Volume 4, Issue-1(2), January, 2017
International Journal of Academic Research

Published by
Sucharitha Publications
Visakhapatnam – 530 017
Andhra Pradesh – India
website :www.ijar.org.in

Office Address
Dr.T.V.Ramana, (9948440288)
46-8-10/B1, Near ,Aditya School
Jagannaickpur, Kakinada- 533002
Andhra Pradesh-India
e-mail: drtvramana@yahoo.co.in

Design by
SS Xerox, Visakhapatnam

Special issue on

25 YEARS OF ECONOMIC REFORMS IN INDIA
(IC25YERI)

Edited by

B. Suresh Lal
Head, Department of Economics
Kakatiya University, Warangal-TS, India

INTERNATIONAL CONFERENCE ON

25 YEARS OF ECONOMIC REFORMS IN INDIA (IC25YERI)

28 & 29 January, 2017

Organized by

Department of Economics

Kakatiya University, Warangal-Telangana State, India

INTERNATIONAL CONFERENCE ON

25 YEARS OF ECONOMIC REFORMS IN INDIA

(IC25YERI)

28 & 29 January, 2017

ORGANIZING COMMITTEE

Prof.R.Sayanna
Vice-Chancellor & Chief Patron

Prof.M.V.Ranga Rao
Registrar & Patron

Dr. B. Suresh Lal
Conference Director & Head

Members
Prof. G. Bhaskar
Prof. C.Renuka
Prof. K. Manuja Devi
Prof. K. Padma Latha
Prof. T. Balbeer Singh
Dr. S. Radhakrishna
Dr. M. Pushpalatha
Dr. K. Mohan Reddy
Dr. M. Ramesh Reddy
Dr. D. Swarupa Rani

Department of Economics
Kakatiya University, Warangal-TS, India

Editor-in-Chief, IJAR – December, vol.4, issue 1(2), 2017

Typeset and Printed (Sucharitha publications) in India:

IJAR, concentrates on critical and creative research in Multidisciplinary and multiple languages Academic Research. This journal seeks to promote original research and cultivate a fruitful dialogue between old and modern thought. Views expressed in the articles is exclusively of the authors, thus, journal is not responsible of it in any case

Visit:www.ijar.org.in

E mail: drtvramana@yahoo.co.in

January, 2017

C O N T E N T S

Volume 4 **Issue 1(2)** **January, 2017**

Sl. No	Paper Title	Page No.
1	Current Status of Employment, Publications, Responsibilities of Teaching Employees of Scheduled Castes (SCs) and Scheduled Tribes (STs) in Central Educational Universities and Institutes in India**: J. B. Komaraiah**	1
2	Trends in sectoral composition of Indian GDP during the pre-reform period and post reform period: **I.Sundar and R.Gopalakrishnan**	18
3	Whose loss and whose responsibility? An economic view point of understanding potential economic losses of farmer suicides in India: **Prakash Babu Kodali**	33
4	Industrial development in India during the pre-reform period and post reform period: **I.Sundar and T. Sezhiyan**	44
5	Comparative study of Telangana before and after bifurcation in industrial sector: **A.Kalpana, Jhansi Rani. N and P.Krishnamachary**	57
6	Status of Sugarcane and Sugar Factories in Pre and Post LPG era in Indian Economy: **Ankasala Samba Siva Rao**	62
7	Status of Industrial Establishments in Telangana: Issues and Challenges: **S. Lingamurthy**	74
8	Challenges to agriculture sector in Indian economy: **Koti Reddy Tamma and I.R.S.Sarma & M.Aruna**	87
9	An analysis of managing risk in banks using camel approach: **A.Kalpana and P.Krishnamachary**	99
10	Commodity Derivatives – Growth, Issues and Challenges: **M V S Mahendra**	107
11	The Dynamic Relationship between Financial Development, FDI, Industrialisation and Energy Consumption in India : **Mallaiah Jalle, Narasimha Rao Jadi** and **Santhosha Gujjunuri**	113
12	Goods and Services Tax: It's Impact on Various Sectors: **Raavi Radhika, Siva Krishna Golla**	121
13	Performance of Iron and Steel Industry in Present Scenario: **Sreeram Daida & K Naveen Kumar**	127
14	Public Expenditure Pattern on Indian Education: **K. Srivani**	136

15	An overview of current trends and contemporary developments in India tourism industry – A study: **G. Vijay**	146
16	Educational status of scheduled caste women – a micro level study: **D. Swarupa Rani**	157
17	Analysing Districts wise Performance and Suitability of Growing Crops in Karnataka: Evidence from Major Crops: **Balaji**	165
18	Migration and migrants: A study of post economic reforms in India- **B.V.Ragavender**	175
19	Post reforms challenges in Indian life insurance sector – A case study of role of IRDA**: B Chandrakala Naik**	187
20	Foreign Direct Investment in India: **K.Gunasekhar** and **K.Ramakrishnaiah**	197
21	Issues and Problems of Small and Marginal Farmer: A Study in Karimnagar District: **Ilaiah Macharla and B. Suresh Lal**	203
22	A Note on Agricultural Credit- Field Experience in Warangal District : **A. Kavitha and B.Venkateshvar Rao**	211

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Current Status of Employment, Publications, Responsibilities of Teaching Employees of Scheduled Castes (SCs) and Scheduled Tribes (STs) in Central Educational Universities and Institutes in India

Prof. J. B. Komaraiah
Department of Economics, Banaras Hindu University, Varanasi, U. P., India

Abstract: *Education is a means to realization of a variety of ends such as employment opportunities, higher productivity and income, better health, greater social and political participation for creation of a just and equitable social and political order and above all enhancing individual's personal and social endowments and capabilities for a more intensive, socially enriching and sustained well being. As access to knowledge and means of livelihood form the two most important constituents of social, economic and political power, they tend to become scarce in a stratified social order. Lack of access to productive assets and knowledge together causes multiple deprivations and accentuates the degree of poverty and destitution among the deprived sections. The Government of India provided the reservations in employment for SC/ST communities. Therefore, the problem is to be investigated that what is the current status of employment and how the eligible members of these communities are getting the employment in the Central Educational Universities and Institutions in the study area. At the same time it is also looked into the matter that whether the MHRD, Govt. of India and UGC have framed a proper mechanism to ensure the effective implementation of reservation policy for the recruitment of teachers in the Universities and Institutions of higher education. The important Government agencies like National Commissions for SCs and STs; Parliament Standing Committee for SCs/STs, SC/ST Cells in the educational Universities/Institutions are functioning for safeguarding the interests of the SCs/STs. In view this, an attempt was made to study the current status of employment, publications, responsibilities of teaching employees of Scheduled Castes (SCs) and Scheduled Tribes (STs) in central educational universities and institutes in India*
Keywords: MHRD, social stratification, educational deprivations

Introduction: The structure of caste-based social stratification in India presents a unique example of structural and systemic exclusion and deprivation of a very large section of hereditary based low castes. *Dalits* (oppressed), as a majority of the *Sudra* and erstwhile untouchable castes are generally referred to, in the official parlance are called the Scheduled Castes (SCs). The SCs constitute 16.2 per cent are economically and educationally the most deprived and vulnerable sections of India's population. The Scheduled Tribes (STs) form yet another segment that has remained dispossessed and marginalized for centuries, which together with the SCs constitute nearly a quarter of India's population.

The centuries-old and accumulated social, economic, political

and educational deprivations the Constitution of India makes specific provisions to protect SCs, STs and other weaker sections including the physically challenged from any form of discrimination. Further taking a proactive stance, the Constitution through the Directive Principles of State Policy lays down that the State shall promote with special care the educational and economic interests of the Scheduled Castes and Tribes. Thanks to the policy of positive and protective discrimination and reservations in educational institutions for the socially and economically marginalized segments that the literacy rates and enrolment among the SCs and STs in various stages of school and higher education has increased manifold during the last five decades or so. As a consequence, inequities in educational attainments across social groups, castes, gender, income levels and states including rural-urban disparities have begun to narrow down. Ensuring equality of access to sources of social and economic opportunities is the fundamental principle on which a socially just and democratic society evolves. Equitable access to social, religious, occupational and economic groups living both in rural and urban areas to educational opportunities in general and higher education in particular has remained a major challenge before the policy makers for nearly six decades since the independence.

Every Constitution has philosophy of its own.

