations in the pilot study, the tool for data collection was revised, refined and standardized.

Tools for Analysis

The following tools have been applied for analyzing the collected data.

1. Cronbach's Alpha Testing
2. Frequency Analysis
3. Correlation
4. Chi-square Test
5. One way ANOVA
6. Factor Analysis
7. KMO Test

Cronbach's Alpha Testing

As shown above, fifty one variables were taken for Cronbach's alpha testing. Here the value for Cronbach's alpha is .632. If some items may be reduced alpha value may go higher.

Reliability Statistics	
Cronbach's Alpha	N of Items
.632	51

FREQUENCY ANALYSIS

TABLE 1 PRIMARY REASON FOR THE RESPONDENTS TO PURCHASE A CAR

PRIMARY REASON FOR THE RESPONDENTS TO PURCHASE A CAR					
	Primary Reason	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Need	221	48.0	48.0	48.0
	Comfort/Convenience	183	39.8	39.8	87.8
	Status/Prestige	49	10.7	10.7	98.5
	Others	7	1.5	1.5	100.0
	Total	460	100.0	100.0	

SOURCE: PRIMARY DATA

From the table 1, we come to know that 48% of the respondents purchased car for their basic need, 39.8% of the respondents purchased car for their comfort, 10.7% of the respondents have purchased car for their prestige and remaining 1.5% of the respondents purchased car for other reasons.

TABLE: 2 IMPORTANT CHARACTERISTICS WHEN PURCHASING THE CAR

IMPORTANT CHARACTERISTICS WHEN PURCHASING THE CAR							
Characteristics		Extremely Important	Very Important	Somewhat Important	Not Very Important	Not at all Important	Ranking
Quality	No	346	107	4	2	1	1
	%	75.2	23.3	.9	.4	.2	
Price	No	205	222	27	6	-	2
	%	44.6	48.3	5.9	1.3	-	
Installation/ First use experience	No	156	221	57	26	-	5
	%	33.9	48	12.4	5.7	-	
Resale value	No	176	225	54	5	-	4
	%	38.3	48.9	11.7	1.1	-	
After sales service	No	192	231	27	4	6	3
	%	41.7	50.2	5.9	.9	1.3	

Source: Primary Data

From the table 2, we come to know that the respondents ranked quality as the number one extremely important characteristics during purchase of a car, price as number two, after sales service as number three, Resale value as number four and Installation and first use experience as number five.

TABLE 3

CRITERIA FOR SELECTING THE PRESENT MODEL

Criteria	Frequency	Percent	Valid Percent	Cumulative Percent
Price	77	16.7	16.7	16.7
Mileage	134	29.1	29.1	45.9
Maintenance	79	17.2	17.2	63.0
Look/Aesthetics	51	11.1	11.1	74.1
Safety features	18	3.9	3.9	78.0
Company's Service	11	2.4	2.4	80.4
Space	5	1.1	1.1	81.5
Comfort	26	5.7	5.7	87.2
Ready Availability	3	.7	.7	87.8
Fuel Type	8	1.7	1.7	89.6
Two or More Option	40	8.7	8.7	98.3
Others	8	1.7	1.7	100.0
Total	460	100.0	100.0	

Source: Primary Data

From the table 3, we come to know that 29.1% of the respondents select the present model due to mileage, 17.2% of the respondents select the present model due to maintenance, 16.7% of the respondents select the model due to the price, 11.1% of the respondents select the present model due to look/aesthetics, 8.7% of the respondents select the model due to two or more options, 5.7% of the respondents select the model due to comfort, 3.9 % of the respondents select the model due to safety features, 2.4% of the respondents select the model due to company's service, 1.7% of the respondents select the model due to fuel type and other options, 1.1% of the respondents select the model due to Space and .7% of the respondents select the model due to Ready availability.

TABLE: 4

DRIVERS OF SATISFACTION

Drivers of Satisfaction		Highly Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Highly dissatisfied	Ranking
Exteriors	No	175	248	36	1	-	1
	%	38	53.9	7.8	.2	-	
Interiors	No	132	261	66	1	-	5
	%	28.7	56.7	14.3	.2	-	
Storage and Space	No	107	269	82	2	-	7
	%	23.3	58.5	17.8	.4	-	
Audio/entertainment/Navigation	No	74	290	69	25	2	11
	%	16.1	63	15	5.4	.4	
Seats	No	109	281	59	7	4	8
	%	23.7	61.1	12.8	1.5	.9	
Air-Conditioning	No	105	286	60	3	6	9
	%	22.8	62.2	13	.7	1.3	
Driving Dynamics	No	146	264	47	1	2	3
	%	31.7	57.4	10.2	.2	.4	
Engine/Transmission	No	132	281	44	3	-	4
	%	28.7	61.1	9.6	.7	-	
Visibility	No	125	271	57	3	4	6
	%	27.2	58.9	12.4	.7	.9	
Driving Safety	No	114	256	72	14	4	10
	%	24.8	55.7	15.7	3	.9	
Fuel economy	No	140	276	43	-	1	2
	%	30.4	60	9.3	-	.2	

Source: Primary Data

From the table 4, we come to know that the respondents ranked the main drivers that lead to their satisfaction level are the Exteriors as the number one, Fuel Economy as the number two, Driving Dynamics as the number three, Engine Transmission as the number four and the Interiors as the number five.

