Multidisciplinary Global Journal of Academic Research (MGJAR)

SVM Publications

www.academicresearchsupport.com

Multidisciplinary Global Journal of Academic Research (MGJAR)

Contents

Multidisciplinary Global Journal of Academic Research (MGJAR)

Contents

Publisher

Editorial Board

Advisory Board

Need for Skill Development among Rural Youth in the Era of Digital World

S.P Sudheer
Associate Professor & HOD
Department of Economics, S.N.M College
Maliankara, Kerala

P. Arunachalam
Professor & Head
Department of Applied Economics
Cochin University of Science and Technology, Kochi-22

Abstract

While launching the National Skill Development Mission for India, the Prime Minister of India Narendramodi has stated that employment generation and skill development are the top priorities of the mission. According to him if China is recognised as the 'manufacturing factory' of the world, India can become the 'human resource capital'". For this country needs to have a "futuristic vision" and draw up plans for the next ten years. There is a need for mapping job requirements for both domestic and global markets and then planning the skill development targets accordingly. India aims to skill 402 million people between now and 2022; of these, at least 110 million workers are required in over 25 select sectors such as textiles, automobiles, construction, banking and retail. India is adding nearly 12 million people to the job market every year and more than 65 per cent of its population is below the age of 35. Generating more and better quality of employment is a common challenge faced by the countries world over. The challenge is more pronounced in case of developing countries with large informal sector and with problems of unemployment and underemployment. To face these challenges, governments are putting increasing emphasis on enhancing the skills of its people in general and that of workers in particular to increase their employability and to facilitate them to get decent employment.

Key Words: Digital Economy, Digital India Programme, Skill Development, Economic Empowerment, Vocationalisation of Education etc.

Introduction
   Indian economy is one of the fast growing economies of the world. Rural economy holds significant importance in the economic development of India. Recently many financial institutions and technology related service centres are focusing on rural areas to increase its operational base. It is a fact that many of the mobile wallets and ecommerce companies are focusing on the rural areas and they are adapting strategic approaches for attaining a fine market share. Indian economy has been focusing on development. In the recent past, there are significant developments that have taken place in digital services in various fields, especially in the financial system and telecom sector. The move towards a digital economy has led to huge changes and transformations in the rural business world.

Meaning of Digital Economy
Digital economy means an economy that is based on digital computing technologies. The digital economy is also sometimes called the Internet Economy or Web Economy. It is true to say that the growth of the digital economy has widespread impact on the whole economy.
 Thomas Mesenbourg (2001) has identified three main components of the concept of Digital Economy. These are:
1. e-business infrastructure such as hardware, software, telecoms, networks, human capital, etc.),
2. e-business and all other matters related to it such as how business is conducted, its process and organization which is facilitated by computer oriented networks.
3. e-commerce, that is the transfer of goods with the help of online.

Significance of the study
   It is believed that the Digital India Programme can ensure the growth and development in the rural areas of India by connecting remote villages and rural areas with fast internet service. The Prime Minister himself is supervising this entire project. The transformation of the economy to a digital economy can improve their skills and knowledge of the rural people. This is an ambitious project of the Government of India that will benefit majority of the people, especially the villagers. There exists a digital structure in our economy and like the public utility service for the people, it can provide fast access to internet facility which will make it easier and faster for all types of services rendered by the government. This kind of digitalisation can provide various kinds of online services such as handling bank accounts, financial management, safe and secure cyber space, education, distance education etc. In this context this study is an attempt to assess the role of Digital India Programme in enhancing the skill and expertise of rural youth for accomplishing a good carrier.

Objectives of the Study
   1. The main objective of this study is to assess the various dimensions of Digital India Programme, initiated by the government of India.
   2. Another objective of the study is to examine the contributions of digital revolution in enhancing the skill and expertise of rural youth.

3. Finally this paper also tries to assess the various skill developing programmes launched by the Government of India in the era of digitalisation.

Methodology of the Study

This is a descriptive study and primarily secondary data has been used for preparing this paper. The secondary information has been collected from various publications, such as books, journals, periodicals, conference paper, working papers and websites.

Review of Literature

Telecom Regulatory Authority of India (TRAI) (2017), has described about The Digital India Program. 'Digital India' program launched by the Government of India in July 2015 at an estimated cost of Rs 1,13,000 crores. The program has the vision to transform India into a digitally empowered society and knowledge economy. Three primary focus areas of the 'Digital India' program are Creation of Digital Infrastructure, Electronic delivery of services and digital literacy, Empowerment of citizens with e-participation in governance. According to TRAI the Nine Pillars of Digital India Program are Broadband Highways, Universal access to phones, Public internet access programme, Reforming Government through Technology (E. Governance), Electronics delivery services (eKranti), Information all, Electronics manufacturing-targeting net zero imports, IT for jobs and Early harvest programmes. D. S. Rawat (2017), Secretary General, ASSOCHAM has observed that effective implementation of e-governance is a key component of the Digital India programme. Digital connectivity is making sweeping changes to the socioeconomic and geopolitical map of the world. From entertainment to commerce, education to health, a digital society is at the heart of this worldwide transformation. The ICT industry is connecting billions of people by the transformative power of the Internet and mobilizing every device we use in our daily lives. In fact, we are in the midst of a digital revolution that is being driven by the connectivity revolution.

Nilu singh (2017), has assessed that the Digital India Project, will help in evolution of employments and also increase economic part of Indian economy. Introducing the concept of Digital India is the step towards a drastic and far-reaching change in ways of making a new India where citizens are digitally empowered and economically well. It is providing digital literacy and enrich with knowledge of technology in rural as well as urban areas. If a continuous approach is made in this project with trustworthiness it will absolutely precede India to convert into the Digital India, and the development achieved will help India to become a developed country.

Tukesh Kumar,Shwati Prdhiand Abhay Bisen (2017) has stated that With the adoption of Digital India Project, India will have a powerful digital infrastructure. All educational institutions and government services will soon be able to provide digital services round the clock. More employment prospects will open for the youth that will boost the economy. Tech giants from all over the world are willing to actively participate in this campaign. The outcome of Digital India is to produce Wi-Fi locations for people, creating job, universal phone connection, High speed internet,

Digital Inclusion, e-Services, e-Governance, Digitally motivated people, National Scholarships Portal, Digital Lockers System, e-education and e-health making India to be pioneer in IT use solution.

Digital India Programme

Digital India, a much ambitious programme, was launched on 1ˢᵗ of July (Wednesday) in 2015. It is believed that this programme can bring digital revolution in the country. Digital India programme is a great step taken by the government of India to make our economy digitally empowered. Various schemes are framing in connection with this programme, such as Digital Locker, e-health, e-education, national scholarship portal, e-sign, etc.

The major objective of this campaign is to provide electronic government services to our people i an efficient way. Digital revolution can connect people of rural areas with the high-speed internet networks to access any information needed and can save time and man power to a great extent. Three important elements of digital India are like creation of digital infrastructure, digital literacy and delivering services digitally all over the country. Even laymen can improve their level of knowledge and skill if they covered under the umbrella of internet. It is considered as an ambitious project that can benefit common man especially villagers who travel long distance and waste time and money for doing various works. It is a most effective version National e-Governance Plan. The major pillars of this prestigious programme are broadband highways, public Internet access programme, mobile connectivity everywhere, e-Kranti, e-Governance, information for all, IT for jobs, early harvest programmes and electronics manufacturing) of already existing. Huge number of villages interconnected with high speed network will really undergo a huge change from backward regions to complete digitally equipped areas. The major objectives of Digital India programme that has been implemented by the government of India are to ensure the broadband highways, to ensure the universal access to mobile phones, to facilitate people with high speed internet, to bring e-Governance by reforming government through digitization, to bring e-Kranti through electronic delivery of services, to make available online information for all and to ensure more IT jobs.

Benefits Of Digital India Campaign

The Digital India Campaign can promote the implementation of digital locker system which in turn reduces paper work by minimizing the usage of physical documents as well as enabling e-sharing through registered repositories. It is an effective online platform which may engage people in governance through various approaches like "Discuss, Do and Disseminate". This programme can ensure the achievement of various online goals set by the government. It makes possible for people to submit their documents and certificates online anywhere which reduces physical work. Through e-Sign framework citizens may digitally sign their documents online. It may ease the important health care services through e-Hospital system such as online registration, taking doctor appointments, fee payment, online diagnostic tests, blood check-up, etc. This venture provides benefits to the beneficiaries through

National Scholarship Portal by allowing submission of application, verification process, sanction and then disbursal. Digital India programme can serve as a big platform which facilitates an efficient delivery of government or private services all over the country to its citizens. It is believed that the Bharat Net programme, a high-speed digital highway will connect almost 2.5 lakhs Gram Panchayats in the country. Open access of broadband highways in all the cities, towns and villages will make possible the availability of world-class services on the click of mouse.

The digital India initiative can help the outsourcing policy of the country. It is expected that the Next Generation Network of BSNL can replace three decades old telephone exchange and can provide better online mobile services such as voice, data, multimedia management etc. Large scale deployment of Wi-Fi hotspots has been planned by the BSNL all across the country. The existence of Broadband Highways can handle all the connectivity related issues.

Sill Developing Programmes for the Rural Youth
Due to demographic 'dividend', in India, the share of youth population has increased. This younger population seems to be one of the sources of future economic growth in our economy. Even though, the school and college enrolment rates are increasing, the proportion of youth in the labour force has been declining in India. Their high proportions in the labour force indicate that the problem of youth unemployment and underemployment would remain a serious policy issue for many more years to come in India.

Young population can act as a major human resource for development and key agents for social change. It is also a driving force for economic development through technological innovation. During 1985, the international year of the youth, the Department of Youth Affairs and Sports, Ministry of Human Resource Development, Government of India, initiated a proposal to formulate a National Youth Policy which became a reality in 1988. In India, the first National Youth Policy was formulated in the year 1988. The National Youth Policy 1988 recognized that the most important component of the youth programme is the removal of unemployment.

Skill Requirements in India by 2022
The quantitative as well as qualitative skill gaps can further widen going forward if there are no or limited efforts towards addressing the key supply related issues. As per the skill gap study conducted by the National Skill Development Cooperation over 2010 - 2014, there is an additional net requirement of 109.73 million skilled manpower by 2022 across twenty four key sectors. As India strengthens its base as a knowledge economy, there would be additional requirements to the highly skilled workforce in sectors like financial services, IT/ITeS, Biotechnology, Healthcare and Pharmaceuticals. Further, with value added industries being given a policy push under the 'Make in India' initiative, highly skilled workforce would also be required in high-end industries.

Table-1: Incremental Human Resource Requirement across Sectors by 2022

Sl. No	Sector	Employment in 2013 (million)	Projected employment by 2022 (million)	Incremental requirement from 2013- 2022 (million)
1	Auto and Auto Components	10.98	14.88	3.9
2	Beauty and Wellness	4.21	14.27	10.06
3	Food Processing	6.98	11.38	4.4
4	Media and Entertainment	0.4	1.3	0.9
5	Handlooms and Handicrafts	11.65	17.79	6.14
6	Leather and Leather Goods	3.09	6.81	3.72
7	Domestic Help	6	10.88	4.88
8	Gems & Jewellery	4.64	8.23	3.59
9	Telecommunication	2.08	4.16	2.08
10	Tourism, Hospitality and Travel	6.96	13.44	6.48
11	Furniture and Furnishing	4.11	11.29	7.18
12	Building, Construction and Real Estate	45.42	76.55	31.13
13	IT and ITES	2.96	5.12	2.16
14	Construction Material and Building Hardware	8.3	11	2.7
15	Textile and Clothing	15.23	21.54	6.31
16	Healthcare	3.59	7.39	3.8
17	Security	7	11.83	4.83
18	Agriculture	240.4	215.6	24.8
19	Education/ skill development	13.02	17.31	4.29
20	Transportation and Logistics	16.74	28.4	11.66
21	Electronic and IT Hardware	4.33	8.94	4.61
22	Pharma and Life Sciences	1.86	3.58	1.72
23	BFSI	2.55	4.25	1.7
24	Retail	38.6	55.95	17.35
Total		461.1	581.89	120.79
Removal of Duplication in Retail Sector		(10.37)	(21.43)	(11.06)
Total Requirement		**450.73**	**560.46**	**109.73**

Source: Ministry of Skill Development & Entrepreneurship

National Skill Development Agency (NSDA)

   National Skill Development Agency (NSDA) is an autonomous body under Ministry of Skill Development and Entrepreneurship that anchors the National Skill Qualifications Framework and allied quality assurance mechanisms for synergizing skill initiatives in the country.

1. The National Skills Qualifications Framework (NSQF)- The National Skills Qualifications Framework (NSQF) organizes qualifications according to a series of levels of knowledge, skills and aptitude. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning. In that sense, the NSQF is a quality assurance framework. It is, therefore, a nationally integrated education and competency based skill framework that will provide for multiple pathways, horizontal as well as vertical, both within vocational education and vocational training and among vocational education, vocational training, general education and technical education, thus linking one level of learning to another higher level. This will enable a person to acquire desired competency levels, transit to the job market and, at an opportune time, return for acquiring additional skills to further upgrade their competencies.

2. Labour Market Information System (LMIS)-The National Skill Development Agency under the Ministry of Skill Development and Entrepreneurship has launched a single window platform to aggregate supply and demand trends in the Indian skill development ecosystem, referred to as the National Labour Market Information System (LMIS). LMIS is an integrated set of institutional arrangements, procedures, mechanisms and data systems designed to produce labour market information as per global standards and best practices. The system brings together statistical (quantitative) and non-statistical (qualitative) information concerning labour market actors and their environment and generate key analysis and reports which can be used for various policy interventions by different government stakeholders, as well as by the industry at large.

3. National Quality Assurance Framework (NQAF)- Across India, many learners are studying for qualifications by taking part in education and training/skills programmes. Through these programmes, they develop the knowledge, skills and competence they need for jobs and future careers. Quality lies at the heart of effective education and training / skills programmes. Learners, employers and the public need to be assured that the training and qualifications provided through education and training / skills programmes of a high quality, regardless of where they are delivered and assessed. The National Quality Assurance Framework (NQAF) aims to improve the quality of all education and training/skills programmes in India. The NQAF provides the benchmarks or quality criteria which the different organisations involved in education and training must meet in order to be accredited to provide education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications. The NQAF Manuals provide guidance for different groups of organisations, describing what each needs to do to meet the quality criteria.

4. National Skill Research Division (NSRD)- The National Policy for Skill Development and Entrepreneurship 2015 announced the establishment of a National Skill Research Division. The division has been set up within NSDA at the national level to serve as a think tank for inputs on research related to skill development and evolve as a credible research organization in skill development at the national level. Its mission is to serve as

an authentic, qualitative and accessible think tank for research related to skill development in India.

Skill Development Programmes for the Rural Youth in India
1. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)- The Union Cabinet had approved India's largest Skill Certification Scheme, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), on 20 March, 2015. The Scheme was subsequently launched on 15 July, 2015, on the occasion of World Youth Skills Day by Honorable Prime Minister, Shri Narendra Modi. PMKVY is implemented by National Skills Development Corporation (NSDC) under the guidance of the Ministry of Skill Development and Entrepreneurship (MSDE). With a vision of a "Skilled India", MSDE aims to skill India on a large scale with speed and high standards. PMKVY is the flagship scheme that is driving towards greater realisation of this vision. Owing to the its successful first year of implementation, the Union Cabinet has approved the Scheme for another four years (2016-2020) to impart skilling to 10 million youth of the country.