The Preamble of our Constitution proclaims the resolution of people of India to constitute India into a sovereign, socialist, secular and democratic republic and to secure to all its citizens: Justice, social, economic and political; liberty of thought, expression, belief, faith and worship; equality of status and opportunity; and to promote among them all; fraternity assuring the dignity of the individual and the unity and integrity of the Nation. In view of the above it is aimed at to study the current status of employment, publications, and responsibilities of teaching employees in educational Universities and Institutions.

Objective of the study: Main Objective of the paper is to study the current status of employment, publications, responsibilities of teaching employees of Scheduled Castes (SCs) and Scheduled Tribes (STs) in Central Educational Universities and Institutes in India

Methodology:

Study area: The major central Universities namely Delhi University, Jawaharlal Nehru University, Banaras Hindu University, University of Hyderabad, IIT-Khargpur, IIM-Ahmadabad, NIT- Warangal, AIIMS-New Delhi etc, in India have been selected purposively. This study adopted multi-stage, systematic, probability and non-probability sampling methods. The respondents were selected through the snowball sampling method. In the study both Primary and secondary data was used. Primary data was collected through the pre-structured questionnaires/interview schedules from the selected respondents. The secondary data was also collected from published sources in the form of Books, Journals, and unpublished information in the form of various policy documents other relevant Reports of Government of India on the subject including through R.T.I. sources. The total primary data including updates on data was collected during July

2013 to March 2015 from selected study areas. The statistical tools like averages and percentages, co-relation, regression analysis, Chi-square test etc., have been used where ever was applicable in the analysis of results. The suitable graphs were used where ever felt necessary in the analysis of the study. SPSS package for data analysis is used extensively. Only the most suitable techniques are used appropriately.

Major findings of the study:

Table- 1 Distribution of Respondents (Teaching Employees) by Designation and Year of Joining in Service

Designation	Joining Year									
	Before 2000		2000 to 2004		2005 to 2009		2010 to 2014		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Professor	20	83.3	3	12.5	0	.0	1	4.2	24	100
Associate Professor/ Additional Professor	8	30.8	10	38.5	6	23.1	2	7.7	26	100
Assistant Professor	0	.0	5	8.3	31	51.7	24	40.0	60	100
Total	**28**	**25.5**	**18**	**16.4**	**37**	**33.6**	**27**	**24.5**	**110**	**100**
Chi-Square = 85.130, df= 6, P <0.001										

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05) Source: Field Survey.

The table-1shows that the distribution of respondents (teaching employees) by designation and year of joining in service. Out of total 110 respondents of teaching employees, maximum 33.6% of respondents joined in their jobs during the year from 2005 to 2009; 25.5% of respondents joined in their jobs before 2000; 24.5% of respondents joined during the year from 2010 to 2014 and 16.4% of respondents joined during the year from 2000 to 2004. Out of total 24 Professors, the maximum 83.3% of respondents joined before 2000 and the minimum 4.2% of respondents joined during the year from 2010 to 2014. Out of total 26 Associate or Additional Professors, maximum 38.5% of respondents joined during the year from 2000 to 2004 and the minimum 7.7% of respondents joined during the year from 2010 to 2014. Out of total 60 Assistant Professors, the maximum 51.7% of respondents joined during the year from 2005 to 2009 and minimum 8.3% of respondents joined during the year from 2000 to 2004. Statistical test signifies that there is very high significant difference in the year of joining of the

respondents of teaching employees according to their designations.

Table- 2: Distribution of Respondents (Teaching Employees) by University/ Institutions and Year of Joining in Service

University/ Institutions	Joining Year								Total	
	Before 2000		2000 to 2004		2005 to 2009		2010 to 2014			
	No.	%	No.	%	No.	%	No.	%	No.	%
BHU	6	20.7	5	17.2	9	31.0	9	31.0	29	100
DU	3	17.6	3	17.6	10	58.8	1	5.9	17	100
JNU	2	9.5	2	9.5	4	19.0	13	61.9	21	100
UoH	3	25.0	2	16.7	4	33.3	3	25.0	12	100
AIIMS-ND	9	56.2	4	25.0	3	18.8	0	.0	16	100
IIT-KGP	2	40.0	2	40.0	1	20.0	0	.0	5	100
NIT-W	3	30.0	0	.0	6	60.0	1	10.0	10	100
Total	**28**	**25.5**	**18**	**16.4**	**37**	**33.6**	**27**	**24.5**	**110**	**100**
Chi-Square = 42.782, df= 18, P < 0.01										

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05) Source: Field Survey.

The table 2 shows that the distribution of respondents (teaching employees) by University/ Institution and year of joining in service. Out of total 29 respondents of BHU, maximum 31% of respondents joined during the year from 2005 to 2009 and during the year from 2010 to 2014 and minimum 17.2% of respondents joined during the year from 2000 to 2004. Out of total 17 respondents of DU, maximum 58.8% of respondents joined during the year from 2005 to 2009 and minimum 5.9% of respondents joined during the year from 2010 to 2014. Out of total 21 respondents of JNU, maximum 61.9% of respondents joined during the year from 2010 to 2014 and minimum 9.5% of respondents joined before 2000 and during the year from 2000 to 2004. Out of total 12 respondents of UoH, maximum 33.3% of respondents joined during the year from 2005 to 2009 and minimum 16.7% respondents joined during the year from 2000 to 2004. Out of total 16 respondents of AIIMS-New Delhi, maximum 56.2% of respondents joined in the period of before 2000 and minimum 18.8% of respondents joined during the year from 2005 to 2009. Out of total 5 respondents of IIT-KGP, maximum 40% of respondents joined during the year from 2000 to 2004 and in the year before 2000 and minimum 20% of respondents joined during the year from 2005 to 2009. Out of total 10 respondents of NIT-W, maximum 60% of respondents joined during the year from 2005 to 2009 and minimum 10% of respondents joined during the year from 2010 to 2014. Statistical test signifies

that there is highly significant difference in years of joining of the respondents of teaching employees according to their Universities or Institutions.

Table- 3: Distribution of Respondents (Teaching Employees) by Caste and Year of Joining in Service

Caste	Year of Joining									
	Before 2000		2000 to 2004		2005 to 2009		2010 to 2014		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
SC	21	28.8	12	16.4	22	30.1	18	24.7	73	100
ST	07	18.9	6	16.2	15	40.5	9	24.3	37	100
Total	**28**	**25.5**	**18**	**16.4**	**37**	**33.6**	**27**	**24.5**	**110**	**100**
Chi-Square = 1.728, df = 3, P > 0.05										

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05) Source: Field Survey.

The table 3 shows that the distribution of respondents (teaching employees) by caste and year of joining in service. Out of total 73 respondents under SC category the maximum 30.1% of respondents joined during the years from 2005 to 2009 and minimum 16.4% of respondents joined during the year from 2000 to 2004. Out of total 37 respondents under ST category, the maximum 40.5% of respondents joined during the year from 2005 to 2009 and minimum 16.2% of respondents joined during the year from 2000 to 2004. The statistical test signifies that there is no significant difference in year of joining of the respondents of teaching employees of different castes.

Table – 4: Distribution of Respondents (Teaching Employees) by Year of Joining and Present Status

University/ Institution	Current Status					
	Same		Different		Total	
	No.	%	No.	%	No.	%
Before 2000	0	.0	28	100	28	100
2000 to 2004	5	27.8	13	72.2	18	100
2005 to 2009	31	83.8	6	16.2	37	100
2010 to 2014	27	100	0	.0	27	100
Total	63	57.3	47	42.7	110	100
Chi-Square = 74.701, df = 3, P < .001						

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05) Source: Field Survey.

The table 4 shows that out of total 28 respondents who joined before 2000 year, they all were promoted to higher grade and their current status is different. Out of total 18 respondents who joined during the year from 2000 to 2004, 72.2% of respondents were promoted and their current status was different and 27.8% of respondents were not promoted. Out of total 37 respondents who joined during the year from 2004 to 2009, 16.2% of respondents were promoted and their current status was different and 83.8% of respondents were not promoted. Out of total 27 respondents who joined during the year from 2010 to 2014, none was promoted and their current status was the same. The statistical test signifies that there is very highly significant difference in current employment status of the respondents of teaching employees according to their joining year.