TABLE: 5

FURTHER RECOMMENDATION OF MARUTI BRAND CAR IN YOUR CIRCLE				
Fur Rec	Frequency	Percent	Valid Percent	Cumulative Percent
Definitely	243	52.8	52.8	52.8
Probably	181	39.3	39.3	92.2
Not sure	29	6.3	6.3	98.5
Probably not	4	.9	.9	99.3
Definitely not	3	.7	.7	100.0
Total	460	100.0	100.0	

Source: Primary Data

From the table 5, we come to know that 52.8% of the respondents definitely further recommend Maruti Suzuki car to the colleagues and contacts, 39.3% of the respondents probably further recommend Maruti Suzuki car to the colleagues and contacts, 6.3% of the respondents not sure for further recommend Maruti Suzuki car to the colleagues and contacts, .9% of the respondents probably not to do any further recommendations, .7% of the respondents definitely not recommend Maruti Suzuki car.

Findings

- 48% of the respondents purchased car for their basic need, 39.8% of the respondents purchased car for their comfort.
- Majority of the respondents feel all the attributes are extremely important when purchasing the car.
- 29.1% of the respondents select the present model due to Mileage, 17.2% of the respondents select the present model due to ease of maintenance.
- Respondents ranked the main drivers that lead to their satisfaction level are the Exteriors as the number one, Fuel Economy as the number two, Driving Dynamics as the number three, Engine Transmission as the number four, and the Interiors as the number five.
- 52.8% of the respondents definitely further recommend Maruti Suzuki car to the colleagues and contacts.

Conclusion

For a lot of people now-a-days car is becoming a basic need after food, water and shelter as everyone wants to lead a comfortable life. It is mainly due to the reasons like standard of living, high disposable income, women are equally earning, etc. With the rapid increase in car brands, consumers really have to think hard while making a choice or deciding for the Maruti Suzuki car to be purchased. Due to increased competition, more and more work is to be done by the marketing department so as to understand the purchase behavior of the consumers. Therefore this study would help the companies in understanding the factors that influence the purchase decision of the consumers and their expectations from the passenger cars and it explains how the three important factors have a great reflection on the market space and again how the market space reflection is connected with the customer perception.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

IDENTITIES OF NARIKKURAVARS IN TAMIL NADU

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Abstract

Narikkuravar is the community that hunts foxes and makes a living on their skin, teeth and nails. Narikkuravars are an offshoot of Vagri Family who are known under different names in various regions they live. The Narikkuravars in Tamil Nadu have became very popular thanks to the mass media presentation of Narikkuravars in cinemas, news papers etc. Since the life styles of Narikkuravars are very different from the mainstream of Tamil Nadu, they have become very miserable and noted by the people of Tamil Nadu. Imitating their life style in popular movies, in the name of Kuravan-Kurathi song and dance, has become very popular. In this modernized world, the Narikkuravars struggling in keeping their identities in a traditional way. The present article is going to highlight the common identities of Narikkuravars in Tamil Nadu.

Keywords: *Narikkuravar, Vagri, Tribe, Nomads, Efficacy Dimension, Self-Esteem*

Introduction

The term identity is used in various ways. In one of its more common usages it's refers to the unique characteristics of an individual that distinguish his/her from others in a social context. The essence of the term lies in the fact that identity is the self-definition of an individual in the context of a group. And it is in this context that makes the concept interesting to understand, because both the individual and group forces are at work in crafting the identity of the individual. Identity is a complex concept. It involves a descriptive dimension, an evaluative dimension and a resulting efficacy dimension.

The descriptive dimension helps us to develop a self-concept and the evaluative dimension affects the self-esteem of the person. Greater the positive valence associated with the characteristic one possesses, higher is the self-esteem of the individual and vice versa. Lastly, the efficacy dimension is the basis of the confidence that an individual displays in any work situation.[1] It is commonly known in Tamil Nadu that the Kuravas formed a nomadic tribe. In a landscape littered with a large number of castes, there are about 70 types of Kuravas like Pannikuravas, Uppukkuravas, Malaikkuravas etc., Narikkuravar is the community that hunts foxes and makes a living on their skin, teeth and nails. Narikkuravars are an offshoot of Vagri Family who are known under different

names in various regions they live. The present article is going to highlight the common identities of Narikkuravars in Tamil Nadu.