Pradhan Mantri Kaushal Vikas Yojana (2016 - 2020) is a modified and improved version of PMKVY 2015-2016. It is the flagship outcome-based Skill Training Scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). This Skill Certification Scheme aims to enable and mobilize a large number of Indian youth to take up skill training and become employable and earn their livelihood. The objective of this Scheme is to encourage and promote Skill Development for the youth throughout the country by aligning itself with the Common Norms guidelines. The scheme also needs to be aligned to complement all other Missions of the Government, such as Make in India, Digital India, Swachh Bharat, and Smart Cities. Specifically, the Scheme aims to: • Enable and mobilize a large number of youth to take up industry designed quality skill training, become employable and earn their livelihood. Increase productivity of the existing workforce, and align skill training with the actual needs of the country. Encourage standardization of the Certification process and put in place the foundation for creating a registry of skills. Benefit 10 million youth over the period of four years (2016- 2020).

2. Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) Project- Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) project aims to implement the mandate of the National Skill Development Mission (NSDM), which was launched on 15th July by Ministry of Skill Development & Entrepreneurship, through its core sub-missions. The project will be implemented in mission mode through World Bank support and is aligned with the overall objectives of the NSDM. The main objectives of the project include strengthening institutional mechanisms at both national and state levels, building a pool of quality trainers and assessors, creating convergence among all skill training activities at the state level, establishing robust monitoring and evaluation system for skill training programs, providing access to skill training opportunities to the disadvantaged sections and most importantly supplement the Make in India initiative by catering to the skill requirements in relevant manufacturing sectors.

SANKALP is an outcome oriented project supported by World Bank. The project will focus on the overall skilling ecosystem covering both Central (MSDE, NSDA and NSDC) and State agencies, and outcomes will be measured through Disbursement Linked

Indicators (DLIs) agreed between MSDE and the Bank. A DLI verification protocol has also been established to measure DLIs on a periodic basis. Under SANKALP four key result areas have been identified viz: (i) Institutional Strengthening; (ii) Quality Assurance; (iii) Inclusion; and (iv) Expanding Skills through PPPs.

3. UDAAN- Udaan is the Special Industry Initiative (SII) for J&K which is funded by Ministry of Home Affairs and implemented by National Skill Development Corporation (NSDC). The programme is a part of the overall initiative for addressing economic issues in J&K. While steps are being taken by the State and Central Government to revive economic activity in J&K, Udaan programme is a special initiative to address the needs of the educated unemployed in J&K. Udaan program is focused on youth of Jammu & Kashmir (J&K) who are graduate, post graduate and three year diploma engineers. The aim is to provide skills and job opportunities to the youth. Simultaneously, the aim is also to provide exposure to corporate India towards the rich talent pool available in J&K. It was observed that youth from J&K were unable to find employment in many companies as either they were unaware of the opportunity in the companies or the companies were unaware of the talent pool that existed in J&K. The principal focus of the Udaan programme is to create an ecosystem that would bridge this gap. The Udaan programme is designed to encourage corporates to travel to J&K meet with the youth and hire aspiring youth in J&K who wish to explore the opportunity to work with corporates. Udaan provides a framework of support to the youth to travel, undergo training in firms and transit to work. The main objectives of Udaan are to provide exposure to the graduates and post graduates of Jammu and Kashmir to the best of corporate India and to provide corporate India with exposure to the rich talent pool available in the state. Standard Training Assessment and Reward (STAR) Scheme:

4. STAR (Standard Training Assessment and Reward)- The National Skill Certification and Monetary Reward Scheme, known as STAR (Standard Training Assessment and Reward),was operational between August 2013 and September 2014. NSDC is the designated implementing agency of the scheme and is working through various Sector Skill Councils (SSCs), Training Providers (TPs) and independent Assessment Agencies (AAs).

5. Polytechnic Schemes- Mission on Polytechnics under the Coordinated Action for Skill Development 2015-16 were Setting Up of New Polytechnics In Unserved & Underserved Districts, Scheme of Community Development Through Polytechnics (CDTP). Technical Education plays a vital role in human resource development of the country by creating skilled manpower, enhancing industrial productivity and improving the quality of life of its people. Technical Education covers programmes in engineering, technology, management, architecture, town planning, pharmacy, applied arts & crafts, hotel management and catering technology.

6. The Scheme of Vocationalisation of Secondary Education- In order to bridge the industry academia gap – NSDC has developed a unique model to integrate skill based trainings into the academic cycle of the Universities. These are based on National Occupational Standards set by industry through sector skill councils. The job roles offered are designed to be progressive in nature – from Level 5 – level 7 on National Skills Qualification framework. The Centrally Sponsored Scheme of Vocationalisation of

Secondary Education of Ministry of HRD, Government of India lists out a crucial role for NSDC and its Sector Skill Councils (SSCs) in implementation of NSQF. The trainings conducted in the scheme are based on the National Occupational Standards set by NSDC through its Sector Skill Councils. The scheme also mandates the SSCs to conduct assessments and certification jointly with the State Board. NSDC is currently working with the State Governments of Haryana, Himachal Pradesh, Karnataka, Punjab, Uttarakhand, Madhya Pradesh, Nagaland, Maharashtra, Chhattisgarh and Rajasthan for implementation of the scheme in their states through its approved and funded Sector Skill Councils. Sector Skill Councils support the States in Identification of Trades/ Occupations, Accrediting curriculum with PSSCIVE, Recommendation for Appointment of Vocational (Industry) Coordinator, Quality Control of Training, Training of Trainers, Student Assessment and Certification and Industry Interface. NSDC funded Training Partners take the responsibility of entire Training Delivery including deploying and managing faculty, setting up of labs, organising Guest Lectures/Industry Visit.

Bibliography

1. Hans-Dieter Zimmermann (200), 'Understanding the Digital Economy: Challenges for new Business Models' SSRN Electronic Journal, January 2000, https://www.researchgate.net/publication/ 241675515.
2. Renjith.R.P. (2009) Role of Entrepreneurship in economic development http://www.indiastudychannel.com/resources/93451-Role-entrepreneurship-economic-development.aspx
3. Sameer "Role and Importance of Rural Entrepreneurs in India"
4. Chinmoy Kumar (2011) WHAT is the Role of an Entrepreneur in Economic Development?http://www.preservearticles.com/201101143326/role-of-an entrepreneur-in-economic-development.html
5. *Krishnakumar (2010)* ***How many entrepreneurs are there in India? http://www.dare.co.in/blog-entries/ideas/how-many-entrepreneurs-are-there-in-india.htm***
6. TRAI (2017), Digital Infrastructure in India, Symposium on 'Collaborative Regulation for Digital Societies', Telecom Regulatory Authority of India, New Delhi August 2017
7. ASSOCHAM (2017), 'Digital India, Targeting Inclusive Growth', **www.assocham.org**.
8. Ninu Singh (2017), 'Digital India: To Transform India into A Digitally Empowered Society', **https://www.researchgate.net/publication/321722968**.
9. Tukesh Kumar,Shwati Prdhiand Abhay Bisen (2017), Role of Digital India in Rural Areas', IJAERD- International Journal of Advance Engineering & Research Development, e-ISSN: 2348-4470, p-ISSN:2348-6406.

*****

Tamilnadu Cooperative Sugar Mills – A Study

Dr. G. Rajesh
Assistant Professor
PG and Research Department of Commerce
The Quaide Milleth College for Men
Medavakkam, Chennai – 100.

Abstract

This paper highlighted Development of Cooperative Sugar Industries through Innovative practices. Sugar industry is the second largest processing industry next to textiles. Sugar industry boosts rural Indians economy in a significant way. Cooperative Sugar factories are dedicated to the cause of emeliorating the socio-economic condition of their neighbouring rural areas and financial position of their cane grower members. To this end, the sugar cooperatives have made remarkable progress ad have completely charges the overall rural panorama of their area of operation. This is also evidenced for the contribution of cooperative sector in the country's total sugar production.

Key Words: Organizational Structure, Operational Performance, Sugar Production, Problems of Cooperative Sugar Mills and Innovative Practices

INTRODUCTION

The growth of sugar industry in Tamilnadu has been very impressive, particularly in the Co-operative sector and is one of the leading producers of sugar in the country. Its contribution is about 10 percent of Country's total sugar production. There are 44 sugar mills functioning in this state of which 16 are Co-operative sector, 2 in public sector and 26 in private sector. Sugar continues to be the sweetener world over. The ratio between sugarcane sugar and Beet sugar stands in the ratio of 80:20. Inspite of the growth in the population, the world consumption continues to be hovering around 176 million tones whereas production figure touch 181 million tones. As result, there is demand supply disparity and the world is carrying over a

stock of around 5 million tones. This needs to keep the sugar at constant prices as against ever increasing production and marketing costs.

ORIGIN AND DEVELOPMENTS

Sugar industry plays a vital role in the development of the rural economy in Tamilnadu. It serves as one of the important agencies to bring about rural development. It is a major industry which directly helps to improve the economic conditions of farmers in the rural areas. Tamilnadu is one of the leading sugar producers in India. The sugar produced by the Tamilnadu sugar mills is about 10 per cent of India's total sugar production. In Tamilnadu the income generated from sugarcane sales exceeds Rs. 2000 crores per year.

EID Parry's sugar mill at Nellikuppam in cuddalore district started in 1897, is the oldest sugar mill in Tamilnadu.As on 31st March 2012 there were 46 sugar mills in Tamilnadu of which 16 were in the Co-operative sector, 3 in the public sector and 27 in the private sector.

District-wise classification of Co-operative sugar mills in Tamilnadu is classified as under,

Table 1.1
Growth of Co-operative sugar mills in Tamilnadu

S.No	Name of the District	Number of Co-operative Sugar Mills
1	Cuddalore	1
2	Dharmapuri	2
3	Kancheepuram	1
4	Madurai	1
5	Nagapatnam	1
6	Namakkal	1
7	Thiruvallur	1
8	Tirupur	1
9	Tiruvannamalai	1
10	Vellore	3
11	Villupuram	3
	Total	**16**

The district - wise classification of Co-operative sugar mills in Tamilnadu as on 31st March 2014 is shown in table 1.1. The Table 1.1 indicates that the Villupuram and Vellore district have maximum of three sugar mills and followed by Dharmapuri district which have two sugar mills. The Cuddalore, kancheepuram, Madurai, Nagapatnam, Namakkal, Thiruvallur, Tripur andTiruvannamalai have one Co-operative sugar mill each.

OBJECTIVES OF THE CO-OPERATIVE SUGAR MILLS

The main objectives of the Co-operative sugar mills are

1. To help the farmers to get a fair price on their products.
2. To carry on the manufacture of sugar from sugarcane and sell the sugar and its by-products to the best advantage of members
3. To undertake and assist in establishing industries associated with such by-products.
4. To arrange for marketing of sugarcane produced by the members.
5. To undertake co-generation of power.
6. To aid, develop, and maintain sugar and sugar related organizations.

ORGANIZATIONAL STRUCTURE

The organizational structure of a Co-operative sugar mill in Tamilnadu is shown in figure 3.1. For each Co-operative sugar mill in Tamilnadu, a special officer is appointed by the Government of Tamilnadu; he administers the day-to-day affairs of the mill. In the day-to-day management the Special Officer is assisted by a Chief Cane Officer, a Chief Engineer, a Chief Chemist and a Chief Accountant. The Chief Engineer is in charge of machinery operating in the sugar mill. In the maintenance of machines, he is assisted by a Deputy Engineer and skilled and unskilled workers

Figure1.1
Organizational structure of the Co-operative sugar mills in Tamilnadu
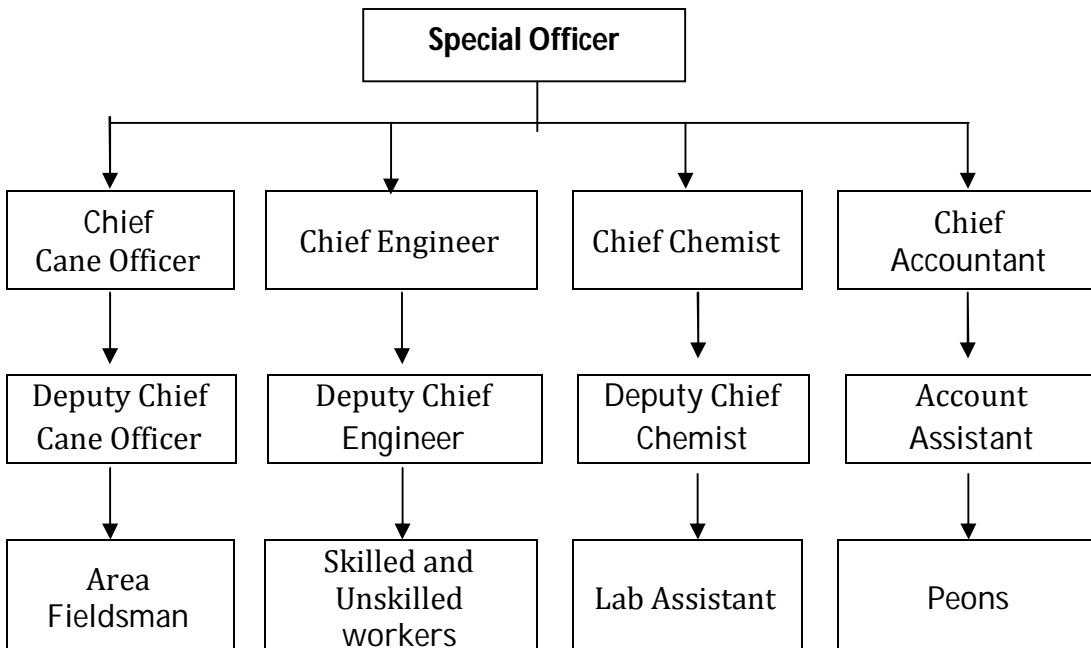
SECTOR-WISE DISTRIBUTIONS OF SUGAR MILLS IN TAMILNADU

The sector-wise distribution of sugar mills in Tamilnadu during the period 2004-05 to 2013-2014 is given in table 1.2

Table 1.2
Sector wise distribution of mills in Tamilnadu

Sl. No.	Year	Co-operative Sugar Mills	%	Other Mills	%	Total Mills	%
1	2004-05	14	41.18	20	58.82	34	100
2	2005-06	15	42.86	20	57.14	35	100
3	2006-07	15	40.54	22	59.46	37	100
4	2007-08	15	40.54	22	59.46	37	100
5	2008-09	15	40.54	22	59.46	37	100
6	2009-10	15	37.50	25	62.50	40	100
7	2010-11	15	34.88	28	65.12	43	100
8	2011-12	16	36.36	28	63.64	44	100
9	2012-13	16	36.92	28	63.08	44	100
10	2013-14*	16	34.52	28	65.48	44	100

*Provisional

The sector-wise distribution of sugar mills in Tamilnadu during the period 2004-05 to 2013-14 is given in table 1.2. It is observed from the table that the number of sugar mills in the Co-operative sector in Tamilnadu increased from 14 during 2004-05 to 16 during2013-14.The number of sugar mills in the other sectors in the Tamilnadu which stood at 20during2004-05has increased to 28during2013-14. The share of Co-operativeSugar Mills varied between 34.52 percent and 42.86 percent during the study period. Other Mills also has shown 51.14 per cent to 65.48 per cent during the study period.