Table – 5: Distribution of Respondents (Teaching Employees) by Designation and Present Status

Year of Joining	Current Status					
	Same		Different		Total	
	No.	%	No.	%	No.	%
Professor	1	4.2	23	95.8	24	100
Associate Professor/ Additional Professor	2	7.7	24	92.3	26	100
Assistant Professor	60	100	0	.0	60	100
Total	**63**	**57.3**	**47**	**42.7**	**100**	**100**
Chi-Square = 98.540, df= 2, P < 0.001						

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 5 shows that the distribution of respondents (teaching employees) by designation and present status. Out of total 24 Professors, 95.8% of respondents were promoted and their current status was different. Out of total 26 Associate Professors, 92.3% of respondents were promoted and their current status was different and 7.7% of respondents not promoted. Out of total 60 Assistant Professors, all 100% of respondents not promoted. The statistical test signifies that there is very highly significant difference in current employment status of the respondents of teaching employees according to their designation.

Table- 6: Distribution of Respondents (Teaching Employees) by University/Institutions and Mode of Promotion

University/Institutions	Promotion Year							
	CAS		Direct		APS		Total	
	No.	%	No.	%	No.	%	No.	%
BHU	9	66.7	3	33.3	0	.0	9	100
DU	4	100	0	.0	0	.0	4	100
JNU	2	66.7	1	33.3	0	.0	3	100
UoH	3	50.0	3	50.0	0	.0	6	100
AIIMS-ND	10	62.5	1	6.2	5	31.2	16	100
IIT-KGP	0	.0	5	100	0	.0	5	100
NIT-W	3	75.0	0	.0	1	25.0	4	100
Total	**28**	**59.6**	**13**	**27.7**	**6**	**12.8**	**47**	**100**

Source: Field Survey.

The table 6 shows that the distribution of respondents (teaching employees) by University/Institutions and mode of promotion. Out of total 9 promoted teaching employees of BHU, maximum 66.7% of respondents were promoted through career advancement scheme and 33.3% of teaching employees promoted through direct promotional scheme. Out of 4 promoted teaching employees of DU, all 100% of respondents were promoted through CAS scheme. Out of total 3 teaching employees of JNU, maximum 66.7% of respondents were promoted through CAS scheme and minimum 33.3% of respondents were promoted through direct promotional scheme. Out of total 6 employees of UoH, equally maximum 50% of respondents were promoted through CAS and direct promotional scheme. Out of 16 promoted teaching employees of AIIMS-New Delhi, maximum 62.5% of respondents were promoted through CAS scheme and 31.2% of respondents were promoted through APS scheme. Out of total 5 teaching employees of IIT-KGP, all 100% of respondents were promoted through direct promotional scheme. Out of total 4 employees of NIT-W, the maximum 75% of respondents were promoted through CAS and 25% of respondents were promoted through APS scheme.

Table- 7: Distribution of Respondents (Teaching Employees) by Caste and Mode of Promotion

Caste	Promotion Year							
	CAS		Direct		APS		Total	
	No.	%	No.	%	No.	%	No.	%
SC	19	55.9	10	29.4	5	14.7	34	100
ST	9	69.2	3	23.1	1	7.7	13	100
Total	**28**	**59.6**	**13**	**27.7**	**6**	**12.8**	**47**	**100**
Chi-Square = .780, df= 2, P >0.05								

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05) Source: Field Survey.

The table 7 shows that the distribution of respondents (teaching employees) by caste and mode of promotion. Out of total 34 promoted teaching employees under SC category, maximum 55.9% of respondents were promoted through CAS scheme; 29.4% of respondents were promoted through direct promotional scheme and 14.7% of respondents were promoted through APS scheme. Out of total 13 promoted teaching employees of ST category, maximum 69.2% of respondents were promoted through CAS scheme, 23.1% of respondents were promoted through direct scheme and 7.7% of respondents were promoted through APS scheme. The significance test shows that there is no significant difference found between the mode of promotions and designation.

Table 8: Distribution of Respondents (Teaching Employees) by University/ Institutions and Number of Projects Undertaken

University/ Institutions	Number of Projects									
	None		1		2		>3		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
BHU	19	65.5	4	13.8	4	13.8	2	6.9	29	100
DU	12	70.6	2	11.8	0	.0	3	17.6	17	100
JNU	14	66.7	5	23.8	0	.0	2	9.5	21	100
UoH	4	33.3	2	16.7	4	33.3	2	16.7	12	100
AIIMS-ND	2	12.5	2	12.5	2	12.5	10	62.5	16	100
IIT-KGP	0	.0	2	40.0	1	20.0	2	40.0	5	100
NIT-W	7	70.0	1	10.0	1	10.0	1	10.0	10	100
Total	**58**	**52.7**	**18**	**16.4**	**12**	**10.9**	**22**	**20.0**	**110**	**100**
Chi-Square = 44.847, df= 18, P = .000										

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 8 shows that the distribution of respondents (teaching employees) by University/ Institutions and number of projects undertaken. Out of total 29 employees of BHU, 6.9% of respondents have undertaken 3 and more than 3 projects; 13.8% of respondents have undertaken 2 projects; 13.8% of respondents have undertaken 1 project each and 65.5% of respondents have not undertaken any project. Out of total 17 employees of DU, 17.6% of respondents have undertaken 3 and more than 3 projects; 11.8% of respondents have undertaken 1 project each and 70.6% of respondents have not undertaken any project. Out of total 16 employees of AIIMS-New Delhi, 62.5% of respondents have undertaken 3 and more than three projects; 12.5% of respondents have undertaken 2 projects; 12.5% of respondents have undertaken 1 project each and 12.5% of respondents have not taken any project. Out of total 5 employees of IIT-KGP, 40% of respondents have undertaken 3 and more

than three projects; 20% of respondents have undertaken 2 projects; 40% of respondents have undertaken 1 project each. Out of total 10 employees of NIT-W, 10% of respondents have undertaken 3 and more than three projects; 10% of respondents have undertaken 2 projects; 10% of respondents have undertaken 1 project each and 70% of respondents have not undertaken any project in the study area.

Table –9: Distribution of Respondents by Total No. of Ph. Ds Currently Supervising and Designation

Ph. Ds. Under Progress	Designation							
	Professor		Associate Professor/ Additional Professor		Assistant Professor		Total	
	No.	%	No.	%	No.	%	No.	%
None	3	12.5	5	19.2	36	60.0	44	40.0
1-5	16	66.7	16	61.5	20	33.3	52	47.3
6-10	4	16.7	3	11.5	3	5.0	10	9.1
>10	1	4.2	2	7.7	1	1.7	4	3.6
Total	**24**	**100**	**26**	**100**	**60**	**100**	**110**	**100**
Chi-Square = 23.462, df= 6, P <0.01								

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 9 shows that the distribution of respondents by total No. of Ph. Ds currently supervising and designation. Out of 110 teaching employees 40% of employees are not guiding any Ph. D. students presently; 47.3% of employees are guiding up-to 5 Ph. D. students; 9.1% of employees are guiding 6 to 10 Ph. D. students and 3.6% of employees are guiding more than 10 Ph. D. students. Up-to 5 Ph. Ds. are guided under the supervision of 66.7% of respondents out of total 24 Professors; 61.5% of respondents out of total 26 Associate Professor/ Additional Professor and 33.3% of respondents out of total 60 Assistant Professors. 6 to 10 Ph. Ds. are guided under the supervision of 16.7% of respondents out of total Professors; 11.5% of respondents out of total 26 Associate Professor/ Additional Professor and 5% of respondents out of total 60 Assistant Professors. More than 10 Ph. Ds. are guiding under the supervision of 4.2% of respondents out of total 24 Professors, 7.7% of respondents out of total 26 Associate Professor/Additional Professor and 1.7% of respondents out of total 60 Assistant Professors. The statistical test shows that there is high significant difference in their designation and total no. of Ph. Ds. currently supervising.

Table – 10: Distribution of Respondents (Teaching Employees) by Total No. of Ph.D. and M. Phil. of SC and ST Students

No.	Ph. D. of SC Students		Ph. D. of ST Students		M. Phil. of SC Students		M. Phil. of ST Students	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
None	70	63.6	93	84.5	99	90.0	101	91.8
1	18	16.4	7	6.4	3	2.7	2	1.8
2	9	8.2	3	2.7	3	2.7	3	2.7
3	-	-	2	1.8	1	.9	2	1.8
4	5	4.5	2	1.8	1	.9	-	-
5	2	1.8	1	.9	-	-	1	.9
6	-	-	2	1.8	2	1.8	-	-
7	2	1.8	-	-	-	-	-	-
8	1	.9	-	-	-	-	-	-
9	-	-	-	-	1	.9	-	-
10	1	.9	-	-	-	-	1	.9
14	1	.9	-	-	-	-	-	-
17	1	.9	-	-	-	-	-	-
Total	**110**	**100**	**110**	**100**	**110**	**100**	**110**	**100**

Source: Field Survey.