Etymology of Narikkuravar

Nari+Kuravar = Narikkuravar. Nari is the Tamil name for fox which is known for its cunningness. Kuravar stands for people living on a hill top. Since Narikkuravars hunt these foxes for meat and, sell their teeth, skin etc., for their living, they are called Narikkuravars.[2]

Name Identity of Narikkuravars in India

In Tamil Nadu, they are known as 'Kuruvikkaran' or 'Narikkuravar'.[3] They are known by various names. For example, in Pudukkottai, they are known as 'Perisu' or 'Adi', in Tirunelveli as 'Nariyakar', in Nagapattinam as 'Narithompan', in Kannyakumari as 'Muratiyan', in Tiruchirappalli, Salem and Villupuram Districts as Narikkuravar and in Chengleput and Vellore Districts as 'Kuruvikarans'.[4]

In Puducherry, they are called Narikkuravans; in Andhra Pradesh as Nakla or Naklavandlu, Pillaikuttu Ammu; in Kolkata as Singalan; in Rajasthan as Vagri, Pakdi, Singa; in Kerala as Kuruvikkaran; in Karnataka as Akipikki; in Maharashtra as Patha Parthilowar; in Gujarath and Madhya Pradesh as Vagri; in Uttar Pradesh, Delhi and Orissa as Akipikki. Since their roots link them to Gujarat, they are called as Vagrivel Jath. Vagri in Gujarati means Kurivikkaran and Vagrivel Jath means Tribe of Kuruvikkarans.[5] Other names used are Kuttiraja/Katturaja and Sikkari, the former signifying their affinity to forested stretches and their lordship over them. Their distinctive different cultures and habits make them easily identifiable.

Occupation Identity

The Narikkuravas are distributed throughout Tamil Nadu. They live in rural areas, towns, cities and pilgrim centres. They are known as Oosi Kurarvar because they sell needles (*Oosi*) and beads, and Kuruvikaran as they trap birds *(Kuruvi.)*. Nari in Tamil means fox. They trap small animals such as fox and mongoose and sell their teeth as charms. Some of them use the title *Singha*. They have apparently lived in Tamil Country for several generations.[6]

Physical Identity-Narikkuravar

In the early days, the Narikkuravars were mostly found half clad. He had around his waist a loins-cloth which had several pouches. He had a turban red in colour, on his head. Traditionally, they had a piece of cloth thrown on the shoulder which was mostly saffron in colour and dirty. This piece of cloth on his shoulder served several purposes. When it was doubled, it could be used as a bag. It could be used as a cradle for carrying the child. It could also be used for covering himself during the stay. Some Narikkuravars also used half trousers. They used to wear garland of artificial pearls around the waist and around the neck. They used earrings made of tin and rings on the fingers, made of silver or brass or tin. They also used to wear necklaces, with tooth of a fox as a pendant. During the childhood, their head would be shaven three times. After the shave in the childhood, they do not normally cut their hair in later years. They normally sported long hair which was knotted into a tuft. The reason why they did not trim their hair was that it was considered to be sacrilegious and this would prevent them from participating in religious gatherings.[7] This taboo on trimming of hair resulted in the hair being dirty, riddled with ticks and their appearance being savage.[8] However the present day Narikkuravars have adopted the modern ways of trimming the hair.[9]

Traditionally, male Narikkuravars tied and trimmed their hair into a knot, with the help of hairpins. They sported moustaches in order to exhibit their masculinity. Except for the priests, normally male Narikkuravars did not sport beards. However, one could find many Narikkuravars in the present day to go without

moustaches and sporting beards. Male Narikkuravars used to tattoo in various parts of the body and this practice continues even to this day.[10] The present day Narikkuravars prefer jeans, pants and T- shirts and look almost like everybody else in the modern society.[11] Since they normally eat the flesh of animals like fox, rabbit, grey quill, grey partridge (Kavudari), they are normally physically very strong.[12]

Narikkuravar Women

Narikkuravar women had the habit of buying a Sari[13] and tearing it into two or three pieces and use them as petticoats. Normally Narikkuravar women dressed in such a way that their navel was exposed. Some Narikkuravar women used petticoat, with a piece of cloth thrown around the shoulders (*Dhavani*).[14] Mostly this piece of cloth on the shoulder could also be converted into a cradle for the baby. Even while they were feeding the young ones, they were engaged in the traditional occupation of making necklaces with artificial beads. Mostly the dresses worn by women were just as the dresses worn by the men and they were normally found dirty.[15]