OPERATIONAL PERFORMANCE

In the same vein physical efficiency can be derived from the number of employees and the wages paid to them, which is exhibited in table 1.3.

Table 1.3
Crushing capacity, Number of Workers & Wages paid

Name of Sugar Mills	Daily Crushing Capacity(tonnes)	Number of Workers	Wages Paid for the year (in lakhs)
Ambur	1400	516	779.00
Amaravathy	1250	516	944.83
Cheiyyar	2500	476	1,065.62
Kallakuruchi-I	2500	528	1,056.24
Salem	2500	509	903.86
Thirupathur	1250	509	664.41
S.Siva	2500	235	936.33
N.P.K.R.R	2500	495	961.03
Vellore	2500	514	1,015.59
Chengalrayan	3000	604	1,224.75
Thiruthani	2500	548	947.21
M.R.K	2500	496	1,101.35
Kallakuruchi-II	2500	356	898.30
National	2500	529	1,382.34
Dharmapuri	2000	505	646.41

Table 1.3 shows that the crushing capacity, number of workers, wages paid for the year 2012-13 is observed that the Chengalrayan sugar mills having maximum crushing capacity of 3000 tonnes among the cooperative sugar mills. Number of workers and wages paid to the year also shows highest in Chengalrayan next to National Cooperative sugar mills.

Chart 1.1
Crushing capacity, Number of Workers & Wages paid
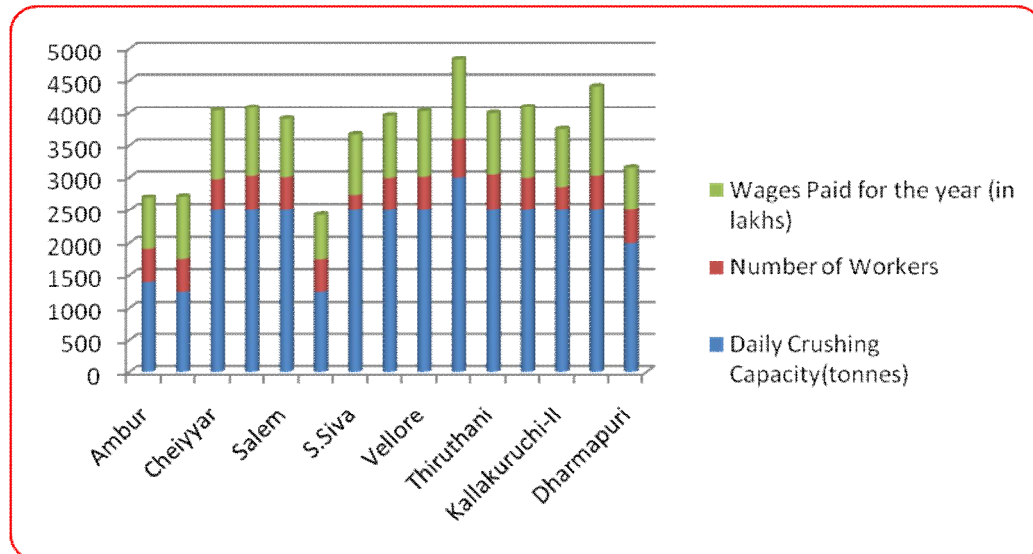
SUGAR PRODUCTION

Comparison of sugar production at All India level andin Tamilnadu for ten years from 2002-03 to 2011-12

For further evaluation, sugar production is studied against All India figures and the same is shown in table 1.4.

Table 1.4
Sugar Production (in lakh tones)

Year	All India	Tamil Nadu	Percentage of Production
2002-2003	201.45	16.44	8.2
2003-2004	135.46	9.21	6.8
2004-2005	126.90	11.08	8.7
2005-2006	192.67	21.42	11.1
2006-2007	283.67	25.39	9.0
2007-2008	263.57	21.41	8.1
2008-2009	145.39	15.97	11.0
2009-2010	189.12	12.80	6.8
2010-2011	245.00	18.46	7.53
2011-2012	260.00	20.75	7.98

As from percentage of All India figures, production of sugar in Tamilnadushowed in the table 1.4 indicates declining performance during 2003-04 and recovered slightly in 2005-06onwards. Yet the recovery was not anywhere near 2005-06, which was in peak of the performance indicated by 283.67 percent of All India figures in the year 2006-07 after it was going to decline.Sugar production Tamilnadu shows 9.21 lakh tonnes in the year 2003-04 which is the least one among the ten years further it has increased to 20.75 lakh tonnes in the year 2011-12 which is also the highest.

Chart 1.2
Sugar Production (in lakh tones)
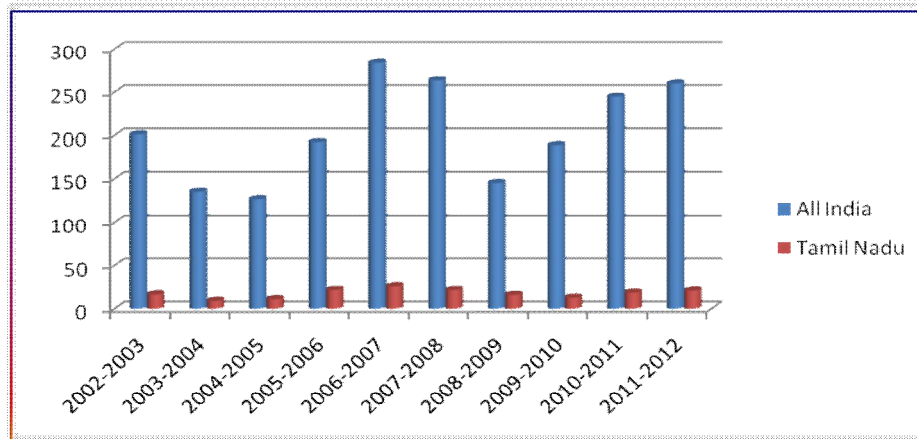
SUCCESS OF INDIAN SUGAR MILLS

- v   India has world's largest number of sugar factories.
- v   Indian sugar factories have many technological achievements.
- v   India has a variety of industries based on the by-products of cane sugar industry.
- v   India has a many industries based on ethylalcohol an important by-products.
- v   India has the world's largest producer of all sweetening agents from sugarcane.
- v   Indian sugar factories have introduced many socio and rural developments activities.
- v   Indian sugar factories have arrested environmental pollution.
- v   India has a large sugar machinery building industry.

NEED EMERGING INNOVATION

Statutory Minimum Price (SMP)

The Statutory Minimum Cane Price (SMP) is the backbone of the sugar industry, if unremunerated it can discourage sugarcane production and render the sugar industry unviable.For example, the National Federation of Co-operative Sugar Factories Ltd. had presented a memorandum to the Commission for Agricultural Costs and Prices (CACP) in which attention was drawn to the declining sugar production after the mounting cane price arrears, the increasing trend amongst sugarcane farmers to diversify to other remunerative crops and over all sickness in the sugar industry.The sugarcane farmers, not satisfied with the meager increase in SMP in the year 2005-06 to 2008-09, diverted from their sugarcane in many places to gur and khandasari, as a result of which the sugar production fell sharply in the subsequent years.

Reduced Sugarcane Price for Higher Recovery

It could not be explained why the government had reduced sugarcane price for recoveries higher than 10 percentage point. This was against the governments declared policy of encouraging cane payment, according to content. This had seriously hit the progressive co-operative sector of sugar industry It might also be mentioned that the decision is contrary to the recommendation of expert body namely CACP.[5]

State Advised Cane Prices

In the state of Gujarat, Maharashtra and northern portion of Karnataka, the sugarcane prices are paid to the farmers based on working results and this system of cane payment covers approximately 50% of the sugar production in our country. However, in other areas, the cane prices are as per the advice of the state government to protect the interest of millions of small cane growers.[6]Unfortunately the factories are not able to obtain sugar prices so as to be able to pay the cane prices and this results in huge cane price and frustration among the cane growers.

17

Dual pricing problem

The association of private sugar mills, views with serious concern, the unprecedented crisis facing the sugar sector following two successive years of record production of 283.61 lakhs tonnes in 2006-07 a high record and followed by 263.56 lakhs tones in the year 2007-08 and another 263.42 lakhs tonnes in 2011-12.[8]The association seriously apprehends that the sugar mills may face premature closure. To rectify the situation the association has suggested that the dual pricing policy on sugar be replaced with decontrol of sugar prices on a long term basis to simulate consumption of sugar, stabilize, production, encourage efficiency, reduce costs and encourage exports.

Conventional measures of Operational Performance

In the foregoing analyses, it was seen that the SMP has been responsible for the losses in sugar factories in spite of record production. The SAP has further aggravated the position. In addition, dual pricing has caused problems to the sugar mills by way of adding to the losses. Again, the levy sugar and open market release are on an irrational basis and has complicated the problem. Further, there are a number of subsidies paid by the government.

Mono products to multi-various products

Previous production of sugar by sugar factories and the molasses was sent to distilleries and they were processing further. Current trend is production of sugar, rectified spirit, ENA & ethanol done in the same factory. Moreover most of the sugar mills have established co-generation facility. As a result, the sugar factories are producing electricity to be supplied to the power grid. For fuel purposes of Automobiles, they are producing ethanol. In essence, the sugar factories have become integrated sugar complexes.

Value Addition

Sugar is being further processed and converted into refined sugar cubes. In refinery pharma grade sugar, cube sugar, 1 kg., and 5 kg. Consumer packs, 5 gm sachets are produced and marketed. With better marketing facilities they are fetching higher prices when compared with regular plantation white crystal.

Technological advancements

World continues to conduct research on improved sugar rich varieties, pest resistant varieties, drought resistant varieties. In India also varietal research is going on in various Universities, National institutes etc,. Sugar factories are also conducting research in this field.

Agricultural practices

Now-a-days, wider row spacing is being advocated for twin purposes. One is for robust growth of cane. Another is to facilitate modernization for easy harvesting. The progress in this practice is very slow. The farmers are yet to pick up this practice.

In Tamil Nadu, it may be around 10% of the farmers following the practice. Punjab State is said to be following this practice in a bigger way.

Increased awareness of the advantages of Drip Irrigation and fertigation is yet to pick up. Farmers in Northern and Eastern districts of Tamil Nadu are with fixed mind-set of just planting, taking care with fertilizers for 3 to 4 months and leave it. After that, only irrigation will be done. As a result, the growth is uneven bushes emerge, rats and reptiles conveniently converting he sugarcane buses as their homes. In those areas water will not reach the plant uniformly.

Harvesting technology

In India, sugarcane harvesting continues to be done manually in major parts. During peak season period, cutting charges are abnormally high. In Tamil Nadu too, sugarcane harvesting is done manually in majority of the areas. Some private sugar mills use mechanical harvesters. As a result, the farmers are following the wider row spacing. The harvesters are used to be redesigned to suit Indian conditions. The higher capital cost remains a reason on hesitation by the mills. Smaller machineries with an idea of Indian conditions, Indian agricultural practices will yield better results. The machinery should preferably be hand driven or tractor driven. The necessity to transport the cut canes within 6 hours of cutting to prevent inversion also the problems. This issue is to be technologically sorted out. The research institution should come out with a machine based on indigenous technology taking into account Indian sugarcane fields. Currently those mills having sugarcane harvesters enter into tripartite agreement. In Cooperative and Public Sector Sugar Mills, entrepreneur model with tripartite agreement i.e., harvester, owner, sugar mills, sugarcane grower is encouraged. In the coming days, it is expected that sugarcane harvesting technology will replace manual sugarcane cutting in a phased manner. Sugar cutting cost should be reduced.

Reasons for Loss Vs Surplus Production
- Sugar mills had to crush cane produced excessively during 2005-06 to 2007-2008. Because of crushing for more number of days there was reduction of sugar recovery and this loss amounted to Rs. 82.33 crores.[10]
- The mill at Madurantakam, National and NPKRR - mill had expansion programs. The delay in crushing after completion of expansion led to a loss of Rs. 44.28 crores.[11]
- Loans were obtained to make up the loss and the interest burden contributed to the loss by Rs.2000.89crores.
- By payment for sugarcane according to SAP in excess of SMP fixed by the Central Government mills incurred a loss of Rs. 325.82 crores.[12]
- Another reason for the loss was the fall in price of sugar in external market and molasses.
- Lack of modernization and value added projects like co-generation, distillery cum ethanol etc.
- Fluctuation in the sugar and the byproducts realization.

19

Problems of Sugar Industry

- The sugar industry has been severely affected by statutory minimum price and state advised price that the mills are constrained to pay. They are in heavy arrears of cane price payable to farmers. Even the difference between State Advised Price (SAP) and Statutory Minimum Price (SMP) paid leads to loss around Rs. 260 to Rs. 290 crores per season. Similarly, the low levy sugar price causes financial constraint to the factories.
- Again the allocation of quotas to public distribution and free market is arbitrary and irrational. This has put the industry to severe problems. The study of all these factors leads to the conclusion that the sugar industry has fared well in operational efficiency in spite of the problems faced by them.

CONCLUSION

In Tamilnadu both research and development and patenting activities in sugar industry are at very low level. State and central Governments should concentrates on the activities of both cooperative and private sector sugar mills in Tamilnadu. In view of the emergence of a number of sugar substitutes, it is predictable that sugar producing units should set up their research and development units to look into day to day problems, while at the national level bothgovernment and research and development activities in the areas such as development of better sugarcane preparatory devices, better harvesting techniques, efficient equipment for clarification of juice, continuous centrifugal devices, other automatic devices assisting units, increasing the recovery of sugar. Thus there is an urgent need to intensify research and development on various aspects of sugar production.

REFERNCES

1. National Federation of Co-operative Sugar Factories Limited, Co-operative Sugar, Vol. 10/.43, No. 2&8, October 2011- April 2012, p. 65, 79
2. A.Sankaralingam, additional director of sugar, Emerging Trends in Sugar Industry in Tamilnadu, Tamilnadu Journal of Cooperation, Vol.14, No.12, October 2014, p 11-15.
3. Annual Reports of the sugar mills in Tamilnadu, 2011-12.
4. The Performance Budget on Sugar Industry, Government of Tamilnadu. August, 1996.
5. M.Pannerselvam, Dr.R.Murugupandiyan, Growth and Development of Indian Sugar Industry, Tamilnadu Journal of Cooperation, Vol.14, No.4, Feb - 2014, p 29-.35.
6. www.coopsugar.org
7. www.indiansugar.org

*****

Deterioration of Tank Irrigation in Andhra Pradesh

Dr. Ch.Thandava Krishna
Assistant Professor
Dept. Of Economics
Acharya Nagarjuna University
Ongole Campus, Ongole-523001

Abstract

In our country India, large parts, due to peculiar geometerological position are prone to recurring droughts their frequency, intensity and impact varying generally with the geographic area affected. Aberrations in the total volume and pattern of rains from South-West monsoon are predominantly responsible for droughts in India. We know well that drought causes widespread crop failures leading to acute shortage of food and fodder that adversely affects human and livestock populations. It causes hunger, malnutrition and scarcity of drinking water accentuated by depleting ground water and its quality. In one of the worst years of drought in the last 100 years, the total food grains production in the country fell down to a mere 184 million tonnes in 2002-03 as against 212 million in 2001-02. The drought has drastic effect on demographic profile also. Some of the experts argue that steps like monetary relief, cash/input assistance, employment generation through relief works etc. would exert only a temporary impact on drought. Some others suggest that appropriate watershed policy would reduce drought conditions and this is widely practiced in Andhra Pradesh.