The table 10 shows that the distribution of respondents (teaching employees) by total No. of Ph.Ds. and M. Phil. of SC and ST students. In case of Ph. D. guidance for SC students out of total 110 teaching employees, 16.4% of employees have guided 1 SC students; 8.2% of employees have guided 2 SC students; 4.5% of employees have guided 4 SC students; each 1.8% of employees have guided 5 and 7 employees. In case of Ph. D. guidance of ST students out of total 110 teaching employees, 6.4% of employees have guided 1 ST students; 2.7% of employees have guided 2 ST students; each 1.8% of employees have guided 3, 4 and 6 SC students respectively. In case of M. Phil. guidance of SC students out of total 110 teaching employees, each 2.7% of employees have guided 1 and 2 SC students; 1.8% of employees have guided 6 SC students. In case of M. Phil. guidance of ST students out of total 110 teaching employees. 2.7% of employees have guided 2 ST students and each 1.8% of employees have guided 1 and 3 ST students.

Table – 11: Distribution of Respondents (Teaching Employees) by other Responsibilities

Responsibility	Yes	%	No	%	Total	
					No	%
Warden	38	34.5	72	65.5	110	100
NSS officer	9	8.2	101	91.8	110	100
NCC officer	1	.9	109	99.1	110	100
Student adviser	30	27.3	80	72.7	110	100
Sports secretary	6	5.5	104	94.5	110	100
Editor	17	15.5	93	84.5	110	100
Editorial Board Member	27	24.5	83	75.5	110	100
SC/ST Member	9	8.2	101	91.8	110	100
Other (Specify)	10	9.1	100	90.9	110	100

Source: Field Survey.

The table11 shows that the distribution of respondents (teaching employees) by other responsibilities. Out of total 110 teaching employees, 34.5% of employees have the responsibility of warden; 27.3% of employees have the responsibility of student adviser; 24.5% of employees were the member of editorial board; 15.5% have the responsibility of editor; each 8.2% were NSS officer and SC/ ST member and 5.5% of employees were the sports secretary in their University/ Institution.

Table – 12: Distribution of Respondents (Teaching Employees) by National, International and Total Papers Publications

No of Articles	National Articles		International Articles		Total Articles	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
None	27	24.5	25	22.7	4	3.6
1-5	35	31.8	32	29.1	28	25.5
6-15	22	20.0	19	17.3	25	22.7
16-25	12	10.9	11	10.0	17	15.5
>25	14	12.7	23	20.9	36	32.7
Total	**110**	**100**	**110**	**100**	**110**	**100**

Source: Field Survey.

The table 12 shows that the distribution of respondents (teaching employees) by national, international and total papers publications. Out of total 110 teaching employees, maximum 31.8% of respondents have publication of up-to 5 national article; 20% of respondents have publication of 6 to 15 national articles; 10.9% of respondents have publication of 16-25 national articles; 12.7% of respondents have publication of more than 25 national articles and 24.5% of respondents have not publication of any national article. In case of international articles, maximum 29.1% of respondents have publications of 1 to 5 international articles; 17.3% of respondents have publication of 6 to 15 international articles; 10% of respondents have publication of 16-25 international articles; 20.9% of respondents have publication of more than 25 international articles and 22.7% of respondents have not any publication of international article. In case of total articles, maximum 25.5% of respondents have publication of 1 to 5 total articles; 22.7% of respondents have publication of 6 to 15 total articles; 15.5% of respondents have publication of 16-25 total articles; 32.7% of respondents have publications of more than 25 total articles and 3.6% of respondents have not publications of any article.

Table – 13: Distribution of Respondents (Teaching Employees) by Total Publications and University/ Institution

University/ Institutions	Number of Publications											
	0-20		21-40		41-60		61-100		>100		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BHU	16	55.2	8	27.6	2	6.9	1	3.4	2	6.9	29	100
DU	12	70.6	3	17.6	0	.0	1	5.9	1	5.9	17	100
JNU	15	71.4	4	19.0	2	9.5	0	.0	0	.0	21	100
UoH	7	58.3	1	8.3	3	25.0	1	8.3	0	.0	12	100
AIIMS-ND	1	6.2	1	6.2	2	12.5	6	37.5	6	37.5	16	100
IIT-KGP	1	20.0	2	40.0	0	.0	1	20.0	1	20.0	5	100
NIT-W	6	60.0	2	20.0	2	20.0	0	.0	0	.0	10	100
Total	**58**	**52.7**	**21**	**19.1**	**11**	**10.0**	**10**	**9.1**	**10**	**9.1**	**110**	**100**
Chi-Square = 58.862, df= 24, P = .000												

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 13 represents that the distribution of respondents (teaching employees) by total publications and university/ institution. Out of total 29 teaching employees of BHU, maximum 55.2% of respondents have up-to 20 total publications; 27.6% of respondents have 21 to 40 total publications; 6.9% of

respondents have 41 to 60 total publications; 3.4% of respondents have 61 to 100 total publications and 6.9% of respondents have more than 100 total publications. Out of total 17 teaching employees of DU, maximum 70.6% of respondents have up-to 20 total publications; 17.6% of respondents have 21 to 40 total publications; 5.9% of respondents have 61 to 100 total publications and 5.9% of respondents have more than 100 total publications. Out of total 15 teaching employees of JNU, maximum 71.4% of respondents have up-to 20 total publications; 19% of respondents have 21 to 40 total publications and 9.5% of respondents have 41 to 60 total publication. In case of 12 employees of UoH, maximum 58.3% of respondents have up-to total 20 total publications; 8.3% of respondents have 21 to 40 total publications; 25% of respondents have 41 to 60 total publications and 8.3% of respondents have 61 to 100 total publications. Out of total 16 teaching employees of AIIMS-New Delhi, each 6.2% of respondents have up-to 20 total publications and 21 to 40 total publications and each 37.5% of respondents have 61 to 100 total publications and more than 100 total publications. Out of total 5 teaching employees of IIT-KGP, each 20% of respondents have up-to 20 total publications, 60-100 total publications and above 100 total publication and 40% of respondents have 21 to 40 total publications. In case of 10 employees of NIT-W, maximum 60% of respondents have up-to total 20 publications; each 20% of respondents have 21 to 40 total publications and 41 to 60 total publications. Statistical test shows that there is very high significant difference which exists between total publication of teaching employees and their University or Institution.

Table – 14: Distribution of Respondents (Teaching Employees) by Total Publications and Caste

Total Publications	Category					
	SC		ST		Total	
	No.	%	No.	%	No.	%
0-20	37	50.7	21	56.8	58	52.7
21-40	13	17.8	8	21.6	21	19.1
41-60	8	11.0	3	8.1	11	10.0
61-100	7	9.6	3	8.1	10	9.1
>100	8	11.0	2	5.4	10	9.1
Total	**73**	**100**	**37**	**100**	**110**	**100**
Chi-Square = 46.471, df= 4, P >0.05						

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)
Source: Field Survey.

Table 14 presents that the distribution of respondents (teaching employees) by total publications and caste. Out of total 73 teaching employees belongs to Scheduled Caste, 50.7% of respondents have up-to 20 total publications; 17.8% of respondents have 21 to 40 total publications; 11% of respondents have 41 to 60 total publications; 9.6% of respondents have 61-100 total publications and 11% of respondents have above 100 total publication. In case of 37 employees belongs to Scheduled Tribes, maximum 56.8% of respondents have up-to total 20 total publications, 21.6% of respondents have 21 to 40 total publications and 8.1% of respondents have 41 to 60 total publications and 61 to 100 total publications and 11% of respondents have more than 100 total publications. Statistical test shows that there is insignificant difference exist between the total publication of teaching employees and their caste.

Table – 15: Distribution of Respondents (Teaching Employees) by Committee Member and Caste

Caste	Committee Member					
	Yes		No		Total	
	No.	%	No.	%	No.	%
SC	26	35.6	47	64.4	73	100
ST	17	45.9	20	54.1	37	100
Total	**43**	**39.1**	**67**	**60.9**	**110**	**100**
Chi-Square = 1.100, df= 1, P >0.05						

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 15 represents that the distribution of respondents (teaching employees) by committee member and caste. There are 35.6% of respondents out of total 73 teaching employees belongs to SC category and 45.9% of respondents out of total 37 teaching employees belongs to ST category were the members in the various selection committees for selecting the SC/ST members for employment and admission in the University/Institution. There is insignificant difference was exists between the status of committee member of teaching employees according to their caste.