They used to wear necklaces made of artificial beads and old coins. These necklaces of colourful beads were known by different names - *Motto*, *Haldo*, *Hariyu*, *Lalsidiya*, *Dhanda*, *Rupaner* and *Neelam*. In the early period, the number of necklaces owned by a woman could indicate her high status in society. Narikkuravar women, wearing many necklaces, would be considered affluent and considered to have attained a high social status.[16] However, the present day Narikkuravars have changed a lot and they do wear artificial beads but beads mixed with gold.[17] They wear bangles made of tin or lead and glass. They used earrings made of tin. They also used hairpins. They also used nose rings made of gold and silver. Married women wear a special ornament called *Metti** in their toe. They always carry a cloth bag on the shoulder. In the early period, they used to carry a pail made of tin. They used their pail for carrying water and food. This habit of carrying a tiny pail is no longer popular with the Narikkuravar women. Normally, in her shoulder bag, she would carry all the materials necessary for makings necklace of artificial beads. Narikkuravar girls, when they attained puberty, would beautify their eyebrows with a concoction made from some herbs. Married women had the habit of blackening their teeth with the use of some herbs. On account of this blackening of teeth, they were sometimes called 'Mai Kurathi' (Narikkuravar women with blackened teeth).[18] There is a Tamil saying that the eye of Kurathi (Narikkuravar women) is the index of her beauty and this is amply proved by the fact that Narikkuravar women take pains to beautify their eyes.

Narikkuravar women use several methods to make their face look attractive. For example, if the Narikkuravar woman has short hair, they use artificial hair (Savary) to make it some more beautiful. On account of their interaction with other communities and the influence of cinema, Narikkuravar women have started wearing saris. Girls wear petticoats called '*Kaakri'*.

Both men and women of this community normally wear dirty clothes and this problem is compounded by the fact that they chew betel leaves.[19] The stains on their clothes distinguish their community from the main stream. Since Narikkuravar community is a fringe community, the drama played by school children and even cinema, make fun of the odd behaviour of the Narikkuravar community.[20] But recently the Narikkuravar Community has undergone change and the educated elements in the community are trying to mainstream into the majority community.

Clan Identity

According to Edgar Thurston, Narikkuravars speak Marathi language and catch birds for their living. They also beg sometimes. They hunt foxes for flesh and use

their skins for making bags. Hence they are known as Jungle Sathi (Jungle Dwellers). But they call themselves '*Vagri'*. They are also known as *'Ethu Marike Vetta Kandalu'*. It means that they hunt from behind the buffalos. In order to catch the birds, they hide behind the herd of buffalos and mimic the sound of birds.[21]

Narikkuravars claim to have descended from Sivaji, the King of Marattas. Sivaji is said to have hunted tigers and sported the teeth of tiger while hunting his enemies. Vagri means Tiger in the Marathi language and Vagrivala means those associated with the tribe of tigers. May be this is the reason why Narikkuravars address each others as vagri. In the early period, the king who won the war had the right to plunder the conquered country. Narikkuravars were once a part of the Sivaji army. But when they were defeated, they did not prefer to be taken captives. Hence they discarded the military dress, put on a cloth of leaves and went to hilly places in the forest. Till date they have chosen a life of forest drivellers.

In the face of the invading Mughal Army, they took shelter in the forest. They learnt the art of mimicking the sound of birds for the purpose of capturing them for food. If any Narikkurvar were to be stranded in the forest, they would whistle or mimic a bird sound to signal for help.[22] They normally go in groups. But if an individual Narikkuravar were to go into the forest, they would leave behind barks and flowers to facilitate their return. If flowers were strewn on the path, it indicated lone woman Narikkuravar and in case of leaves, it would indicate lone male Narikkuravar.

After the advent of the Europeans, Narikkuravars migrated into towns. Since Narikkuravar were expert hunters of bear, tiger, fox, lion etc., the Europeans gave them guns to replace their bow and arrow. The Europeans employed the Narikkuravars in the battle field because they were considered to be very efficient hunters.[23]

Language Identity

Nomads have their own language and Narikkuravars also have a language of their own. Their spoken language is known as Vagriboli Language. Vagri means Narikkuravar and Boli means spoken language. This Vagriboli belongs to the Indo-Aryan language group. In Tamil Nadu, this language is totally unintelligible. The Vagri Language does not have any script. This language can be easily understood by the people who speak Hindi or Urdu or Gujarati. It was Gift Sironmony* of Madras Christian College, along with his students and Srinivasa Varma of Annamalai University who were responsible for the grammar and dictionary of the Vagriboli Language. In view of their wandering nature, the Narikkuravar community pick up the language of the State in which they happen to settle.