Key Words: Droughts, Ground Water, Tank Irrigation and Watershed.

Rayalaseema and Drought

Historically Rayalaseema region consisting of four districts viz. 1.Chittoor, Kadapa, Anantapur and Kurnool is continuously under the clutches of drought in Andhra Pradesh, wherein the average annual rainfall is 618mm, which is lowest in the country.

Tanks: The Insulators

Facing high spatial and temporal variability of rainfall since time immemorial, the rural people of Rayalaseema region have followed a policy of conserving rain

water for subsequent use through tanks or small storage structures like ponds built, owned and managed by the local people through community organizations. Tank systems developed indigenously have provided insulation from recurring droughts, floods, vagaries of monsoon and offered the much needed livelihood security to the poor living in fragile semi- arid regions. However, after green revolution the importance was heavily given to major and medium irrigation and the minor irrigation systems were neglected during the past 40 years. The dominance of ground water also made the prominence of tanks to deteriorate as the main source of irrigation. The following Table.1 presents the percentage of area irrigated by tanks in drought prone districts and non drought prone districts of Andhra Pradesh.

Methodology and Objectives

Keeping the deterioration of tank irrigation in Rayalaseema region, an attempt is made in this paper to analyse the problems and prospects of Tank irrigation in Chittoor District of Andhra Pradesh. The main thrust of the present paper is to:

1. Analyse the absolute and relative decline of tank irrigation in Chittoor district
2. Assess the problems associated with deterioration of tank irrigation and
3. arrive at findings for improvement of tank irrigation in general

The present study is based on both primary and secondary data sources for evaluation. The reports of the Govt. of A.P and Directorate of Economics and statistics, Hyderabad were intensively used for the collection of secondary data.

Three tanks in chittoor district located in chinnagottigallu, Rompicherla and Y.V. Palem were selected for conducting primary survey with a sample of 60 sample farmers comprising 20 marginal farmers (< 2.5 acres), 20 small farmers (2.5-5.00 acres) and 20 large farmers (75.00 acres). A well structured schedule covering various aspects of tank irrigation, it problems and prospects was designed and canvassed to collect information by interview method. The field survey in the command area of three selected tanks was carried out during the first week of March 2006. The responses reported were processed and analysed for the preparation of the present paper. The results and analysis are discussed hereunder.

Deterioration of Tank irrigation in Chittoor District

Chittoor is one of the four districts of Rayalaseema region and also a drought prone district in A.P. It has a population of 37.46 lakhs representing 5% of total population of A.P and 4.9 lakhs of cultivators constituting 35.5% of total main workers and 13.0 % of total population as per 2001 census.

Chittoor is a dominant agro-district which has a normal rainfall of 715 mm in a year and received only 76% of the normal rainfall during 2004-05 through it has received 747 mm of rainfall during 2003-04. Due to a continuous negligence of public authorities and the preferences towards ground water sources, the tank irrigation in the district has been deteriorating.16,878 ha (It was even less at 15314 ha as on 2003-04) during 2004-05, indicating a decline of 50664 ha over a period of 30 years. The percentage of decline works out to 75% in 2004-05 over 1975-76. The data also shows that canal irrigation and area irrigated by other sources also declined during

the past 30 years, with a significant increase of 43307 ha under tube and other wells in 2004-05 compared to 1975-76.

The Case Study

As said earlier three tanks in three mandals of Chittoor district were selected for a primary study by interviewing 60 farmers with different farming status. Social status was also given due importance in the selection of sample farmers

Table.1 Mandal-Wise Distribution of Sample Farmers

S. No	Mandal where sample tanks are located	Farming status (In acres)				Total operational land under tanks selected (Acres)*
		<2.5	2.51-5.00	5.01+	Total	
1	Y.V. Palem	8	6	6	20	49.76
2	C.G. Gallu	8	6	6	20	52.12
3	Rompicherla	8	6	6	20	38.18
	Total	**24**	**18**	**18**	**60**	**140.06**

*erating 140.06 acres under the selected tanks.

Problems of Tank Irrigation

It is a well known fact that where the assured supply of water from tanks is available, there the density of wells is less and this low density leads to active community participation for tank management and on the contrary, where the density of wells is high, the people are not interested to participate actively in the tank management. The sample tanks have high density of wells and the management of tanks was neglected to a significant extent.

The sample farmers have reported three broad categories of factors that affected the management of tanks.

1. **Physical factors:** Including sources of supply, siltation and growth of weeds in the tank and in supply channels and encroachment of supply channels and tank bed area. 68% of the farmers reported these physical factors as the main reason for deterioration of tank irrigation.
2. The most important problematic factor reported under institutional factors are economic i.e., land holding pattern, and population pressure.
3. Among technical factors, the important problems are related to the spread of wells in the ayacut and drainage conditions.

It is true that all these broad categories of critical factors do not act in isolation but there is strong inter connection among these factors. This interconnectivity complicates the smooth functioning of tank irrigation management as per the analysis of the opinions of farmers in the study area.

Suggestions for better Tank Management

The selected farmers were also asked to report and mention the necessary measures to improve the tank irrigation management so that the agro-economy of their area becomes sustainable.

1. They have reported that adequate amount of public investment must be made available to local bodies, so that the problems related to physical factors could be successfully solved. The sources of supply should be properly maintained and there is every need to remove the weeds and small bushes in the tank and in supply channels.
2. Proper legal actions should be taken to evict the encroachments of supply channels.
3. Equity in the use of tank water must be assured by distributing water for a marginal farmer and a large farmer in a judicious way.
4. Proper crop planning is necessary so that the water available in the tank might be used economically and efficiently. Technical guidance must come from the authorities of agricultural departments.
5. A well designed programme should be implemented for desiltation of tanks by the local authorities.
6. Encroachers in the tank bed area and catchment area should be removed immediately.
7. The tanks must be so maintained that they should act as effective rainwater harvesting structures. The technology available with Central Plantation Crops Research Institute (CPCRI), Kasaragod should be made available to farmers or tank ayacutdars so that farming becomes sustainable with rainwater harvesting.
8. Suitable technical measures like covering the sides with polyethylene film (Silpolin) goes a long way for preventing water from percolating into ground.
9. Proper varieties of acquatic crops which serve as cover crops over the water surface might be made available for reducing evaporation.
10. Government should leave the practice of allotting plots for residences in the tank area. The guidelines given by the recent supreme court judgment must be strictly followed.

Above all, the ayacutdars must know that unless tanks are kept in a good situation, their groundwater needs and environmental requirements are not met adequately. Tank is a multi-purpose structure, which serves as a check to floods, conserves soil, humidity and maintains bio-diversity around it. Hence, tanks are the "Banks for environmental Quality". Their proper management leads to sustainable farming integrated with rainwater harvesting.

References

Dhurjati Mukherjee - Agricultural Regeneration Is a Second Green Revolution Possible? Kurukshetra, August, 2006.

Swarna Sadasiva Vepa - Second Green Revolution: Catalyst for Rural Uplift, Yojana, August, 2004.

Ruddar Datt and K.P.M.Sundaram - Indian Economy. S.Chand & Co.,

* * * * *

Gandhi and the Tamils

M. Nithyanandam, B.Com., M.A. (Gandhian Thought)

Abstract

After returning from South Africa Gandhiji did not involve himself in Indian politics, but went round whole of India to feel the pulse of the people. He started struggle against attrocities occured in some places and solved the problems of the people as they requested him to help them. He succeeded in all his endeavours. But Gandhiji started his first struggle for all over India only in Tamilnadu. He sowed the seed for hartal and fasting in particular day and appealed to the people of India to support his struggle.

Gandhiji visited Tamilnadu several times to show his great concern for the Tamils. that he came first time to Tamilnadu to get the support from the Tamils for the struggle in South Africa. He had come to Tamilnadu 20 times from 1896 to 1946. He covered all places in Tamilnadu. He visited every village throughout Tamilnadu. This is an astonishing fact. This article is explains about the relationship among the Gandhi with Tamils.

Key Words: Tamils and Freedom Struggle.

Introduction

Our country had been under the control of foreign rule for two centuries. Mahathma Gandhi , the father of our nation and the great leader of our country had united all the people and freed our country from foreign clutches. Born in Porbandher situated in Kutch region in Gujarath State on October 2, 1869. Mohandas Karamchandh Gandhi went to London and studied Bar at Law and became a Barrister. He went to South Africa as a barrister and his life there became a turning point in the history of India and sowed the seed for freedom struggle in India.

Turning point

Gandhiji went to South Africa as a legal adviser for a firm. When he travelled by train to the court in Pretoria, he was not allowed to travel even he have the first class ticket and thrown out of the train with his bag. Since racial fanaticism, he pushed out of the cart by a white man on the way. These incidents wounded him and made him determine to fight for it. Balasundaram, a tamilian was assaulted by his owner. He met Gandhiji. He appeared for him in the court and saved him. Thus Gandhiji's first contact with the tamils was blossomed.

The Tamils in the Struggle

He established an Association called **"The Natal Indian Congress"** in South Africa. He conducted several struggles for solving issues regarding the rights of Indians in South Africa and he achieved success in all his attempts.The South African Government under the captaincy of General Smuts accepted all the demands of Indians and offered several concessions to them. In all the struggles The Tamils were of great support to Gandhiji.

Tamil Magazine

In South Africa Gandhiji set up a farm called 'Phoenix Farm' to experiment Community living and there he accommodated all the Indains who participated with him in the struggle.Then he also established another farm called 'Tolstoy Farm' In both the settlements majority of the occupants were Tamilians. He published from here the newspaer called **"Indian Opinion"** in four languages. One of them was Tamil. It shows how much affection towards the Tamis and concern about them he had and how great he was.

Tamil in Sathyagraha

The word 'Sathyagraha' is synonymous with Gandhiji and whenever we think of Gandhiji, we think of his sathyagraha movement. He invented this movement at first in South Africa and experimented it there. Majority of The Tamils plunged into this movement and embraced imprisonment. Some of them sacrificed their lives. I can mention a few here: Sri Thambi Naidu, Sri B.K. Naidu, Sri V.A. Chettiar, Sri Kanthasami Pillai, Sri Veerasami Naicker, Sri Amirthalingam Chettiar, Sri Subramani Achari, Sri Munusamy, Sri Sella Paththar, etc., Ms. Valliammaal, Sri Nagappan and Narayanasamy lost their lives. So, Gandhiji had great respect for the Tamils and Tamilnadu.

Mahatma Gandhi at a public meeting in Chennai Tamilnadu India March 1925

Contributor: <u>Dinodia Photos</u> / Alamy Stock Photo

Gandhiji's visit to Tamilnadu

Gandhiji visited Tamilnadu several times to show his great concern for the Tamils. I would like to mention here that he came first time to Tamilnadu to get the support from the Tamils for the struggle in South Africa. He had come to Tamilnadu 20 times from 1896 to 1946. He covered all places in Tamilnadu. He visited every village throughout Tamilnadu. This is an astonishing fact.

His purpose of visit

Gandhiji visited Tamilnadu not only for mustering strength for South African Struggle but for various reasons. He wanted to educate people about his programmes such as Non-cooperation Movement, Khadi development, Harijan Yatra for Harijan welfare and untouchability. He wanted to meet the families of Tamilians who sacrificed their lives in the struggle in South Africa. He also went to the Temples in Palani and Madurai. He writes that his visit to the temple at Palani is 'A good omen for Indian Swaraj'.

27

Mahatma Gandhi addressing scouts in Chennai, Tamilnadu, India 1927

Leaders of Tamilnadu

Leaders of Tamilnadu like Rajaji, G.A. Natesan, Yahoob Hasan, G. Subramania Iyer, Srinivasa Sastri, Kasthuri Ranga Ayyangar, George Joseph of Madurai, Sathyamoorthy, J.C. Kumarappa, Salem Varatharaajulu Naidu, Srinivasa Ayyangar, Harihara Sharma, T.S.S. Rajan, Vaithyanatha Iyer of Madurai, L.N. Gopalsamy, Rajapalayam Kumarasamy Raja, K. Kamaraj, Kovai Ayyamuthu, T.S. Avinasalingam, Ambujammal, Sounthiram Ramachandran and many leaders worked with Gandhiji and gave full co-operation to educate the people for freedom struggle.

The Tamilnadu which gave a change

After returning from South Africa Gandhiji did not involve himself in Indian politics, but went round whole of India to feel the pulse of the people. He started struggle against attrocities occured in some places and solved the problems of the people as they requested him to help them. He succeeded in all his endeavours. But Gandhiji started his first struggle for all over India only in Tamilnadu. He sowed the seed for hartal and fasting in particular day and appealed to the people of India to support his struggle.

Mahatma Gandhi visited Ooty in 1934

 Mahatma Gandhi is seen walking along Ettines road in Ooty on his way to address a public meeting in February 1934. S.Tiruvengadam, Congressman in Ooty then and one of the organisers of the meet, is seen behind Mahatma. (Photo: DC)
(DECCAN CHRONICLE | B. RAVICHANDRAN, Published Oct 2, 2015)

Change of Dress

Gandhiji who was wearing English dress and then Gujarathi dress changed his dress in Madurai and appeared as a simple farmer, wearing loin cloth and towel around his body. The reason for his transformation was due to the fact that majority of the people of Tamilnadu were poor and without proper dress. "If they have only loin cloth I would also wear loin cloth. Now I feel satisfied", said Gandhiji.

Some interesting news in Tamil Nadu

Gandhiji was not allowed to worship Goddess in the temple at Kanyakumari as he had returned from foreign country. Gandhiji did not take bath in the Courtalam Falls because Harijans were not allowed to enjoy the Falls. He laid the foundation stone for Nandanar Temple at Chidhambaram. He visited Kristhukula Ashram at Thiruppathur, near Vellore.

A Film on Gandhiji

The person who took the first documentary film on Gandhiji was a Tamilian by name A.K. Chettiar or A. Karuppan Chettiar. He was called as "The man who went round the world". He travelled 1,61,000 k.m. around the world and collected 50,000

feet film rolls on Gandhiji. He prepared a film on Gandhiji with 12,000 feet and released it in Tamil, Telugu and then after English in America. This film had been traced now after many years.

Conclusion

This year is 150th birth year of Gandhiji. This is the proper time when we have to remember the services of the tamils in the freedom struggle and South African struggle along with Gandhiji. We have to respect them. The remark he made about the Tamils is a perfect proof of his true love towards the Tamils: **"Whenever I meet Tamilians I feel that I meet my kith and kins"**.