Table – 16: Distribution of Respondents (Teaching Employees) by Policy Differences Identified

Policy Differences	Frequency	Valid Percent
Don't like to provide seat for SC/ST Candidates	5	50.0
No reserve seats in research and projects	1	10.0
Non find suitable candidates	1	10.0
Don't like to provide seat for SC/ST Candidates + No reserve seats in research and projects	3	30.0
Total	**10**	**100**

Source: Field Survey.

The table 16 represents that the distribution of respondents (teaching employees) by policy differences identified. Out of 10 teaching employees, 50% of respondents were found that the other committee members didn't like to provide seats for SC/ST Candidates; 10% of respondents were found that there was no reserved seats in research and projects; 10% of respondents didn't find the suitable candidates and 30% of were found for both there was no reserved seats in research and projects and also other members didn't want to provide the seats to SC/ ST candidates.

Table – 17: Distribution of Respondents (Teaching Employees) by Expression of Opinion in front of the Committee and Caste

Caste	Expression of the Opinion					
	Yes		No		Total	
	No.	%	No.	%	No.	%
SC	15	20.5	59	79.5	73	100
ST	11	29.7	26	70.3	37	100
Total	**26**	**23.6**	**84**	**76.4**	**110**	**100**
Chi-Square = 1.147, df= 1, P >0.05						

Very Highly Significant (P<0.001), Highly Significant (P<0.05), Significant (P<0.05), Insignificant (P>0.05)

Source: Field Survey.

The table 17 shows that the distribution of respondents (teaching employees) by expression of opinion in front of other committee members and caste. 20.5% of respondents out of total 73 teaching employees of scheduled caste and 29.7% of respondents out of total 37 teaching employees belongs to ST caste expressed their opinions strongly to the committee members to convince positively to select/protect the interests of SC/ST Candidates. Statistical test signifies that there is no significant difference between expression of opinion or not in front of committee members according to their designation.

Conclusion and Suggestions: Out of 110 teaching employees, 71.8% of respondents gave the information of the positive action to support their community and 28.2% of respondents did not give the positive action to support their community. The action of guiding the students regarding the reservation policy has been taken-up by 22.8% of respondents out of all 110 teaching employees; 20.3% of respondents have taken-up the action of creation of awareness about the reservation provisions; 50.6% of respondents have taken-up the both actions of guiding the students regarding the reservation policy and creation of awareness about the

reservation provisions. 5.1% of respondents have taken-up the action of addressing their problems and informing to higher authorities and 1.3% of respondents have taken the actions of moral, economic and group support for the up-liftment of their community.

Out of 110 employees, 103 respondents gave the suggestions and 7 respondents did not give any suggestion. Out of 103 teaching employees, 57.3% of respondents gave the suggestion of reservations in promotion; 66% of respondents gave the suggestions of up-liftment through education; 56.3% of respondents gave the suggestions of financial support; 54.4% of respondents gave the suggestions of SC/ST observer in projects sanctioning committee; the suggestion of strict implementation of reservation policy was given by 80.6% of respondents; suggestion of Corrective action at frequently was given by 50.0% of respondents and 55.3% of respondents gave the suggestion of SC/ST representation in policy making bodies for the development of SC/ ST communities.

Bibliography:

1. All India Council for Technical Education, Annual report and Audited Accounts, 2011-2012.
2. Apana, B., (1990) "Reservation and Merit", Economic and Political Weekly, Vol. 25, No. 38, pp. 2110.
3. Bains, Ravinder Singh (1991) "Reservation Policy and Anti Reservationists", B.R. Publishing Corporation, Delhi.
4. Balakrishnan, Pulapre, (2006) "Higher Education Needs a Longer View", Economic and Political Weekly, Vol. 41, No. 32, pp. 3458-3459.
5. Bardhan, A. B. (2010) "Class Caste Reservation and Struggle against Casteism", Peoples Publishing House (P) Ltd., New Delhi.
6. Caste Discrimination in AIIMS (2007), Economic and Political Weekly, Vol. 42, No. 22, pp. 2032.
7. Chadha G.K., Sudhanshu Bhushuan & Murlidhar (2008) Teachers in Universities and Colleges-Current Status Regarding Avaliability and Servce Conditions in (ed) UGC, *"Higher Education In India - Issues related to Expansion, Inclusiveness, Quality and Finance"*, New Delhi.
8. Chakrabarty Gurupada (2000) "Development of SCs and STs: The success so far", Social Change: September-December, Vol. 30, Nos. 3&4, pp. 143-162.
9. Chalam K. S., (1990) "Caste Reservations and Equality of Opportunity in Education", Vol. 25, pp. 2333-2339.
10. Chandhoke, Neera, (2006) "Three Myths about Reservations, Economic and Political Weekly", Vol. 41, No. 23, pp. 2289-2290.
11. Department of Higher Education, Ministry of Human Resource Development, Government of India, 'Annual Report 2012-2013', New Delhi.
12. Deshpande , J. V. (2000), "Reservation Policy: Real Issues", Economic and Political Weekly, pp. 1497.

13. Deswal, Siddharth (19th May, 2012), "Reservations in Higher Education – Why I think they're required"
14. Government of India, Population Census of India -2001, New Delhi.
15. Ilaiah Kancha, (2006) "Merit of Reservations", Economic and Political Weekly, Vol. 41, No. 24, pp. 2447-2449.
16. MHRD, F. No. 16-8/2000-TS.1 dated 9th June 2008.
17. MHRD`s Order dated December 2005.
18. Ministry of Human Resource development, Department of Higher Education The report of All India Survey on higher Education, 2011-12 (Provisional).
19. Nancharaiah, G. (2000) "Economic development of *Dalits* and 50 years of Independence: A macro analysis", Social Change, September-December, Vol. 30 Nos. 3&4, pp. 123-142.
20. Planning Commission, Working Group Report of the Development of Education of SC/ST/Minorities/Girls and Other Disadvantaged Groups" For 11th Five Year Plan (2007-2012), Government of India, New Delhi, 2006.
21. Rajendran, Viduthalai, (2000), "Reservation Policy", Economic and Political Weekly, pp. 2194 – 2344.
22. Rana, Mulchand S. (2008) "Reservation in India myths and realities", Concept Publishing Company, New Delhi.
23. Saksena, K. D., (2007) "Policy Changes Needed on Reservations", Economic and Political Weekly, Vol. 42, No. 26, pp. 2494-2495 and 2497-2498.
24. Shah, A.M., (1991) "Job Reservations and Efficiency", Economic and Political Weekly, Vol. 26, No. 29, pp. 1732-1734.
25. Shah, Ghanshyam (1986) "Discrimination, equality and political will" in *(ed) Shah Vimal P. and Agrawal C. Binod "Reservation: Policy, Programmes and Issues",* Rawat Publications, Jaipur.
26. Shastry, Mukul (17th may, 2009) "Reservation Policy in India - A Critical Evaluation", Social Science Research Network.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Trends in sectoral composition of Indian GDP during the pre-reform period and post reform period

Dr. I.Sundar, Associate Professor and Economics Wing Head, Directorate of Distance Education, Annamalai University

Dr.R.Gopalakrishnan, Assistant Professor in Economics, Government Arts College, Chidambaram

Abstract : *An important feature of India's reform programme, when compared with reforms underway in many other countries, is that it has emphasized gradualism and evolutionary transition rather than rapid restructuring or "shock therapy. This paper deals with growth of sectoral composition of Indian GDP during the pre reform period and post reform period. It outlines the trends in GDP composition with respect to agriculture, industry and service sector by comparing the pre reform period 1951-1952 to 1989-1990 and post reform period 1990-1991 to 2011-2012. This paper identifies a sectoral shift in GDP from agriculture sector to the non agricultural sector. This paper concludes with some interesting findings.*

Key words: *sectoral composition, reform programme, GDP*

Introduction

The reform process in India was initiated with the aim of accelerating the pace of economic growth and eradication of poverty. The process of economic liberalization in India can be traced back to the late 1970s. However, the reform process began in earnest only in July 1991. It was only in 1991 that the Government signaled a systemic shift to a more open economy with greater reliance upon market forces, a larger role for the private sector including foreign investment, and a restructuring of the role of Government.

The reforms of the last decade and a half have gone a long way in freeing the domestic economy from the control regime. An important feature of India's reform programme is that it has emphasized gradualism and evolutionary transition rather than rapid restructuring or "shock therapy". This approach was adopted since the reforms were introduced in June 1991 in the wake a balance of payments crisis that was certainly severe. However, it was not a prolonged crisis with a long period of non-performance.