Vagriboli is traced to the Gujarati Language. In course of time, due to the distancing from the Gujarati Language and the mixing of Marathi, Rajasthani etc., the Vagriboli has emerged as an independent language.[24] It is interesting to note that many Narikkuravars do not know the name of the language they speak. On enquiry, they explained that it is difficult to understand because several languages are mixed into the Vagriboli. Some people refer to Vagriboli as the Pattani Language.

Social Identity of Narikkuravar Community

According to Srinivasa Varma, the Narikkuravar Community can be broadly classified into five groups. Gujarati Group worships *Kali,* known as *vehli,* in the Vagriboli and sacrifices the flesh of buffalo. The Mehvado Group worships Eswari and Madurai Meenakshi, known as *novkod* in the Vagriboli and sacrifices goat. Dabi Group worships Durgai, known as *dukav* in the Vagriboli and sacrifices goat. Seliyo Group worships

Mariamman, known as *selio* in the Vagriboli and sacrifices the flesh of goat to appease the god. The Jogan Group worships Kali, known as *vehli* in the Vagriboli and they sacrifice buffalo.[25] The five major groups are hierarchically arranged. The top layer is occupied by Gujarati Group. The next layers are occupied by Mehvado, Dabi, Selio and Jogan in the descending order. The Narikkuravar Community frequently witnesses conflicts between groups over the question of gods they worshipped and the hierarchical position they occupied.

In the Narikkuravar Society, the clan goddesses provide the primary identification of a person. The clans are always headed by a goddess. In the Narikkuravar and similar patrilineal and virile society of India, married girls are removed, both socially and biologically, from their lineage ancestress. Devotion to her own natal goddess, i.e. her father's, will be abandoned once she marries and joins her husband's lineage.[26]

Cultural Identity

Normally, Narikkuravar Settlements are found on the outskirts of any city. The reason why they are located on the fringes of civilized settlement is because Narikkuravars normally do not enter into any social intercourse with the civilized populations. When the majority community picks quarrel with the Narikkuravars, the latter normally shy away from any direct confrontation. In other words, they are prepared to create a social divide between the civilized community and themselves.[27]

Narikkuravar Community is a noisy community and probably it is one of the reasons why they stay away from the civilized community. However, they do cultivate trade relationship with other communities. Another reason for the self-imposed exclusion is due to the fear that their contact with other communities might dilute or dissipate their cultural identity. Narikkuravar Community is very independent and they love the idea of the identity of the community. Since other communities look down upon the Narikkuravars as unclean people, they do not like to come in contact with them.[28]

Each Narikkuravar clan has a bundle of clothes called *Saami – Moottai* meaning 'God's Bundle'. It is filled with the blood of animals sacrificed by the Narikkuravars and clothes dipped in them. The *Saami-Moottai* of a clan must not be touched by the members of another clan. On the death of the head of the family, his eldest son inherits the *Saami – Moottai*. The prestige of a clan – leader depends on the antiquity of his *Saami – Moottai*.[29]

Band and Camp Organization

Group life and camp life are the essential components of any nomadic way of life. The Narikkuravars move as bands in different sizes and composition. Only rarely a group sojourned as a unit in a year, continues in the same place the successive year. Each family decides which group is going to be most accommodative and productive. Groups/ bands are constantly rearranged on the basis of kinship, friendship and expediency. Itinerant Narikkuravars perceive, understand and value the nature of camp life. Camp organization is very fluid in nature and agnatic kinsmen and affined relatives organize themselves temporarily and exhibit fission in the process of their journey from one place to another.[30]

Conclusion

The Narikkuravars in Tamil Nadu have became very popular thanks to the mass media presentation of Narikkuravars in cinemas, news papers etc. Since the life styles of Narikkuravars are very different from the mainstream of Tamil Nadu, they have become very miserable and noted by the people of Tamil Nadu. Imitating their life style in popular movies, in the name of Kuravan-Kurathi song and dance, has become very popular. In this

modernized world, the Narikkuravars struggling in keeping their identities in a traditional way. They struggle to ensure their ST status since from the last four decades. Government acts and policies make serious problems to the society, example - forest act. The Narikkuravars suffered a lot from this act. They slowly lose their occupation sources. In these social-cultural pressures to the Narikkuravars they were pushed to adopt new activity to get their daily bread.