(This article is Translated from Tamil by Sri T. Vipranarayanan, Trustee, Gandhi Study Centre, T.Nagar, Chennai-600 017, Tamil Nadu)

Reference

1. Tamil Naattil Gandhi by A. Ramasamy
2. Thamizhar Thamizhnadu Gandhi by A. Annamalai, K. Mohan, Su. Sivalingam

*****

A Study on Social Impact of Smart Phones on College Students

R.H.Abdul Hajee
Assistant Professor
Department of Commerce
The Quaide Milleth College for Men
Medavakkam, Chennai – 600 100

Abstract

Mobile infrastructure has moving or changed or doing something at great speed during the past decade and this quick increase has become so apparent that you hardly ever come in contact with someone who does not possess a Smart phone or other mobile device. It is becoming increasingly easy and inexpensive for College Students to communicate with friends and access information through their Cell phones (Reid and Reid 2007, p. 424). Therefore, the study on the social implications of smart phones is highly important when it comes to the future generation of our Students. A questionnaire was handed out to College students in Chennai City to find out how mobile phones have affected their lifestyles. The social implications that mobile phones, and its applications have on teenagers were identified. This paper concludes with findings, divided into demographics, sexually explicit material and mobile instant messaging, that could prove useful to those directly involved in guiding teenagers to lead a more balanced lifestyle.

Key Words: Mobile technology, Cell phones, Social Impact, College Students.

Introduction

As mobile technology becomes a more prominent aspect of everyday life, people are realizing the true power when it comes to the use of mobile devices. These mobile devices allow for the enhancement and ease of access to social and business functions (Lu et al., 2003:206). Educational institutions are also starting to realize the potential of mobile technology in the accessing of educational sources (Chen and Kinshuk,

2005:91). These sources are even extending to health care facilities according to Peters et al. (2003:400).It should be noted that not all literature and perceptions on mobile technology are positive. There is for instance a health concern when it comes to the use of mobile devices, as Timotijevic and Barnett (2006) contest in their article. These are some of the factors that an individual would have to consider when purchasing and/or using mobile technologies.

Mobile phones have become common phenomena amongst teenagers according to Campbell (2006:196). The extent to which it can be used to connect and bring information to people is astronomical. Mobile technology has positively impacted the lives of people. These improvements range from making communication easy to watching videos. Despite this, one cannot help to think that there has to be more to it than this. Whether teenagers are affected negatively or positively by mobile phones is something that will need to be monitored as the influence of the technology becomes more apparent.

Cell / Mobile phone technology in recent trends

The following section will describe some of the major uses of mobile phones:

· Voice.
· Short message service (SMS).
· Internet.
· Data transfer.
· Mobile instant messaging (MIM).

Voice

The mobile phone allows a user to speak with one person or many people at the same time. An advantage of voice on mobile phones over that of landlines is that people can be contacted almost anywhere at any time. There are however concerns when it comes to a person being constantly available. A topic which is discussed later, concerns speaking on mobile phones in public, among other things.

Short message service (SMS)

As the name suggests, this service allows individuals to send short messages, with a maximum of 160 characters, to other individuals or groups. One of the reasons for its popularity is due to it being seen as a cheaper method of communicating than that of a telephone (Reid and Reid, 2007:424).

Internet

Previously, if you were travelling abroad, you had to find an Internet café to be able to browse the Web. In recent years, the Internet has extended its reach to include mobile phones. By using mobile phones, it is possible to get access to different social spaces wherever you are (Lu et al., 2003:206). However, there are concerns when it comes to privacy and security that will be addressed in a later section.

Data transfer

Bluetooth is a technology that enables people to share data, such as music, videos and images wirelessly via their mobile phones, among other devices (Erasala and Yen, 2002:193). Teenagers, for instance, are using Bluetooth to get music from their friends without the need to pay (Slade, 2005:3). This could have dire consequences for music companies as this brings a new way of piracy to life. Security concerns are discussed under the heading, "Concerning mobile phones".

Mobile instant messaging (MIM)

A large number of people, especially teenagers prefer instant messaging (IM) to that of other electronic communication methods, such as e-mail (Marshall, 2003). One of the attractive aspects of IM is the instantaneous transfer of messages between individuals and groups. Mobile instant messaging has given rise to new friendships and communities. An example of a popular South African MIM service is MXit (Francke and Weidman's, 2007:4, 6). MXit only charges for data transfer which makes it even cheaper than SMS, which has given rise to its popularity (Country Monitor, 2007). As previously indicated, mobile phones have given rise to certain concerns, which will be discussed next.

Mobile phones – Affects of integration and social behavior

Campbell (2006) conducted a study on teenage girls and how mobile phones affected them. The research focused on three main topics, namely:

· The media and how it portrays it as being a symbol of independence.
· The parents and how it provides peace of mind for them when it comes to their children.
· The youth and how it is used as a social enabler.

In the past few decades, the media has changed its advertising style with regards to telephones and more recently, mobile phones. One of the target markets that it reached was that of young females. Recently, companies have been concentrating on how mobile phones can be used to gain independence from parents as well as to connect with friends and colleagues. Campbell (2006:201) identifies the campaign to sell the idea of the mobile phone as a way of having fun. This also includes the idea of it portraying your sense of style and uniqueness. As the independence of teenagers become more apparent, so increases the concern of their parents. Parents see it as a way to have a connection with their children, no matter where they are. Campbell (2006:202) determined that parents typically buy mobile phones for their daughters as a precaution.

The integration of mobile phones into the lives of teenagers is creating some difficulties in a number of areas that have to be managed and controlled. Teachers for instance have to cope with students bringing their mobile phones to school. This ranges from disruptions in class, bullying other students and cheating in tests (Obringer and Coffey, 2007:41). A significant part of the mobile phones have video

and photo capabilities. This raises issues of privacy where students can be photographed in restrooms and their photos shared via Bluetooth and other data transfer technologies (Obringer and Coffey, 2007:41). As a result, the "violated" teenagers might feel ostracized and too embarrassed to face fellow students in future.

Methodology

The following research paper made use of the quantitative approach. This was done by distributing a questionnaire to high school students between the ages of thirteen and nineteen. The questionnaire distribution was divided by class year. In each year a class was randomly selected and in each class, all the students were selected. Thus, the stratified random sampling approach was used. A total of 80 male and 75 female students took part in the answering of the questionnaire. This allowed for a more balanced view of the data in terms of gender equality. Figure 1 displays the questionnaire distribution in more detail.

Figure 1: Detailed Chart of respondents.
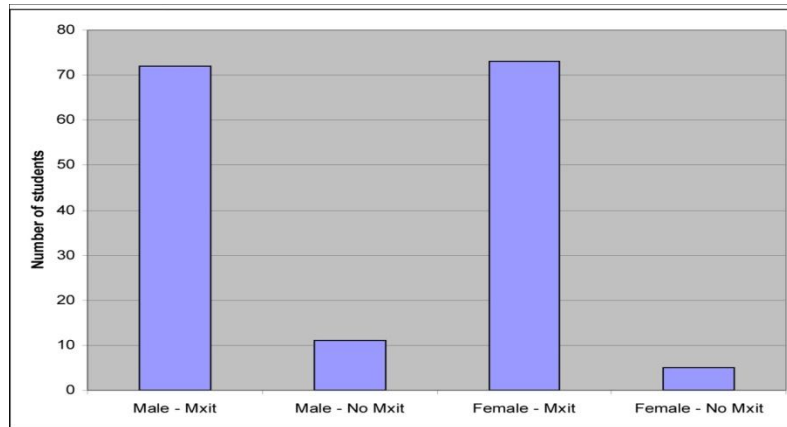
In this questionnaire, the students were asked specific questions pertaining to their own mobile phone usage. It consisted of three components, namely:

· Demographics (General use of mobile phones).
· Explicit material (Whether they have had any experience with sexually explicit material on their mobile phones).
· Mobile instant messaging (The questionnaire concentrated specifically on the MIM, MXit).

Three of the questions used the Five-Point Likert-scale. The questions included all of the main components, consisting of demographics, explicit material and mobile instant messaging.

The teenagers were asked in such a way to deduce how their lifestyles revolved around their mobile phones and to understand how they were affected, socially. The questionnaire reached a large number of students and thus reached one of the objectives by being a representative sample of the study population. The nature of the research has allowed for a view of College Students and their mobile phone usage.

Results & discussion

The following sections discuss the results obtained from the answered questionnaires.

Demographics

On asking how much money was spent per month, a significant difference was found between that of male and female college students. The average amount spent on airtime per month by the female students is R105 while the male students only spend R60. The male respondents send out 27% more SMS's per day, than their female counterparts. While taking this and the amount of money spent into account, it can be perceived that the female students prefer using their mobile phones for calling which is seen as a more personal and social way of communication. Thus it gives us a good indication of the different social spaces that females and males find themselves in.

Some of the students spend a considerable amount of time on their mobile phones per day. With regards to the male students, 15% of them spend between five and six hours on the mobile phone while 7% spend more. Although this does not seem as much, it is still an issue that the parents or guardians should look into as it could affect the students unconstructively in terms of their social development and studies. An even greater number of female respondents spend between five and six hours and more on their phones. 18% spend between five and six hours per day and 7% over six hours. This links to the previous paragraph and Campbell's (2006:201) findings on how teenage girls use their mobile phones to communicate with friends. Figure 2 give a graphical representation of the hours spent per day, using mobile phones.

Figure 2: Hours of mobile phone usage per day (All respondents).
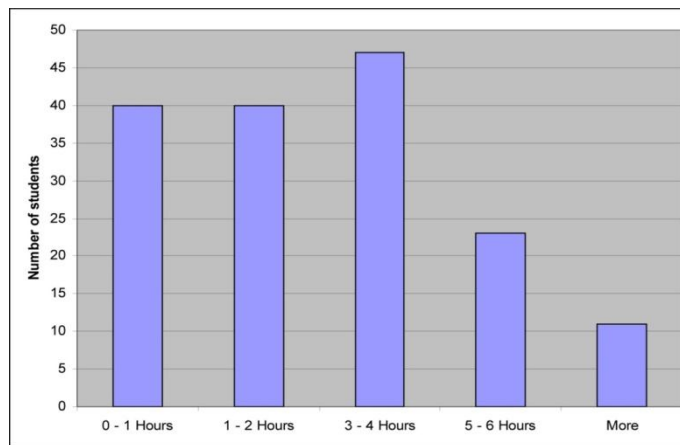
With regards to mobile phone usage in College, 89% of the girls and 92% of boys responded by saying that they use their phones for less than one hour. This coincides with Franck and Weidman's (2006:15) findings that schools have tried to curb the use of mobile phones during school hours.

Conclusion

In this paper I have presented a brief overview on Smart Phones and Mobile technology as well as the use of it in different facets of society today. The article elaborated on the concerns that face users, including security and speaking in public as well as advertising campaigns to College girls and boys into buying a particular mobile phone or reputed mobiles which cheap and best in prices. This concentrated on factors, such as finding one's sense of uniqueness, identity and independence. Cyber bullying has unfortunately increased from the inception of mobile technologies. The reach of this type of bullying should be closely monitored by the parents and or guardians of these College Students. This is especially important due to the possibility that it can reach into homes and into the bedrooms of the College Students.

The research study will help to serve as a precedence of precautionary measures. These measures have to be taken to help in the development of teenagers in an ever changing society.

List of References

A study by, Campbell, R. 2006. Teenage Girls and Cellular Phones: Discourses of Independence, Safety and 'Rebellion', *Journal of Youth Studies*, 9(2) . Available WWW: http://www.ebscohost.com/ (accessed 14 February 2008).

Research Paper by,Chen, J. and Kinshuk 2005. Mobile technology in educational services, *Journal of Educational Multimedia and Hypermedia*, 14(1) . Available WWW: http://www.proquest.com/ (accessed 16 July 2005).

A study by, Furnell, S. 2005. Handheld hazards: the rise of malware on mobile devices, *Computer Fraud & Security*. Available WWW: http://www.sciencedirect.com/ (accessed 7 May 2008).

A study by ,Hulme, G.V. 2004 . Dial v for virus ,*InformationWeek*. Available WWW: http://www.proquest.com/ (accessed 22 May 2008).

A study by ,Obringer, S.J. and Coffey, K. 2007. Cell Phones in American High Schools: A National survey, *Journal of Technology Studies*, 33(1/2). Available WWW: http://www.proquest.com/ (accessed 21 April 2008).

A study by ,Shih, D., Lin, B., Chiang, H. and Shih, M. 2008. Security aspects of mobile phone virus: a critical survey, *Industrial Management & Data Systems*, 108(4). Available WWW: http://www.emeraldinsight.com/ (accessed 22 May 2008).

A study by ,Slade, N. 2005. The new face of piracy, *MusicWeek*. Available WWW: http://www.ebscohost.com/ (accessed 3 May 2008).

A study by ,Timotijevic, L. and Barnett, J. 2006. Managing the possible health risks of mobile telecommunications: Public understandings of precautionary action and advice, *Health, Risk & Society*, 8(2). Available WWW: http://www.ebscohost.com/ (accessed 14 February 2008).

*****

Multidisciplinary Global Journal of Academic Research (MGJAR)

An Application of Time Series ARIMA Forecasting Model for Predicting Sugarcane Productivity in India

Dr. Prakash Karuthapandi
Assistant Professor
Department of Economics
Bishop Ambrose College
Coimbatore - 641 045, Tamil Nadu, India

Abstract

Forecasting at national level finds its importance in the present scenario. The total cropped yield can be decreased continuously in future. Because, A time series modeling approach (Box-Jenkins' ARIMA model) has been used in this study to forecast sugarcane productivity in India. Forecasting of sugarcane productivity of India was made from the historical data of 1970-71 to 2012-13 by using univariate Autoregressive Integrated Moving Average (ARIMA) models and was compared with the forecasted all India data. The autoregressive (p) and moving average (q) parameters were identified based on the significant spikes in the plots of Partial Autocorrelation Function (PACF) and Autocorrelation Function (ACF) of the different time series. ARIMA (0, 1, 2) was found best fitted for forecasting model also suitable for all sugarcane productivity of India.

Key Words: ARIMA Model, Sugarcane, Yield, Forecasting.

Introduction

Sugarcane originally belongs to tropical South Asia and South East Asia. Different species originated in different locations. Saccharum barberi originated in India and Saccharum edule and Saccharum officinarum was originated in New Guinea. Around the eighth century A.D, Arabs introduced sugar to the Mediterranean, Mesopotamia, Egypt, North Africa and Spain. By the tenth century, sources that there was no village in Mesopotamia that grew sugarcane. It was among the early crops brought to the America by Spaniards. (Prakash and Muniyandi 2014).

Sugar is produced in over 120 countries roughly 70 percent of world sugar is produced from sugarcane primarily grown in the tropical and sub-tropical zones of the southern hemisphere. The balance 30 percent sugar come from sugar beet grown mainly in the temperate zones of the northern hemisphere. (Padmanahan and Senthilvasan 2008). Sugarcane is a renewable, natural agricultural resource because it provides sugar besides biofuel, fibre, fertilizer and myriad of byproducts / co-products with ecological sustainability. Sugarcane juice is used for making white sugar, brown sugar (khandhasari), jaggery (Gur) and ethanol. The main by-products of sugar industry are baggase, molasses and press mud. (Saravananan and Parvathi 2010).