Reforms in Industrial Policy

Industrial policy was restructured to a great extent and most of the central government industrial controls were dismantled. Massive deregulation of the industrial sector was done in order to bring in the element of competition and increase efficiency. Industrial licensing by the central government was almost abolished except for a few hazardous and environmentally sensitive industries. The list of industries reserved solely for the public sector -- which used to cover 18 industries, including iron and steel, heavy plant and machinery, telecommunications and telecom equipment, minerals, oil, mining,

air transport services and electricity generation and distribution was drastically reduced to three: defense aircrafts and warships, atomic energy generation, and railway transport. Further, restrictions that existed on the import of foreign technology were withdrawn.

Reforms in Trade Policy

It was realized that the import substituting inward looking development policy was no longer suitable in the modern globalising world. Before the reforms, trade policy was characterized by high tariffs and pervasive import restrictions. Imports of manufactured consumer goods were completely banned. For capital goods, raw materials and intermediates, certain lists of goods were freely importable, but for most items where domestic substitutes were being produced, imports were only possible with import licenses. The criteria for issue of licenses were non-transparent, delays were endemic and corruption unavoidable. The economic reforms sought to phase out import licensing and also to reduce import duties. Import licensing was abolished relatively early for capital goods and intermediates which became freely importable in 1993, simultaneously with the switch to a flexible exchange rate regime. Quantitative restrictions on imports of manufactured consumer goods and agricultural products were finally removed on April 1, 2001, almost exactly ten years after the reforms began, and that in part because of a ruling by a World Trade Organization dispute panel on a complaint brought by the United States.

Financial Sector Reforms

Financial sector reforms have long been regarded as an integral part of the overall policy reforms in India. India has recognized that these reforms are imperative for increasing the efficiency of resource mobilization and allocation in the real economy and for the overall macroeconomic stability. The reforms have been driven by a thrust towards liberalization and several initiatives such as liberalization in the interest rate and reserve requirements have been taken on this front. At the same time, the government has emphasized on stronger regulation aimed at strengthening prudential norms, transparency and supervision to mitigate the prospects of systemic risks. Today the Indian financial structure is inherently strong, functionally diverse, efficient and globally competitive. During the last fifteen years, the Indian financial system has been incrementally deregulated and exposed to international financial markets along with the introduction of new instruments and products.

Review on the subject

The study of review literature is very important aspect of any research. Now an attempt is made to analyze the past trends in the area of research on growth of GDP composition both at the National level and at the International level Many researchers have conducted studies on growth of GDP composition Hence the review of such studies enables researcher to identify the research gap.

Kumar Arvind and Vijay Paul Sharma (2015) studied the trends in agriculture and industry dependence. The study observed that the GDP growth increased in India during the period 1950-1995 and the increase in GDP is quite remarkable in the post reform

period. Wolfgang Dauth and Jens Suedekum (2014) reported that globalization down sized the economic growth during the period 1978-2008. Debnath and Roy (2012) analyzed the trend in sectoral shares in state domestic product and inter-sectoral linkages in northeast India for the period 1981 to 2007. They show that there exists bidirectional causality among the sectoral output of northeastern states, at least in the short run. In the long run, there exists a unidirectional causality running from the agricultural sector and the industrial sector to the services sector.

Rodrik (2009) used regression model for growth rates of GDP for five year periods on shares of industry in GDP in the initial year, but not distinguishing manufacturing from industry. He finds a significant positive relationship and interprets the growth of developing countries in the post war period in terms of the structural bonus argument. He explicitly concludes that transition into modern industrial activities acts as an engine of growth. For Rodrik structural transformation is the sole explanation of accelerated growth in the developing world. A article by Timmer and de Vries (2009) also points to the increasing importance of the service sector in a sample of countries in Asia and Latin America. Using growth accounting techniques, they examine the contributions of different sectors in periods of growth accelerations, in periods of normal growth and in periods of deceleration. In periods of normal growth they find that manufacturing contributes most. In periods of acceleration, this leading role is taken over by the service sector, though manufacturing continues to have an important positive contribution.

It could be seen clearly from the above discussion that many studies have highlighted the growth of GDP composition both at the national level and at the international level. Such studies have not highlighted the growth of GDP composition in India during the pre liberalization 1951 – 1952 to 1980 – 1990 and posts liberalization period 1989 -1990 to 2011 -2012. This is a research gap. In order to fulfill the research gap, the present project in being undertaken.

Methods and Materials

The Indian economic development could be learnt from the point of view of contribution of industrial sector to the Indian GDP. This study is a macro level framework towards identifying and analyzing the growth of GDP composition over a period of time. This study deals with trends in the growth of GDP composition in India during the pre liberalization 1951 – 1952 to 1980 – 1990 and post liberalization period 1989 -1990 to 2011 -2012 This study employs only secondary data. The necessary secondary data are collected from the planning commission reports, statistical reports of ministry of finance, annual reports of ministry of industry and commerce government of India and reports of parliament. The collected data are classified and tabulated with the help of computer programming. Cross tabulation is done by putting independent variables of five year plan period and dependent variables of growth of GDP composition in India. The general data interpretation is done with the help of growth rate, coefficient of variation and average analysis.

Results and discussion

This section deals with growth of GDP composition in India during the pre

liberalization 1951 – 1952 to 1980 – 1990 and post liberalization period 1989 -1990 to 2011 -2012. Further, the growth of GDP composition in India has been analyzed with reference to agriculture and allied services, industrial activities, service sector and total GDP of the country

Data presented in table 1 indicate the sectoral composition of GDP growth. The share of agricultural and its allied activities to the GDP of India was Rs.147, 216 crore based on 2004-2005 value price in 1951-1952 and it moved to Rs.166, 906 crore in 1955-1956, showing a growth of 11.80 per cent. The average share of agriculture to the GDP of India was Rs.159, 597 crore per year. The agriculture sector contributed 51.45 per cent of GDP share in 1951-1952 and it declined to 50.01 per cent in 1955-1956 showing of mild decline of 2.88 per cent during the first five year plan period.

The industrial sector contributed Rs. 54132 crore to the GDP of India 1951-1952 and it moved up to Rs.68015 crore in 1955-1956, showing a growth of 20.41 per cent. In the same period the share of industrial sector to the GDP increased from 18.92 per cent to 20.38 per cent with the growth trend of 7.16 per cent.

The GDP income obtained from the service sector was Rs.84799 crore in 1951-1952 and it went up to Rs.98845 crore in 1955-56, reflecting a growth of 14.21 per cent. In the same period the share of service sector to the GDP of India declined from 29.63 per cent to 29.62 per cent, showing a mild decline of 0.03 per cent.

It could be seen clearly from the above discussion that the first five year plan focused major attention towards agricultural development. The industrial activities including to mining and quarrying and manufacturing activities shared about 20.38 per cent to the GDP of India. The service sector contribution to the GDP of India was 29.33 per cent. The economic development of first plan depended on agriculture and its allied activities.

It is significant to note that the share of industrial activities to the GDP of India was low during the first five year plan period, but its annual growth was much faster than the agriculture and its allied activities both in absolute terms and also in the relative percentage share growth. The growth of GDP income contribution from the industrial activities indicates the growing importance of industrial sector to the overall economic development of the country during the first five year plan period. It is highlighted by many researchers throughout the globe notably Julia G. Dobreva (2014) Pedro Ferreira, Samuel Pessôa and Marcelo Rodrigues dos Santos (2010), James Wong, Y. H. Chiang and Thomas Ng (2008), Frank McDonald, Dimitris Tsagdis and Qihai Huang (2006), Maria-Carmen Guisan and Eva Aguayo (2005) and Gregory H. Wassail and Doryl A. Hellman (1985).