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9. Personal Observation.
10. S. Vijay, *op. cit*, p. 9.
11. *Interview* with Murali (25), Devarayaneri Narikkuravar Colony, Tiruchirappalli on 14th September 2012.
12. *Interview* with Baby (58), Devarayaneri Narikkuravar Colony, Tiruchirappalli on 9th September 2012.
13. A garment that consists of a long piece of cloth that women, particularly in the Indian subcontinent, wear draped around their bodies.
14. Half-Saree
15. Personal Observation.
16. G. Srinivasa Varma, *op. cit*, p. 7.
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. Silver ring worn on one or two toes next to the big toe by married Hindu women in India
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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

TEACHING AND LEARNING PROBLEM SOLVING METHOD: A WAY OF SOLVING THE PROBLEM SCIENTIFICALLY

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Apstract

The scientific environment and its application are influencing modern society. Science has become an integral part of our daily life. Science learning provides to use the problem solving method in developing the scientific attitude of learner. The most important objective of science instruction is to make the pupil aware of the problem solving method of procedure and to inculcate scientific attitude. One of the most important outcomes of the study of science is training in problem solving method or scientific method which is considered as one of the aims of teaching science. Problem solving method refers to a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. To be termed problem solving, a method of inquiry must be based on gathering empirical and measurable evidence subject to specific principles of reasoning. In this method student is involved in finding out the answer to a given scientific problem and thus actually it is a type of scientific or discovery method. Problem solving method involves reflective thinking; logical reasoning, scientific inquiry and results from the achievement of certain abilities, skills and attitude, present evidence indicate that it needs a continuous training. The present paper emphasizes on the meaning, steps, advantages and disadvantages of problem solving method.

Keywords : *Problem solving method, Steps of problem solving method, Advantages and Disadvantages of problem solving method.*

Introduction

"Problem solving method as an educational device whereby the teacher and the pupils attempt in a conscious, planned, purposeful manner to arrive at an explanation or solution to some educationally significant difficulty" ***- James Ross.***

The role of science and technology in the rapid progress of a country like ours is bound to be of utmost significance. Scientific knowledge is doubling itself in some fifteen years and this means that a normal individual will soon get out of date in relation to his awareness of the fast changing world around him. We cannot help this but what we must ensure is that the new generation studying in the schools, colleges and the universities is

taught what is reasonably modern and not feed on what is obsolete. The scientific environment and its application are influencing modern society. Science has become an integral part of our daily life. Science learning provides to use the problem solving method in developing the scientific attitude of learner. The most important objective of science instruction is to make the pupil aware of the problem solving method of procedure and to inculcate scientific attitude. The school will not only give the pupil adequate scientific knowledge and requisite skills to meet the problem of existence. As a science teacher should always promote or give an opportunity to discovery new things. An independent and impartial experimentation help the pupils to develop a logical mind; critical judgment and the habit of solving problems independently to find answers to their own questions. The problem solving methods should be inculcated in all individuals in order that they do not accept things on hearsay; propaganda or superstitious traditions but upon conclusions arrived at on the basis of evidences. Problem solving method is essential to enable the students to adjust themselves and live as efficient citizens of scientific society.

Problem Solving Method

One of the most important outcomes of the study of science is training in problem solving method or scientific method which is considered as one of the aims of teaching science. Problem solving method involves reflective thinking; logical reasoning, scientific inquiry and results from the achievement of certain abilities, skills and attitude, present evidence indicate that it needs a continuous training.

Meaning and Definitions

Problem solving method refers to a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. To be termed problem solving, a method of inquiry must be based on gathering empirical and measurable evidence subject to specific principles of reasoning. In this method student is involved in finding out the answer to a given scientific problem and thus actually it is a type of scientific or discovery method. It is also referred to as ***'the method of science'*** or ***'the method of a scientist'.***

The **Oxford English Dictionary** says that problem solving method is: *"a method or procedure that has characterized natural science since the 17th century, consisting in systematic observation, measurement, experiment and the formulation, testing & modification of hypotheses."*

Risk. T. M. : "*Problem solving may be defined as planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution."*

R. L. Stevenson : *"It is better to travel hopefully than to arrive"*

Abraham Wolf : *"Problem solving methods are of two principle types –technical and logical. The technical methods are very numerous and they are different in the different sciences, but the logical methods of reasoning from the available evidence are not really, numerous and are essentially, the same all the science".*

Steps of Problem Solving Method

The problems solving method is a sequenced and structured way of finding out the results through experiments. The following are the steps of the problem solving method.

1. **Identifying or sensing the problem** : Teacher should take the students to a situation or problematic area where the students can identify or sense the problem by asking questions. A good science teacher always encourages his students to ask questions and tries to answer them in a simple and understandable manner. Such situation or problematic area will stimulate reflective thinking setting up of arriving at

a rational solution.