Sugarcane juice in known for its medicinal value since the vedic period. It originated in New guinea about 10,000 years ago. (Shanmugam *et al.* 2011). Sugarcane is plays a vital role in economic development of the state and particularly in rural areas. The sugar industry provides large scale direct employment to several direct employment to several thousands and indirect employment to several lakhs of farmers and agricultural laborers in the rural areas who are involved in cultivation of cane, harvesting transport and other potential services. (Navaneetha Kannan 2009). Molasses, the chief by-product, is the main raw material for alcohol and for alcohol based industries. Excess baggase is now being used in the paper industry. Besides, co-generation of power using baggase as fuel is considered feasible in most sugar mills. Press mud is used as fertilizer by most of the farmers. It is also used as burning material in so many industries like Brick Kiln.

The leaves of sugarcane are used as fodder and in mulching which is important for increasing the fertilizer status, checking evaporation, maintaining humidity and suppressing weed infestation. (Padmanabhan 2009). Sugarcane, a cash crop, is the main raw material for the production of sugar which fetches a considerable amount of foreign exchange to the national exchequer every year. (Thangavelu and subhadra 2005).

The objectives of the study were to suggest appropriate ARIMA model for the generation of forecasting yield sugarcane cultivation in India and to make ten years forecasts with appropriate prediction interval and to generate forecasts of yield under sugarcane cultivation in India by using appropriate ARIMA models.

Review of Literature

Prakash and Muniyandi (2014) analyzed the forecasting production of sugarcane in India, using Auto Regressive Integrated Moving Average (ARIMA) Models on the basis of secondary data from the period of 1970-71 to 2012-13 (43 years). The conclusion of the study is the total sugarcane production could be increased in the future, though there could be some fluctuations in the production of sugarcane in India. The projection of ARIMA model shows that sugarcane would play a vital role in improving the sugar and by-products production in the coming years in the country.

Prakash and Muniyandi (2015) estimated forecasting with Auto Regressive Integrated Moving Average (ARIMA) models for area under sugarcane cultivation in India. These models are fitted to time series data either to better understand the data or to predict future points in the series. Data were obtained from secondary sources like Co-operative Sugar, Sugarcane Breeding Institute for the period of 1970-71 to 2012-13 (43 years). This study concludes that the total cropped area can be increased in future, even though there was a negative impact would be there in the year of 2018-2019. Hence, in that particular period the government would support to the sugarcane cultivators to increase the area of cultivation.

Materials and Methods

The Auto Regressive Integrated Moving Average **(ARIMA)** model is a generalization of an autoregressive moving average (ARMA) model. These models are fitted to time series data either to better understand the data or to predict future points in the series. The existing study applies Box-Jenkins (1970) forecasting model popularly known as ARIMA model. The ARIMA is an extrapolation method, which requires historical time series data of underlying variable generally this ARIMA model was used in macro level data analysis. The model in specific and general forms may be expressed as follows. Let Y_t is a discrete time series variable which takes different values over a period of time. The corresponding AR (p) model of Y_t series, which is the generalizations of autoregressive model, can be expressed as:

$$AR(p):Y_t = f_0 + f_1 Y_{t-1} + f_2 Y_{t-2} + ... + f_p Y_{t-p} + et \qquad (1)$$

Where, Y_t is the response variables at time t,

Y_{t-1}, Y_{t-2}......Y_{t-p} is the respective variables at different time with lags $f_0, f_1,..., f_p$ are the coefficients and et is the error factor. Similarly, the MA (q) model which is again the generalizations of moving average model may be specified as:

$$MA (q): Y_t = m_t + e_t + d_1 e_{t-1} + L + d_q e_{t-q} + vt \qquad (2)$$

Where, m_t is the constant mean of the series, δ_1... δ_q is the coefficients of the estimated error term, et is the error term. Combining both the model is called as ARIMA models, which has general form as:

$$Y_t = f_0 + f_1 Y_{t-1} + f_2 Y_{t-2} + L + f_p Y_{t-p} + e_t + d_1 e_{t-1} + L + d_q e_{t-q} + vt$$

If Y_t is stationary at level or I (0) or at first difference I (1) determines the order of integration, which is called as ARIMA model. To identify the order of p and q the ACF and PACF is applied.

Data

For the present study, the data were obtained from secondary sources. Data was collected for the periods of 1970-71 to 2012-13 (43 years) yield (Lak hectares / Production 000'tonnes) from source like Cooperative Sugar. For the present study,

the statistical tools were employed to assess the growth performance of Sugarcane in India. Since large numbers of data are required for ARIMA model.

Tool of Analysis

The following tools were employed to analyze the data with reference to selected objectives of the study.

Model Statistics

Results and Discussion

The ARIMA model was formulated after assessing that transforming the variable under forecasting was stationary series. The stationary series was the set of values that varied over time around a constant mean and constant variance. This model was common method to check the stationary and explain in the following figure. Figure 1 reveals in this data used were non-stationary. Again, non-stationary in mean was corrected through first differencing of the data. The yield and time variable (Y_t) could now be examined for stationary.

Figure: 1 Time Plot of Sugarcane Yield (Lak hectares/million tonnes) in India
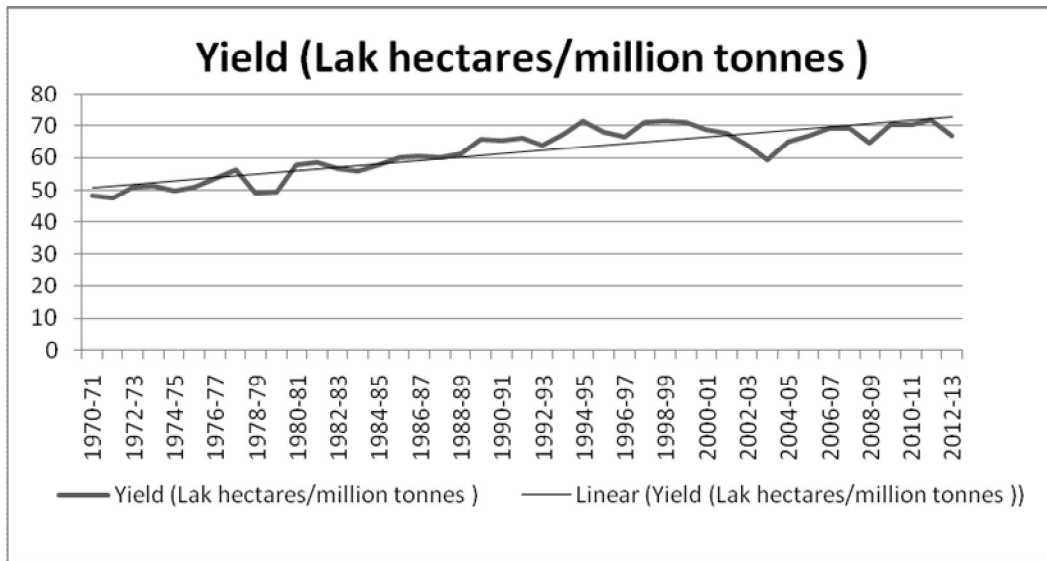
Since, Y_t was stationary in mean, the next step was to identify the values of p and q. For this, the autocorrelation and partial autocorrelation coefficients (ACF and PACF) of various orders of Y_t were computed and presented in Table 1 and Figure 2.

Table: 1 ACF and PACF of Sugarcane Yield

Lag	Auto Correlation		Box-Ljung Statistics			Partial Auto Correlation	
	Value	DF	SIG	Value	DIF	Partial Autocorrelation	Std. Error
1	0.869	0.152	34.783	1	0.000	0.869	0.152
2	0.733	0.242	60.121	2	0.000	-0.091	0.152
3	0.693	0.289	83.328	3	0.000	0.317	0.152
4	0.663	0.325	105.113	4	0.000	-0.012	0.152
5	0.589	0.355	122.803	5	0.000	-0.075	0.152
6	0.479	0.377	134.797	6	0.000	-0.181	0.152
7	0.430	0.391	144.757	7	0.000	0.155	0.152
8	0.411	0.402	154.076	8	0.000	-0.037	0.152
9	0.322	0.412	159.986	9	0.000	-0.193	0.152
10	0.234	0.417	163.195	10	0.000	0.037	0.152
11	0.192	0.420	165.425	11	0.000	0.000	0.152
12	0.164	0.422	167.100	12	0.000	-0.035	0.152
13	0.108	0.424	167.847	13	0.000	-0.054	0.152
14	0.021	0.425	167.875	14	0.000	-0.085	0.152

Figure: 2 ACF and PACF of differenced data
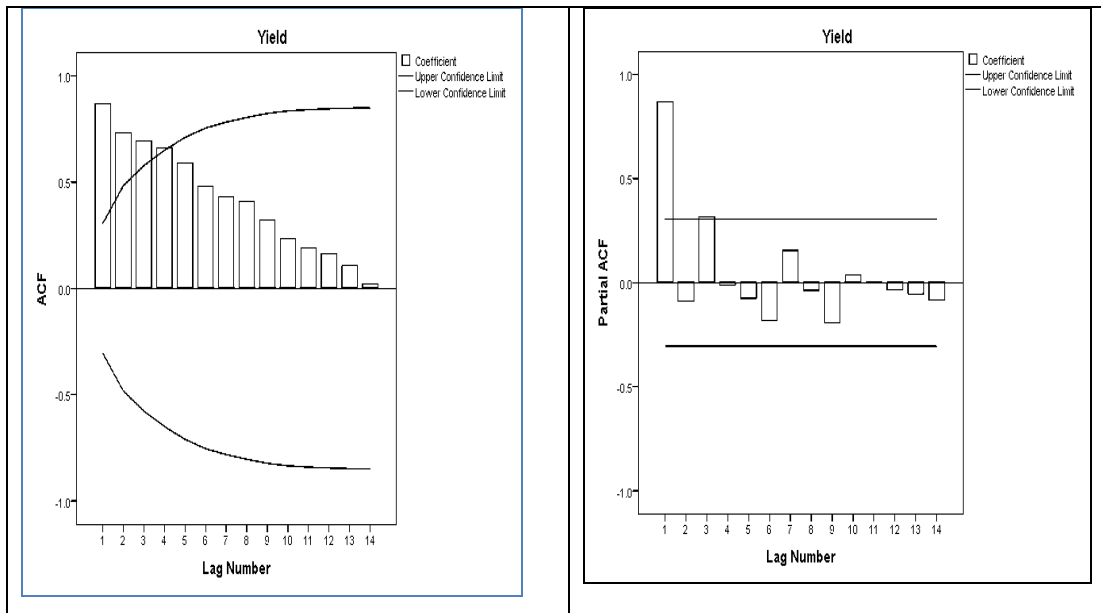
The order of an ARIMA model is usually denoted by the notation ARIMA (p,d,q), where p is the order of the autoregressive part d is the order of the differencing q is the order of the moving-average process.

The ARIMA model were discussed with values differenced once (d=1) and the model which had the minimum normalized Bayesian information criterion (BIC) was chosen. The BIC value to determine the autoregressive order used to estimate the error series. The Estimation of parameters for sugarcane and yield was estimated in Best Fitted Model. The various ARIMA models and the corresponding normalized BIC values are given in Table 2. The value of normalized BIC of the chosen ARIMA was 2.365. Estimation of Parameters for Sugarcane, yield of Best Fitted Models.

Table: 2 BIC value of ARIMA (p,d,q)

Sl.No	Model Type	BIC Value
1	0,1,0	2.459
2	0,1,1	2.489
3	**0,1,2**	**2.365**
4	1,1,1	2.445
5	1,1,2	2.443
6	2,1,0	2.482
7	2,1,1	2.531
8	2,1,2	2.643

Model Estimation

The second step was the estimation of model parameters were estimated using SPSS.20 version to estimate the results and were presented in Table 3 and 4. R^2 value was 0. .871. Hence, the most suitable model for Sugarcane cultivation area was ARIMA (0,1,2), as this model had the lowest normalized BIC value, good R^2 and better model fit statics (RMASE and MAPE). In this, justified that the selection of ARIMA (0,1,2) is the best model to represent the data generating process very precisely.

Table: 3 Estimated ARIMA Model of Sugarcane Area

	Estimate	SE	t	Sig
Constant	1.235	.215	5.736	0.000

Table: 4 Estimated ARIMA Model Fit Statistics

| Stationary R-squared	R- squared	RMSE	MAPE	Normalized BIC
0.285	0.871	2.730	3.250	2.365

Diagnostic Checking

In this model proved that the verification was concerned with checking the residuals of the model to see if they contained any systematic pattern which still could be removed to improve the chosen ARIMA, which has been done through examining the autocorrelations and partial autocorrelations of the residuals of various orders. For this purpose, Table 5 shows various autocorrelations up to 10 lags were computed and the same along with their significance tested by Box-Ljung statistic. The results indicated that none of these autocorrelations was significantly different from zero at any reasonable level. The selected ARIMA model was suitable model for forecasting sugarcane yield in India.

Table: 5 Residual of ACF and PACF of Sugarcane Yield

| Lag	ACF		PACF	
	Mean	SE	Mean	SE
1	-0.011	0.154	-0.011	0.154
2	0.029	0.154	0.028	0.154
3	0.000	0.154	0.000	0.154
4	0.109	0.154	0.108	0.154
5	0.195	0.156	0.200	0.154
6	-0.260	0.161	-0.271	0.154
7	-0.048	0.171	-0.071	0.154
8	-0.022	0.172	-0.012	0.154
9	-0.080	0.172	-0.135	0.154
10	0.012	0.172	0.043	0.154

Figure: 3 ACF And PACF Plot of Residuals
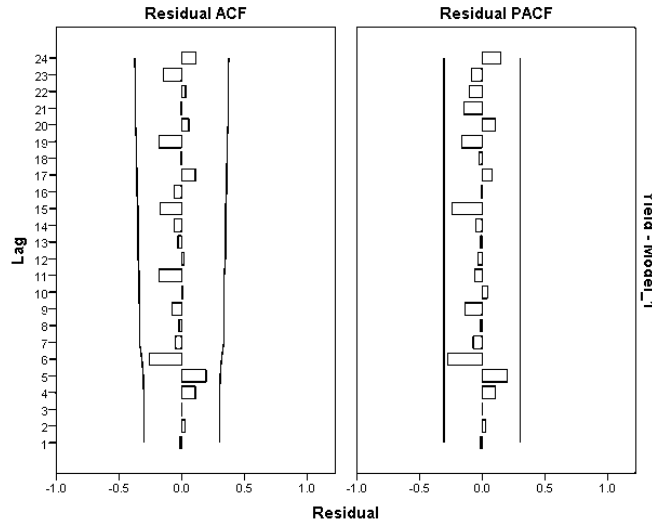
Table: 6 Forecast for the yield of Sugarcane in India
(Lak hectares / million tonnes)

SI. No	Year	Predicated	Average	Percentage	Indices	Average	LCL	UCL	Average
1	2013-14	65.31		9.88	100		59.9	70.73	
2	2014-15	67.4		10.20	103.20		60.88	73.92	
3	2015-16	67.15	66.04	10.16	102.81	59.63	60.64	73.67	72.44
4	2016-17	66.88		10.12	102.40		60.36	73.39	
5	2017-18	66.57		10.08	101.92		60.05	73.08	
6	2018-19	66.23		10.02	101.40		59.71	72.74	
7	2019-20	65.85		9.97	100.82		59.34	72.37	
8	2020-21	65.45		9.91	100.21		58.93	71.96	
9	2021-22	65.01		9.84	99.54		58.49	71.52	
10	2022-23	64.54		9.77	98.82		58.02	71.05	
Total		660.39	-	100	-	-	596.32	724.43	-