Table 1 Sectoral GDP of India during the Pre Reform Period 1951-1956 to 1989-1990

Year	Agriculture & Allied Services	Industry	Services	GDP total
First Five Year Plan Period				
1951-52	147,216 (51.45)	54,132 (18.92)	84,799 (29.63)	286147
1952-53	151,859 (51.61)	54,970 (18.68)	87,438 (29.71)	294267
1953-54	163,553 (52.39)	58,684 (18.80)	89,940 (28.81)	312177
1954-55	168,361 (51.73)	62,898 (19.33)	94,172 (28.94)	325431
1955-56	166,906 (50.01)	68,015 (20.38)	98,845 (29.62)	333766
Mean	159,579 (51.42)	597,39.8 (19.25)	91,038,8 (29.33)	310357
Growth Rate	11.80	20.41	14.21	14.27
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Second Five Year Plan Period				
1956-57	175,980 (49.89)	77,941 (22.09)	98,845 (28.02)	352766
1957-58	168,075 (48.23)	77,034 (22.10)	103,391 (29.67)	348500
1958-59	185,010 (49.34)	82,663 (22.05)	107,275 (28.61)	374948
1959-60	183,147 (47.80)	88,316 (23.05)	111,690 (29.15)	383153
1960-61	195,482 (47.65)	97,565 (23.78)	117,232 (28.57)	410279
Mean	181538.8 (48.55)	84703.8 (22.65)	107686.6 (28.80)	373929.2
Growth Rate	9.98	20.11	15.68	14.02

Table 1 Sectoral GDP of India during the Pre Reform Period 1951-1956 to 1989-1990 (cont...)

Year	Agriculture & Allied Services	Industry	Services	GDP total
Third Five Year Plan Period				
1961-62	195,647 (46.25)	96,853 (22.90)	130,511 (30.85)	423011
1962-63	191,755 (44.39)	102,322 (23.69)	137,883 (31.92)	431960
1963-64	196,241 (43.24)	111,519 (24.57)	146,069 (32.19)	453829
1964-65	214,343 (43.90)	119,432 (24.46)	154,472 (31.64)	488247
1965-66	190,675 (40.53)	120,932 (25.71)	158,795 (33.76)	470402
Mean	197732.2 (43.60)	110211.6 (24.30)	145546 (32.09)	453489.8
Growth Rate	-2.61	19.91	17.81	10.07
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Three Annual Plan Period				
1966-67	187,962 (39.56)	123,516 (25.99)	163,712 (34.45)	475190
1967-68	215,914 (42.02)	128,004 (24.91)	169,942 (33.07)	513860
1968-69	215,572 (40.88)	133,966 (25.41)	177,732 (33.71)	527270
Mean	206482.7 (40.85)	128495.3 (25.42)	170462 (33.73)	505440
Growth Rate	12.81	7.80	7.89	9.88
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Fourth Five Year Plan				
1969-70	229,428 (40.85)	374,491 (25.87)	186,910 (33.28)	561630
1970-71	245,699 (41.66)	147,930 (25.08)	196,158 (33.26)	589787
1971-72	241,087 (40.47)	151,280 (25.39)	203,374 (34.14)	595741

1972-73	228,988 (38.56)	155,502 (26.19)	209,353 (35.25)	593843
1973-74	245,479 (39.54)	159,230) (25.65	216,163 (34.82)	620872
Mean	238,136.2 (32.46)	197,686.6 (33.37)	202,391.6 (34.17)	592374
Growth Rate	6.54	-135.19	13.53	9.54

Table 1 Sectoral GDP of India during the Pre Reform Period 1951-1956 to 1989-1990 (cont...)

Year	Agriculture & Allied Services	Industry	Services	GDP total
Fifth Five Year Plan				
1974-75	241,740 (38.49)	161,263 (25.68)	225,076 (35.84)	628079
1975-76	272,899 (39.86)	171,699 (25.08)	240,036 (35.06)	684634
1976-77	257,131 (37.09)	184,896 (26.67)	251,164 (36.23)	693191
1977-78	282,937 (37.98)	198,469 (26.64)	263,566 (35.38)	744972
1978-79	289,452 (36.83)	215,352 (27.40)	281,161 (35.77)	785965
1979-80	252,475 (33.89)	205,259 (27.55)	287,349 (38.57)	745083
Mean	266105.7 (37.29)	189489.7 (26.55)	258058.7 (36.16)	713654
Growth Rate	4.25	21.43	21.67	15.70
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Sixth Five Year Plan				
1980-81	285,015 (35.69)	212,877 (26.66)	300,614 (37.65)	798506
1981-82	298,130 (35.35)	229,071 (27.16)	316,225 (37.49)	843426
1982-83	297,293 (34.25)	232,018 (26.73)	338,781 (39.03)	868092
1983-84	327,382 (34.97)	250,731 (26.78)	358,157 (38.25)	936270
1984-85	332,571 (34.17)	260,777 (26.79)	380,009 (39.04)	973357

Mean	308078.2 (34.85)	237094.8 (26.82)	338757.2 (38.32)	883930.2
Growth Rate	14.30	18.37	20.89	17.96

Table 1 Combined GDP of India during the Pre Reform Period 1951-1956 to 1989-1990 (cont...)

Year	Agriculture & Allied Services	Industry	Services	GDP total
Seventh Five Year Plan				
1985-86	333,616 (32.91)	271,088 (26.74)	409,162 (40.36)	1013866
1986-87	332,250 (31.42)	285,136 (26.96)	440,226 (41.62)	1057612
1987-88	326,975 (29.86)	299,817 (27.38)	468,201 (42.76)	1094993
1988-89	378,113 (31.35)	327,406 (27.14)	500,724 (41.51)	1206243
1989-90	382,609 (29.89)	352,436 (27.53)	545,183 (42.58)	1280228
Mean	350712.6 (31.02)	307176.6 (27.17)	472699.2 (41.81)	1130588
Growth Rate	61.52	84.64	84.44	77.65
Overall CV	26.82	52.41	55.33	42.86

Socio economic survey of India 2014-2015

In second five year plan period the share of agriculture to the GDP of India increased in absolute sense and it showed a marginal decline in terms of percentage as it declined from 49.89 per cent to 47.65 per cent during the first five year plan period. The share of industrial activities including mining and quarrying and manufacturing activities recorded a more than 20 per cent increase during the second five year plan and it constituted a one third of the GDP. The industrial activities showed an increasing status in their contribution to the GDP of India. The service sector contributed about 28.52 per cent of the income to the GDP of India.

During the third five year plan period the share of agriculture and its allied activities to the GDP of India showed 2.61 per cent decline during the third five year plan period. In absolute sense it contributed 40 per cent of the GDP. The industrial activities including mining and quarrying and manufacturing activities contributed 25 per cent of the GDP and their growth rate during the period 1961-1962 to 1965-1966 was more than 2.81 per cent in relative percentage

term and in absolute actual money term it was about 20 per cent increase during the third five year plan period. The service sector made a one third contribution to the GDP of India. The industrial development was quite remarkable during the third five year plan period, but overall expected growth target of 5.6 per cent did not achieve and only 2.8 per cent was achieved during the third five year plan period. The failure of third five year plan was due to occurrence of Chinese aggression in 1962, Indo-Pak war in 1962 and severe droughts in 1965-1966.

During the three annual plan period the share of agriculture and its allied activities to the GDP showed an increase level consequent upon introduction of green revolution, high yielding varieties of seeds, use of chemical fertilizers, and proper utilization of irrigation resource and soil conservation measures. The industrial activities slowed down during the three annual plan period. In absolute level the industrial activities, contributed to the GDP increased but in the relative percentage sense, it showed a mild decline owing to putting much pressure on agricultural development to solve the prevailed agricultural crisis and food shortage problems.

During the fourth five year plan period 1969-70 to 1973-74 the agriculture contributed about 40 per of the GDP and 25.65 per cent of GDP from the industrial activities and 34 per cent of the GDP obtained from the service sector during the fourth five year plan period. The share of agriculture and its allied activities to the GDP of India increased in absolute level but in relative percentage share it was declined. The share of industrial sector and service sector to the GDP increased remarkably over the years in fourth five year plan. In fourth plan period fund were directed towards industrial development in backward areas with a view to reduce the regional disparity in the process of industrial development.

It could be observed from the tabular data that the targeted economic growth of fifth five year plan was 4.4 per cent per year, but actual achieved growth was 4.8 per cent during the fifth five year plan and rolling plan period. The share of agriculture to the GDP of India declined drastically, a mild increase in the share of industrial sector to the GDP and a mild increase in the case of service sector contribution to the GDP was noted. The implementation of fifth five year plan was discarded in 1978 when Janata Party came to power in India. By that time the government of India proposed rolling plan emphasising an employment, in contrast to Nehru plan when supported the concentration of power in the hands of a few individuals, increasing economic inequality and poverty. However the Janata government ruled only for two years. The congress party returned to power in 1980 and launched different plan aimed at direct attacking on the problem of poverty by creating condition or an expanding economy.