2. **Defining the problem :** After identifying or sensing the problem students will define the problem in scientific language and proceed towards a solution. The statement of the problem be such that it clearly defines the scope of the problem as also its limitation.
3. **Analyzing the problem :** In this step, students are allowed to identifying the key words in the problem and these help to pursue in the next step.
4. **Collection of data :** In this step, teacher is allowing and suggesting the students to refer books, periodicals, internet to collect information on key words. Unnecessary data should be discarded by discussing with friends or teachers. The data should be free from the mechanical and personal errors.
5. **Interpreting the data :** In this step, student are allowed to organize the data on the basis of similarity and difference. This phase of problem solving demands a great amount of guidance from the teacher because students may not be able to interpret data in a correct way due to lack of experience. The superfluous data should be discarded.
6. **Formulating hypotheses :** In this step, student will frame the tentative hypotheses to the problem after interpretation of data. A hypothesis is in fact a certain tentative solution to the problem. The hypothesis should be free from bias and self inclination.
7. **Testing the most likely hypothesis:** In this step, students are allowed to select a suitable hypothesis or solution for testing with the help of a discussion and experimentation. The experiment or discussion will show the occurrence or non-occurrence of the expected phenomenon and from this we will be able to accept or reject or modify the hypothesis.
8. **Drawing conclusion and generalization :** In this step, conclusion are drawn from the selected hypothesis. The results should support the expected solution. Experiments can be repeated to verify the consistency and correctness of the conclusion. After drawing conclusion the teacher will make generalization by arranging a set of experiment in systematic manner.
9. **Its application to new situation :** In this step, the teacher will allowing the student to associate the current problem solution to the different problems or situation. This step will help in minimizing the gap between classroom situation and real life situation.

Role of the Teacher in Problem Solving Method

For the success of problem solving method the role of the teacher is very important. He should act a co-investigator along with students and must also find sufficient time and have patience to attend to students' problems. Under the proper guidance of the teacher the science laboratory should become the hub for implementations of this method.

Advantages of Problem Solving Method

Advantages of the problem solving method are :

1. Students learn science of their own and teacher works only as a guide.
2. It helps students to become real scientist as they learn to identify and formulate scientific problem.
3. It gives enough training to students in techniques of information processing.
4. This method is based on the principle of *'learning by doing'*.
5. It develops a habit of logical thinking in the students as they are required to interpret data and observations.
6. It helps to develop intellectual honesty in

students by accepting or rejecting or modifying the hypothesis.

7. It helps the students to find the relationships and pattern among things and variables.
8. It provides the training in the scientific methods and skills of discovering new knowledge in science.
9. It develops scientific attitude of mind as well as interest and appreciation through personal experience and keen observation.
10. It helps to give individual attention to every student.

Disadvantages of Problem Solving Method

Some important disadvantages of the problem solving method are as under :

1. It is a long, drawn out and time consuming method.
2. It can never become a full fledged method of learning science.
3. Due to lack of exposure to this method most of the science teachers fail to implement it successfully. This method requires gifted and trained teachers which have research skills too.
4. This method is suitable only for very bright and creative students.
5. There may be non availability of equipments in the laboratory of schools.

Conclusion

The study of science would remain incomplete if we do not adapt the problem solving method in solving the problem. Problem solving method helps to develop the power of reasoning, application of scientific knowledge, critical thinking and positive attitude among the learner. Positive attitude towards science is essential for each individual to live a harmonious life in the nature. The attitude developed by the student, therefore, is beneficial for both the individual and to the existence of nature. Science is a process as well as a product. The understanding of this process is possibly only when the individual will get thorough knowledge about the skills involved in each process. Simple science experimentation does not train the learner in scientific method or develop scientific attitude but efforts are needed to facilitate acquisition of scientific method and scientific attitude. The problem solving method give an opportunity to solve the problems raised or faced by the teacher while teaching or learning process.

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Available online @ www.selptrust.org/www.iaraindia.com
SELP Journal of Social Science
ISSN : 0975-9999 (P) 2349-1655 (O)
Impact Factor : 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Vol. IX, Issue. 38 | Julu - September 2018 © Author

EFFECTIVE RURAL DEVELOPMENT STRATEGIES FOR THE IMPROVEMENT OF INDIAN ECONOMY

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Abstract

The people lives in rural areas are majorly depends on agriculture. The rural agricultural production & consumption process plays a predominant role in developing the Indian economy. The major objective of rural development is to increase farm productivity, for achieving rapid economic transformation, increasing profits to farmers and to increase the household outputs of selected agricultural products. The present article majorly focused on the various rural development strategies in field of agriculture, starting from management of land, labor and natural resources to the effective harvesting, pre processing methods and effective marketing strategies to be followed.

Key words: *Rural development, Agriculture products, Rural development strategies, Indian economy.*

Introduction

The rural agricultural production & consumption process plays a predominant role in developing the Indian economy. Agriculture and agro processing account for 30-60 % of GDP in developing countries. 63 percent of population lives in rural areas only. With rapid urbanization rural people depends mostly on agriculture. India started producing about 700 million tonnes (Mt) of biological materials per year including food grains, fruits, oilseeds, vegetables, milk, eggs, tea, coffee, fiber crops, forest produce and so on. Because of its socio economic impact specifically on employment and income generation, Agro processing is now regarded as the sunrise sector of the Indian economy. The common agro processing industries includes paper making units, hand pounding units for rice, bullock operated sugarcane crushers, water power driven flour mills, bullock driven oil ghanies, spinning wheels and handloom units for weaving etc. The rural areas are consuming a large number of industrial and urban manufactured products.