Figure: 4. Actual and Estimate of Sugarcane Yield
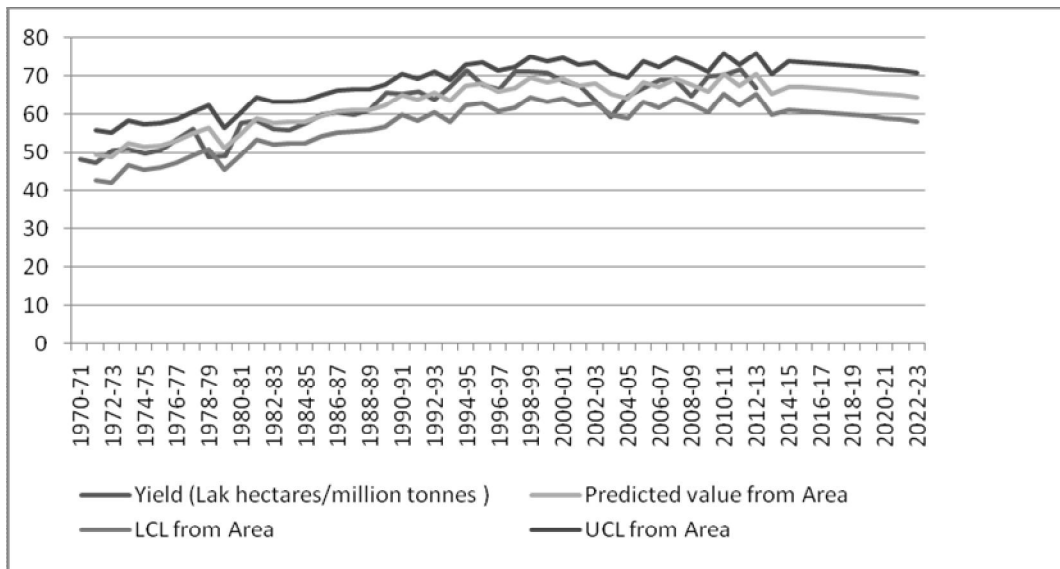
Forecasts of Sugarcane

The ten year forecast of Sugarcane yield was estimated by using the best model of ARIMA is presented in the Table 6. It has predicted that Sugarcane yield will decreased from 65.31 (Lak hectares / Production 000'tonnes) in the year 2013-14 to 64.54 in 2022-23 further the predicted yield of f decreased to (Lak hectares / Production 000'tonnes) respectively.

Conclusion and Suggestion

The study concludes that the total cropped yield can be decreased continuously in future. It is the responsibility of the government to safeguard the sugarcane cultivators by assisting technologically, economically, lawfully in the form of fixing remunerative cane price to encourage sugarcane cultivation, and fixing minimum administered prices to sugar which may give at least a nominal profit. The latest agricultural production technologies viz., deep ploughing, liberal use of organic manures to improve water holding capacity of soils, use of planting material from (three tier) nursery crop, set treatment with lime solution, balanced nutrition, trash mulching, detrashing, integrated pest and decease management, will influence in increasing the sugarcane productivity.

References

Navaneetha Kannan V. (2009) Financial status of co-operative sugar mill: A micro study, *Southern Economist,* 48 (9) 15-17.

Padmanabhan (2009) Sugarcane and sugar in India, *Kisan World,* 36 23-29.

Padmanabhan V. and Senthilvasan K.G. (2008) Sugar Industry Global and India Perspective, *Kisan World*, 35(9) 9-14.

Prakash K. and Muniyandi B. (2014) An economic analysis on sugarcane cultivation in Madurai district of Tamil Nadu, India, *Agricultural Situation in India*, 71 (7) 7-15.

Prakash K. and Muniyandi B. (2014) Forecasting Production of Sugarcane in India Using ARIMA Models, *Journal of Sugarcane Research* 4 (2) 64 – 69.

Prakash K. and Muniyandi B. (2015) Forecasting with ARIMA models for area under sugarcane cultivation in India, *Indian Journal of Sugarcane Technology*, 30 (1) 28-31.

Saravananan and Parvathi, (2010) The important of sugarcane industry in India, *Kisan World*, (37) 38.

Shanmugam, M., S. Paneerselvam and Manoharan (2011) Sugarcane juice and its health benefits, *Kisan World*, (39) 28.

Thangavelu S. and Subhadra D. (2005) Sugarcane technology in the past eight decades in India in sugarcane production, *Cooperative Sugar*, 36 (9) 739-743.

*****

Multidisciplinary Global Journal of Academic Research (MGJAR)

Exploring Relationship between Corporate Social Responsibility and Employee Engagement: An Empirical Analysis in Automobile Industry, Chennai

S.Jaya
Assistant Professor
The Quaide Milleth College for Men
Medavakkam, Chennai – 600 100

Abstract

In modern years the concept of Corporate Social Responsibility (CSR) has attain much consideration. It provides companies with a significant approach for achieving performance distinction and considered a source for enhancing feasible benefit. Employee engagement is an attitude of dedication and involvement of employee's towards their work and organization. The aim of this research is to find the impact of Corporate Social Responsibility on Employee Engagement in Automobile Industry, Chennai. For this purpose the study used Log-Linear regression, correlation and one-sample "t" test. The Log-Linear regression results indicate that Corporate Social responsibility (Internal CSR) have significant positive relationship on employee engagement. The variable Internal CSR Training and Education, Human rights, Health & safety, work life balance, workplace diversity are positively correlated with employee engagement and there is significant relationship on employee engagement. In order to enhance employee engagement in the Organization, the decision makers must work on creating and maintaining and efficient corporate social responsibility program, which would increase employee's engagement in the work.

Key Words: Corporate Social Responsibility, Employee Engagement, Internal CSR, Automobile Industry.

Introduction

Nowadays Corporate Social responsibility and Employee Engagement has become important to business. Indian companies Act 2013 has mandated that every company whose net worth of 500crores or more or turnover of 1000crore or more or net profit of 5crore or more should spent 2% from their profits towards Corporate Social responsibility. Corporate social responsibility has been chosen as an important driver in employee engagement. Corporate Social responsibility has two dimensions Internal CSR and External CSR.

An internal CSR practice refers to "CSR practices which are directly related with physical and psychological working environment of the employees", Pedro Ferreira and Elizabeth Real de Oliveira (2015)

External CSR refers to "Corporate Socially responsible for local community, business partners and suppliers, customers, public authorities and NGOs representing local communities and the environment such as philanthropy, volunteerism and environmental protection". Md. Kayssar Ahmed (2013)

Review of Literature

Osveh Esmaeelinezhad, Ali Bin Boerhannoeddin, Kuppusamy Singaraveloo (2015) investigated the effect of CSR on employee engagement and found that there was a positive effect on ethical and philanthropy responsibility towards employee engagement.

Maryam Hamzala Tariq (2015) studied the relationship between CSR and employee engagement. He observed that there was no relationship between CSR and employee engagement.

Fortunate Slindile Kweyama (2014) found out the impact of CSR on employee engagement. The result predicted that there was a significant relationship between CSR and employee engagement.

Govand Anwar and Bafer Abd Zebari (2015) found the relationship between CSR and employee engagement.

Irene Listyani Santoso (2014) analyzed the impact of Internal CSR towards Employee Engagement and Affective commitment. The survey was taken from employees in XYZ Hotel Surabaya. Three components of Internal CSR include Training and Education, Health and safety, human rights, Work Life Balance and work place diversity. The result showed that health and safety was the strong predictor in effecting Employee Engagement and Affective commitment.

Objective of the Study:

1. To assess the level of employee engagement in Automobile Industry.
2. To identify the Internal Corporate social responsibility factors influencing employee engagement.
3. To analyze the relationship between corporate social responsibility and employee engagement.
4. To examine the impact of corporate social responsibility on employee engagement.

Research Methodology

To fulfill the purpose of the present study, the primary data were collected from the employees in Automobile Industry.

Sample Size: A sample of 100 employees chosen from various Automobile Industry in around Chennai.

Tools for analysis: The following statistical tools have been used to analyze the collected data Log-Linear regression, Correlation, One-sample "t" test.

DATA ANALYSIS AND INTERPRETATION

(i) Demographic profile of the respondent

Table: 1 Respondent Demographics of the Study Sample

Demographic Information	Number	Percentage
Gender		
Male	68	68
Female	32	32
Educational Qualification		
SSLC	5	5
ITI/Diploma	48	48
Graduate	31	31
Post Graduate	16	16
Nature of Job		
Technical	60	60
Non-technical	40	40

It is observed from the Primary data, more than half of the respondents are male-showing the Auto Industry is a male leading. Majority of the respondents are ITI/Diploma followed by Graduate and Post Graduate. It is observed that most of respondents are Technical and the remaining were Non-technical.

(ii) Level of Employee Engagement

To assess the Level of Employee Engagement "t" Test is adopted and the results are displayed in below Table:

Table 2: Level of Employee Engagement

5-Point Scale (1=Very Committed, 2=Committed,3=Moderate,4=little committed, 5=None					
Variables	**Mean**	**Standard Deviation**	**"t" value**	**Degree of freedom**	**Number of Sample**
Job control	4.24	0.76	55.28**		
Accessibility of Tools & resources	3.87	0.92	41.60**		
Recognition for performance	3.87	0.92	41.69**		
Fair rewards	3.81	1.07	35.60**		
Recognition for ideas & suggestions	3.87	0.92	41.69**		
Individuals needs	3.76	1.12	33.29**	99	100
Employee commitment	3.87	0.92	41.69**		
Refer to a friend or colleague	3.75	1.15	32.38**		
Image of the company in the industry sector	3.87	0.92	41.69**		
Image of the company in the community	3.73	1.17	31.85**		

Interpretation:

From the above Table (No.2), it is understood that there is a significant difference among the employees in Job control, accessibility of tools & resources, recognition for performance, fair rewards, recognition for ideas and suggestions, individual needs, employee commitment, refer to a friend or colleague, image of the company in the industry sector, image of the company in the community.

(iii)   To assess the influential factors of Internal CSR on Employee Engagement

The researcher classified the Internal Corporate Social responsibility into five components namely Training and Education, Human rights, Health & safety, work life balance, workplace diversity.

To assess the influential factors of Internal CSR on Employee Engagement Log-Linear Regression model is adopted and the results are displayed in below table:

Log Linear Regression

Table 3: Definition of Variable to assess the influential factors of Internal CSR on Employee Engagement

Variable	Definition
X1	Training & Education (1=Strongly Disagree;5= Strongly Agree)
X2	Human rights (1=Strongly Disagree;5= Strongly Agree)
X3	Health & safety (1=Strongly Disagree;5= Strongly Agree)
X4	Work life Balance (1=Strongly Disagree;5= Strongly Agree)
X5	Work place diversity (1=Strongly Disagree;5= Strongly Agree)

$$Ln (Y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots \beta_5 X_5 + \mu$$

Where,

Ln (Y) = Natural logarithm value of employees engagement

β_0 = Intercept

β_i's   = Regression coefficients

μ = Random disturbance term; $(\mu_i \sim 0, \sigma_i^2)$

Table 4: Factors Influencing Internal CSR on Employee engagement

S.No	Variables	Regression Co-efficient	't' Value
1	Training & Education	0.838**	9.806
2	Human Rights	0.109**	1.999
3	Health & Safety	0.290**	4.546
4	Work Life Balance	0.086**	2.554
5	Work place Diversity	0.390**	5.958
	Constant	4.946**	28.010
	Dependent Variable	Employee Engagement	
	R^2	0.577	
	Adjusted R^2	0.554	
	F-Statistics	25.620**	
	N	100	

The linear-log regression analysis is employed for assessment of employee engagement which comprises ten variables such as a) Job control b) accessibility of tools & resources c) recognition for performance d) fair rewards e) recognition for ideas and suggestions f) individual needs h) employee commitment i) refer to a friend or colleague j) image of the company in the industry sector k) image of the company in the community. The Score value of employee engagement has been considered as dependent Variable.

The following Semi-log regression model was postulated with five influential factors related to Internal CSR (CSR to employees) such as Training and Education, Human rights, Health & safety, work life balance, workplace diversity are treated as Independent Variable.

The Semi-log multiple linear regression technique is applied to assess the influential factors of Internal Corporate social responsibility on Employee engagement and the results are presented in Table4. The co-efficient of multiple determination (Adjusted R^2) is found to be 0.554, which indicates that 55.40 per cent of variations in the dependent variable explained by the independent variables.

The F value was 25.620 which are also found to be significant at 1 percent level. The variable of employee Training and Education, Human rights, Health & safety, work life balance, workplace diversity, had a significant at 1 percent level and positive relationship with the employee engagement. Further, the five important components of Internal Corporate social responsibility are playing vital role to improve employee engagement in their Jobs.

(iv) Relationship between Employee engagement and Corporate social responsibility   (Internal & External)

To assess the relationship between Employee Engagement and Corporate Social responsibility (Internal) the researcher adopted correlation and the results are displayed in the below table.

Table 5: Relationship between Employee Engagement and Corporate Social Responsibility

Variables		Employee Engagement	Training & Education	Human Rights	Health & Safety	Work Life Balance	Work place Diversity
Employee Engagement	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	100					
Training & Education	Pearson Correlation	.277**	1				
	Sig. (2-tailed)	.005					
	N	100	100				
Human Rights	Pearson Correlation	.225*	.955**	1			
	Sig. (2-tailed)	.024	.000				
	N	100	100	100			
Health & Safety	Pearson Correlation	.010	-.135	-.170	1		
	Sig. (2-tailed)	.925	.181	.091			
	N	100	100	100	100		
Work Life Balance	Pearson Correlation	.260**	.932**	.890**	-.114	1	
	Sig. (2-tailed)	.009	.000	.000	.258		
	N	100	100	100	100	100	
Work place Diversity	Pearson Correlation	.323**	.955**	.915**	-.138	.982**	1
	Sig. (2-tailed)	.001	.000	.000	.172	.000	
	N	100	100	100	100	100	100

** Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

It is inferred from the Table5 that Work place diversity (r=0.323) is the biggest driver of employee engagement followed by Training &education(r=0.277), Human rights (r=0.225), Health & safety (r=0.010), and Work life balance (r=0.260). The variable Internal CSR Training and Education, Human rights, Health & safety, work life balance, workplace diversity are positively correlated with employee engagement and there is significant relationship employee engagement.

CONCLUSION AND SUGGESSTION

This study aimed to find out the Impact of Corporate social responsibility on employee engagement. The results of the study indicated that Internal Corporate Social responsibility has impact on employee engagement and there is a positive significant relationship between internal corporate social responsibility and employee engagement. From the analysis the researcher offered the following suggestions: It is observed that corporate social responsibility increase the level of employee engagement among employees in Automobile Industry and it will result in more competence and good performance in the business. In order to enhance employee engagement in the Organization, the decision makers must work on creating and maintaining and efficient

corporate social responsibility program, which would increase employee's engagement in the work. Moreover, involvement of employees in social responsibility projects will increase the social status of employees within and outside the organization.