The major wings for the rural development are

1. Economic dimension
2. Human dimension
3. Science & Technology

4. Resources and Environment
5. Political dimension.

Need for Rural Development

- To raises the quality of life & environment in rural areas.
- To reduce urbanization
- For the improvement of Indian economy
- For the proper management of natural resources like land, water for agricultural production
- To produce variety of food products through agriculture.
- To improve profits for farmers.

The implementation of Rural development strategies will use & develop existing institutional, management and funding mechanisms to focus the expenditure of government in the three spheres to more effectively and efficiently respond to needs and opportunities. So there is a great need to develop the rural areas for the improvement of Indian economy.

The objectives of the RDS are to increase farm productivity, for achieving rapid economic transformation, to increase household outputs of the selected agricultural products, and to promote value addition and ensure a stable market for these agricultural products.

RDS (Strategies)

The effective rural development strategies to be followed are

1. Provision of support to the farmers Groups, and Associations in order to build their capacity and supporting farmer unions.
2. By adopting localized way of distributing agricultural products.
3. Water management for agricultural production by the Usage of sprinklers and drips.
4. Use of private companies for processing & marketing.
5. By proper communication & quality maintenance.
6. Enhancing Rural Micro finance services & provision of subsidies for crops.
7. Strategy for provision of technology inputs to the farmers.
8. Liberalization of Markets and Price Structures.
9. All weather roads to rural habitations.
10. Better economic utilization of agricultural residues, byproducts & Recycling of wastes by the establishment of separate plants at the village levels by the support of government.
11. Enhancement of linkage to farmer groups with processors and buyers for increasing the profits to the farmers.
12. Pests and disease control with the usage of improved seeds, Bio Fertilizers, Herbicides, and Bio Pesticides.
13. Usage of advanced equipment and machinery that constitutes the technology for the plantation and harvesting of the crops that leads to decrease the labor cost.
14. Agricultural Productivity Enhancement.
15. Research & Development for agro processing technologies.
16. Provision of Support to agricultural related industries.
17. Establishment of farmer care centers.
18. Analysis of complete Agricultural trade statistics includes Tree crops, Consumption data, Diseases and disease control data, Statistics on agricultural products processing & marketing, Fisheries statistics etc.
19. Increasing the organic farming.
20. By conducting and organizing the camps / programs at the rural areas regarding development.
21. Establishment of separate teams for the rural development by the central

government with special packages.

22. Maintenance of CLEAN & GREEN at the villages.
23. By providing transport facilities to the rural areas.
24. Building of interactions with the agricultural experts for gaining more profits.

These are the different rural development strategies.

Because of high utilization of pesticides and fertilizers by the farmers, scientists are advising the organic products. The agricultural products, that produced through organic farming termed as organic products. In the world market these organic products having high demand day to date. So, there is a great need to follow the organic farming by the Indian farmers and produce the organic foods and export to other countries for the propitiation. Worldwide the organic farming land increased 11% - 40% from 1990 to 2010.

Rural Marketing

Rural marketing basically deals with delivering manufactured or processed inputs or services to rural producers. Rural Marketing would also be different they include input manufacturers, dealers, farmers, government agencies and traders. Thus, to promote their brands, they are exploiting social and cultural values. Increasing specialization in the farming sector has marketers to this strategy.

Challenges for Rural Development

1. Developing rural areas is long time consuming process.
2. There is no doubt that, Most of the rural people depend on agriculture & that is a risky business.
3. Sustainable economic growth and diversification;
4. Government funding and institutional development
5. Agricultural employment has started to decline and where replacement employment is required.
6. Lack of appropriate technology & beneficiary participation.

Conclusion

More than 60% of the Indian population lives in rural areas and most of the rural people depend on agriculture and agricultural related industries. So there is a great need to follow the effective rural development strategies for improving the quality of life in rural areas, self employment to rural people and raising profits to the farmers to improve the Indian economy.

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SELP JOURNAL OF SOCIAL SCIENCE

(A Peer Reviewed & Refereed Quarterly Journal with ISSN: 0975-9999 (Print) 2349-1655 (Online)
Impact Factor : 3.655 (CIF), 2.78(IRJIF), 2.5(JIF), 2.77(NAAS)

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Impact Factor : 3.655 (CIF), 2.78(IRJIF), 2.5(JIF), 2.77(NAAS)

Vol : IX ***July - September 2018*** ***Issue 38***

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