References

1. Osveh Esmaeelinezhad, Ali Bin Boerhannoeddin, Kuppusamy Singaraveloo (2015) "The effect of Corporate social responsibility Dimensions on Employee Engagement in Iran", International Journal of Academic Research in Business and social sciences, Vol.5, No.3, pp261-276.
2. Maryam Hanzala Tariq (2015) "Effect of Corporate Social responsibility on Employee Engagement", Indian Journal of Science and Technology, Vol.8 (S4), 301-306.
3. Fortunate Slindile Kweyama (2014) "The Impact of CSR on Employee Engagement", Dissertation, University of Kwazulu Natal.
4. Zorigt Amarsaikhan (2014) "The Impact of CSR on Employee Organizational commitment: A Study in Ireland", Dissertation
5. Govand Anwar and Bafer Abd Zebari (2015) "The relationship between Employee Engagement and CSR: A Case study of Car dealership in Erbil, Kurdistan", International Journal of Social sciences and Educational studies, Vol. 2, No.2, pp.45-50.
6. Md. Kayssar Ahmed (2013) "Corporate Social responsibility of Commercial banks in Bangladesh: A case study on Southeast Bank Ltd.", IOSR Journal of Business and Management, Vol.12, Issue 1, pp.13-18.
7. A.R.Vijaya Chandran (2014) " Corporate Social Responsibility its impact on Engagement of Employee with respect to BPO Industry in Bangalore", Journal of Business Management and social sciences research, Vol.3, No.12, pp.1-5.
8. Marie Anttonitte Valentin, Celestino C Valentin, Fredrick Muyia Nafukho (2015) "The engagement continuum model using Corporate social responsibility as an intervention for sustained employee engagement: Research leading practice", European Journal of Training and development, Vol.39, Issue 3, pp.182-202.
9. Barbera Zemanova, Nikola Hojdova (2017) "Corporate Social responsibility and Employee Engagement in selected region in the Czech Republic", New trends and Issues proceedings on Humanities and social science, Vol.4, Issue 10, pp.144-153.
10. Hatem Radwan Ibrahim Radwan (2015) "The Impact of CSR on Employees in the Hotel sector", International Journal of Tourism and Hospitality review, Vol.2, Issue 1, pp.85-96.
11. Govand Anwar and Bafer Abd Zebari (2015) "The relationship between Employee Engagement and CSR: A Case study of Car dealership in Erbil, Kurdistan", International Journal of Social sciences and Educational studies, Vol. 2, No.2, pp.45-50.
12. Brenda Beryl, Achieng Otieno, Esther Wangithi Waiganjo and Agnes Njeru (2015) "Effect of Employee Engagement on Organization performance in Kenya's Horticultural sector", International Journal of Business Administration, Vol.6, No.2, pp.77-85.
13. Pratima Sarangi, Bhagirathi Nayak (2016) "Employee Engagement and its impact on Organizational success-A study in Manufacturing company, India", IOSR Journal of Business and Management, Vol.18, Issue 4, pp.52-57.
14. Irene Listyani Santoso (2014) "Impact of Internal CSR towards Employee Engagement and Affective commitment in XYZ Hotel Surabaya", iBuss Management, Vol.2, pp 79-88.

*****

Multidisciplinary Global Journal of Academic Research (MGJAR)

The Impact of old Education Policies in India and the Review of New Education Policy 2016

M. Dhamodharan
PhD Research Scholar
Dept. of Anthropology
University of Madras

Abstract

In India, literacy rate of the general population is 74%, while the literacy rate of the tribal population is only 58.95%. In Tamil Nadu, the literacy rate of the general population is 80.09%, differing greatly from the literacy rate of the Tribal population that stands at 54.34%.

There is a clear need to bring out the unique problems faced by the tribal people and understand the impact of our education policies and schemes on this section of population. Starting from British period to till data Government brought many education policies and formed many education commission to provide the education for citizen. Outcome the all policies is that 55% of class 5 children are not able to read a simple paragraph in Tamil (ASER 2016). Only 35 % class 5 tribal children are able to read balance 65% are NOT able to read. Tamil Reading skill is the foundation for learning all other subjects. If the children are lagging behind in Tamil, then how are they going complete or pass the other subjects? Math and English skills are even worse. Without addressing these kinds of learning quality issue our government are bringing many new policies. Recently in 2016, the current central government introduced New Education Policy 2016 but without re visiting or questioning the impact of old policies then it's waste of energy. This article mentioned our old policies and its component and critically reviewed new policy.

Key Words: Tribal People, Education and Education Policies.

Introduction

Since the time human beings evolved as a species on this planet, children's education has been a continuous process. In ancient times education involved adults teaching children about survival mechanisms including defending themselves from wild animals, hunting animals, seasonal changes and aligning with the environment. Even when ancient men lived in groups, learning was a knowledge sharing process.

Nomadic tribes began settling down in river banks and practiced agriculture. Few people claimed the lands and the rest worked as laborers. In order to stake claim on the fruit of hard labor the land owners started to dominate the laborers. This environment sowed the first seeds for inequality in education.

Around 1500 BC, during the Vedic times religious and spiritual education occupied center space. Rishis preaching the Vedic education to their sons and male students in a group setting was the first form of a school system. In the beginning, Vedic schools taught by Brahmin teachers had only Brahmin children under their tutelage. But in later periods Kshatriyas and Vaishyas were also accepted into the school. This Vedic schooling system was the foundation for Gurukul, a more formal schooling system.

During the Vedic times sutras were forbidden from learning. Even under monarchial rule and British raj education was an unreachable dream for the sutras.

Between 1800 – 1900 AD British governments initiated efforts to provide education to all sects of people. Beginning from 1800 to 2016 AD, for the past 216 years, there has been several policies constituted for education. Listed below are the most important of those policies and their impact on the society:

Education Policies from British period and Its Impact

1835 T.BMacaulay Education Policy	Western education methods with English as medium of instruction;
1854 Charles Woods principles	· Initiate government aided schools · Divide the education system into primary, secondary and higher secondary;levels · Build Universities;. · Teacher training institutes; · Women oriented educational training; · Vocational skill training programs
1882 Hunter Commission	· Primary schools to have mother tongue as language of instruction; · Teachers to be appointed by the government · Syllabus to include agriculture, anatomy, communications and maths

	· Government is responsible for providing educational opportunities to Scheduled communities and Backward communities
1929 Hartog Commission	· Primary education to be made mandatory · Focus on quality of education instead of increasing the number of schools. · Education should be imparted to Backward community children and other community children in the same school;
1964 – 66 Kothari Commission ;	· Common education syllabus for all · Schools and community learning centers in every location · No discrimination based on language, religion, caste, gender in providing educational opportunities · System should have grade 10, 11, 12 followed by 3 year college education · Free education until class12.
1985 – 86 National Education Policy & Ramamoorthy Commission	· Provide equal educational opportunities to those oppressed in the past; · Scheduled communities to be provided educational opportunities ; · Pre-Primary education for children p · Children centric education initiatives · Formation of village education group
1992 –Yashpal Commission	· Creative learning methods ; · Children enrollment to be increased with continuous and comprehensive assessments
2010 –Right to Education Act ;	· Right to Basic education

Despite 216 years of implementing the above policies we have achieved success in few aspects and failed in rest of them.

1900 – 1960- The emphasis on education for women and downtrodden mass was predominant which resulted in widespread acceptance of children from all sect of the society including female children in schools.

1960 – 1990 - In this time period focus was on retention of children in schools and to reduce dropout rates which resulted in 98% of children in Tamilnadu continuing school education

1990 – 2000 - During these years the importance of practical way of learning was stressed and this has resulted in in-depth understanding and learning in children.

The above mentioned are the positive impact of the policies. But listed below are several more issues which have not been addressed and defective practices are continued in spite of the defects.

- Free quality education until higher secondary school completion
- Common syllabus system has not been implemented. Despite the stress on following Samacheereducational system several private schools do not follow the syllabus.
- Number of Children continuing education beyond the primary level is going down steadily

Table-10: Level-wise Drop-Out Rates in School Education
(in % age)

Level	ALL			SC			ST		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
I-V	21.2	18.3	19.8	17.7	15.4	16.6	31.9	30.7	31.3
I-VIII	39.2	32.9	36.3	42.4	34.4	38.8	49.8	46.4	48.2
I-X	48.1	46.7	47.4	51.8	48.0	50.1	63.2	61.4	62.4

Data Source : U-DISE-2013-14(Provisional)

Most children from tribes such asIrular, hill tribes, Aurndhadhiyar and such Scheduled communities don't even complete their middle school education. As an example, InThazhavedu, a village near Thiruthani, around 10 children are ready to move beyond primary school education.   But to continue education they need to travel 4 kilometers to Thumbikulam. With no government bus facilities to this village, parents are not in a situation to pay Rs. 20 every day for private bus commute fare to send the children to school. So these children have dropped out of school due to this situation. The conditions are even more challenging for the hill tribe children.

- Children are not taught Social science in classrooms, which leads to educated youth participating in caste riots due to lack of awareness
- Teachers do not attend the Schools on the hills
- All schools whether private, government or aided, the quality of education is not up to the mark

More than 50% of School going children move on to the next grade without learning to write, read and perform basic arithmetic operations.

Out of 95% of the children attending school in India, 63% goes to government school, 30,7% goes to private schools, 1% go to independent schooling.

In TamilNadu 98% of children go to school and 67.6% of children go to government school and 30.5% go to private schools

As seen above the learning levels are very poor.

In Scheduled tribe educational welfare initiative schools, only 35% of 5th grade children can read simple stories.

The education index state of Irular and hill tribes are very worrisome.

Initiative of providing mandatory free education in the year 2010 did not bring about any change.

Under this act 25% of the seats in private schools should be allocated to downtrodden children. This has not yet been implemented in most schools

According to part 4, section 'd' of this act, on behalf of the school and the teachers that every underperforming child should be provided individual attention and extra coaching to make sure a particular skill is achieved. Furthermore, according to part 4. Section 24, subsection 'e' the school management has to closely monitor the quality of education. None of this is being implemented in any of the schools

When there are implementation issues with already existing policies, central government has brought in new policies in 2016 to add more to the woes.

Educational activists, schools and teachers will definitely try and implement these programs. They should understand the issues and definitely record their feedback.

New education policy 2016

National Education policy 2016 is being drafted by human resource development body without consulting state or district level stake holders or educationists. Let us look into the policies to understand the pros and cons of implementing them:

| S. No	2016 New Education Policy	Opinions of Educationists/ Activist	Focus
1	Primary education to be provided for children between 4 to 5 years;	appreciated;	· Responsibilities of state government to form the Syllabus and lesson plans. · Responsibilities like pregnant women welfare schemes, women empowerment programs to be moved from child care center supervisors to village rural health centers.

			· Child Care centers to be responsible for welfare of 2½- 4 year old children, Pre-primary education for 4 – 5 year old children.; · Private nursery and primary schools to be allowed to function smoothly without government interference. This will discourage bribing opportunities · 1986 National Education policy talks about implementing the above strategy but even after 30 years this has not been implemented.
2	Change in syllabus and assessment methods		In a country like India with diverse language, religion and culture the responsibilities of syllabus setting should be with the states. Maths and science alone can be handled by the central government ;
3	Learning capacities, impact measurement	appreciated	Developing impact assessment methods common to both private and government schools is an encouraging move. But implementation and accountability of the process is still doubtful.
4	All pass system till class – 8 changing to till class 5	All children should be unconditionally promoted up to class 8.	As followed in the current practice all children should be compulsorily provided skills for up to class 8; It is not the fault of the children for the failure to learn the skills. It is the fault of the teachers to have not reached it to the children. It is understandable if 5% of the children have failed to acquire the skills relevant to a specific class. If 80% of the children have failed to acquire skills then it is entirely the fault of the teachers. So at least 95% of the class 8 children should be made to acquire the skills completely.

5	Vocational skills or job related skill training	appreciated	Vocational training as part of school education should be made compulsory and not just for failed students. It should be followed by all schools uniformly including state, matric and CBSE.
6	Language and cultural education p		Mother tongue should be given the importance as mode of instruction from class 1 to 5 along with English language training. Hindi and Sanskrit should not be made compulsory subjects.

Privatization of higher education should be stopped. Undergraduate and graduate programs, regardless of the discipline, should include courses on personal integrity, social science and equality between different genders.

The national level budget on Education is very low

Source: http://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=IN
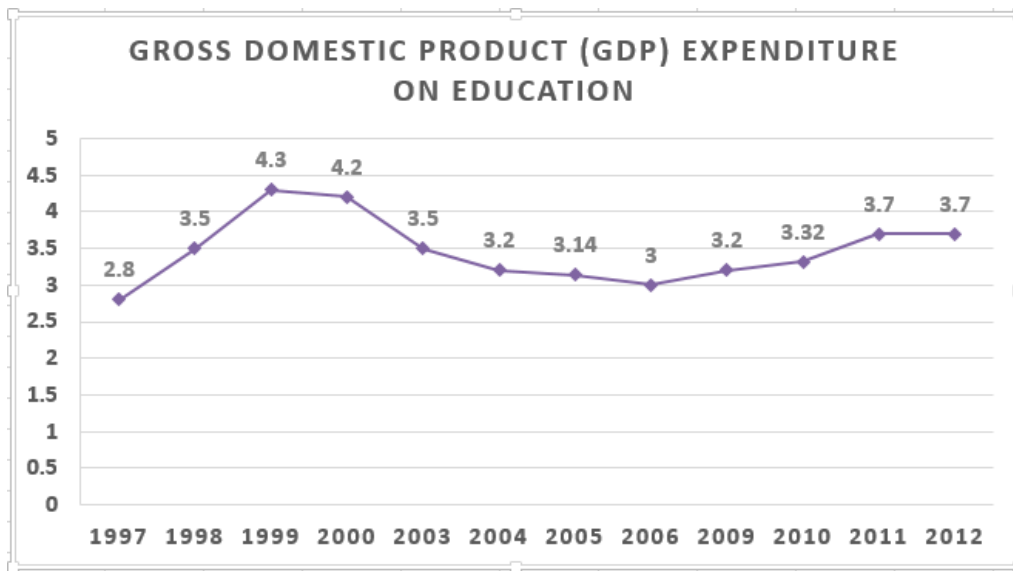
Compared to developed and developing countries India spends very little on education.

Country	GDP%
Trinidad & Tobago	15.6
Cuba	13.6
Kenya	7
South Africa	6

What we sow we reap.   We need to plan ahead with a vision of the society we want to build for the future generations of the country and sow the seeds accordingly.

For the past 30 years the focus of the education department officials were not on the quality of education. The policies have to be formed with quality of education as the central objective.   We need to bring in social awareness building subjects as compulsory part of the programs.

Education should not cater to what is demanded in the market. It should not be focused on improving technological expertise but to help evolve an individual as a responsible human being.

Government should ensure that the educational policies impact the people in the lowest strata of the society positively.

Reference cited

· *Subramani,S, 2015, Indian Education History, Published by Science Publication, Chennai -86.*
· *Agarwal,J.C, Education Policies in India, 2009, Published by Shipra Publication, New Delhi.*
· *Balaji Sampath,2008, The Politics in Exam System, Published by BharathiPuthagalayam, Chennai.*
· *Rajamanickam,2016, National Education Policy 2016 and Important Question, Published by Science Publication, Chennai -86*

Web Reference cited

1. www.asercentre.org
2. http://edglossary.org/equity/
3. http://www.oecd.org
4. http://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=I

*****