It is observed from the tabular data that the overall targeted economic growth was 5.2 per cent, but the actual achievement was 5.7 per cent, and it is evident that all the targets of sixth five year plan were achieved. It could be noted that during the sixth plan period, the GDP contributed by the industrial activities showed a more than 18 per cent growth. The relative share of agriculture to the GDP decreased to 34 per cent by the end of the sixth five year plan period. The share of industrial activities to the Indian

GDP was about 26.82 per cent by the end of the sixth five year plan period. Thus the process of industrialization is very essential to achieve the rapid process of economic development in India.

It could be seen clearly from the above discussion that the seventh plan targeted growth rate was 5 per cent but the actual growth rate was 6 per cent. The level of growth is due to nearly 27 per cent of the GDP contributed by the industrial activities including mining and quarrying and manufacturing activities. The share of agriculture and allied activities contributed GDP declined by 29.89 per cent. It is evident that a rapid economic development is possible only through industrialization and enhancement of industrial activities.

It could be observed that agriculture and its allied activities made a GDP contribution of Rs. 147216 crore in 1951-1952 and it rose to Rs.382609 crore in 1989-1990, indicating a growth of 61.52 per cent in absolute sense. The level growth explains the 26 per cent fluctuation as per the result of co efficient of variation.. In the case of relative percentage sense, it declined from 51.45 per cent of GDP in 1951-1952 to 29.89 per cent in 1989-1990, showing a slowdown of 72.13 per cent during the pre reform period.

The industrial sector made a GDP contribution of Rs.54132 crore in 1951-1952 and it expanded to Rs.352436 crore in 1989-1990 reflecting a growth of 84.64 per cent during the pre reform period. The growth rate explains the 82.41 per cent of fluctuation as per the result of co efficient of variation. In the absolute percentage term, it increased from 18.92 per cent of GDP in 1951-1952 to 27.53 per cent in 1989-1990, recording a growth of 31.22 per cent in the period of analysis.

The service sector made a GDP contribution of Rs.84799 crore in 1951-1952 and it rose to Rs.545183 crore in 1989-1990, registering a growth of 84.44 per cent during the pre reform period. The growth rate explains the 55.33 per cent of fluctuation as per the result of co efficient of variation. In the relative percentage term it increased from 29.63 per cent of GDP in 1951-1952 to 42.58 per cent GDP in 1989-1990, recording a growth of 30.41 per cent during the pre reform period.

The overall GDP of India was Rs.28614 crore in 1951-1952 and it enlarged to Rs.1280228 crore in 1989-1990, indicating a growth of 77.65 per cent during the pre reform period with fluctuation of 42.86 per cent as per the results of co efficient of variation.

Table 2 Sectoral Composition of Indian GDP during the Post Reform Period 1990-1991 to 2011-2012

Year	Agriculture & Allied Services	Industry	Services	GDP total
Two Annual Plan period				
1990-91	397,971 (29.53)	376,453 (27.93)	573,465 (42.55)	1347889
1991-92	390,201 (28.54)	376,604 (27.55)	600,366 (43.91)	1367171
Mean	394086 (29.03)	376528.5 (27.74)	586915.5 (43.23)	1357530
CV	1.39	0.03	3.24	1.00
Growth Rate	-1.99	0.04	4.48	1.41
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Eighth Five Year Plan Period				
1992-93	416,153 (28.89)	389,802 (27.06)	634,549 (44.05)	1440504
1993-94	429,981 (28.24)	411,012 (27.00)	681,351 (44.76)	1522344
1994-95	447,127 (27.61)	451,427 (27.87)	721,140 (44.52)	1619694
1995-96	491,484 (28.28)	452,216 (26.02)	794,041 (45.69)	1737741
1996-97	478,933 (25.53)	543,543 (28.97)	853,843 (45.51)	1876319
Mean	452735.6 (27.62)	449600 (27.43)	736984.8 (44.96)	1639320
CV	7.05	13.11	11.90	10.54
Growth Rate	13.11	28.28	25.68	23.23
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Ninth Five Year Plan Period				
1997-98	478,933 (24.47)	624,256 (31.90)	853,843 (43.63)	1957032
1998-99	509,203 (24.39)	648,536 (31.06)	930,089 (44.55)	2087828
1999-00	522,795 (23.18)	725,009 (32.15)	1,007,138 (44.66)	2254942

2000-01	522,755 (22.26)	697,210 (29.69)	1,128,516 (48.05)	2348481
2001-02	554,157 (22.39)	735,122 (29.70)	1,185,683 (47.91)	2474962
Mean	517568.6 (23.27)	686026.6 (30.84)	1021054 (45.90)	2224649
CV	5.25	7.02	13.42	9.25
Growth Rate	13.57	15.08	27.99	20.93

Table 2 Sectoral Composition of Indian GDP during the Post Reform Period 1990-1991 to 2011-2012 (cont...)

Year	Agriculture & Allied Services	Industry	Services	GDP total
Tenth Five Year Plan Period				
2002-03	517,559 (20.13)	704,096 (27.39)	1,349,280 (52.48)	2570935
2003-04	564,391 (20.33)	755,625 (27.22)	1,455,733 (52.44)	2775749
2004-05	565,427 (19.40)	772,958 (26.52)	1,576,255 (54.08)	291464
2005-06	594,487 (18.27)	910,413 (27.99)	1,748,173 (53.74)	3253073
2006-07	619,190 (17.37)	1,021,204 (28.65)	1,923,970 (53.98)	3564364
Mean	572210.8 (18.97)	832858 (27.62)	1610682 (53.41)	3015752
Growth Rate	16.41	31.05	29.87	27.87
Year	**Agriculture & Allied Services**	**Industry**	**Services**	**GDP total**
Eleventh Five Year Plan Period				
2007-08	655,080 (16.81)	1,119,995 (28.74)	2,121,561 (54.45)	3896636
2008-09	655,689 (15.77)	1,169,736 (28.13)	2,333,251 (56.11)	4158676
2009-10	660,987 (14.64)	1,276,919 (28.27)	2,578,165 (57.09)	4516071
2010-11	717,814 (14.59)	1,373,339 (27.92)	2,827,380 (57.48)	4918533
2011-12	753,832	1,480,657	3,013,041	5247530

	(14.37)	(28.22)	(57.42)	
Mean	688680.4 (15.14)	1284129.2 (28.24)	2574679.6 (56.62)	4547489
Growth rate	13.10	24.36	29.59	25.74
Overall CV	47.20	75.57	80.96	74.31

Socio economic survey of India 2014-2015

A study in table 2 indicates the sectoral composition of Indian GDP during the post reform period. It could be seen clearly from the above discussion that the share of agriculture and its allied activities, industrial activities and manufacturing activities to the Indian GDP decreased during the annual plan period 1990-92.

It is observed from the tabular data analysis that the targeted overall growth of eight five year plan was 5.6 per cent and actual growth achieved was 6.8 per cent per annum. It is evident that the nearly 28 per cent of GDP generated from the industrial activities including mining and quarrying and manufacturing activities during the eighth five year plan period and also high level contribution of GDP from the service sector. It is evident that the economic development is higher when the role of industrial sector and service sector is found to be higher than of the role of agricultural sector to the GDP contribution.

It is inferred from the tabular data analysis that the ninth plan targeted growth rate was 6.5 per cent per year, but actual growth was 5.4 per cent. In general absolute increase in the contribution of agriculture and its allied activities, industrial mining and quarrying and manufacturing activities to the GDP was highly reported but their relative share to the GDP declined during the ninth five year plan period. In the case of service sector a remarkable increase in the absolute level GDP contribution and also relative percentage level GDP share was reported. In ninth five year plan period, service sector shared 48 per cent of the GDP, 30 per cent GDP from the industrial sector and the rest of 22 per cent of the GDP from the agriculture and its allied activities. Thus in ninth five year plan period, the service sector played a major role in Indian economic development followed by industrial sector and agricultural and its allied activities.

It could be seen clearly from the tabular data analysis that the targeted economic growth in tenth five year plan was 8 per cent per year, but actual achieved growth rate was 7.6 per cent. In absolute term the share of agriculture and its allied activities and mining and quarrying activities to the Indian GDP showed increased growth but in relative percentage share to the GDP remarkably declined. In tenth five year plan period the agriculture and its allied activities shared 17.37 per cent of the GDP, industrial sector 46.59 per cent and service sector 53.70 per cent to the Indian GDP.

It is observed from the tabular data analysis that the eleventh five year plan period expected the annual growth of 8 per cent but actual achieved growth was 7.6 per cent. In general most of the eleventh five year plan targets were achieved.

The agriculture and its allied activities made a GDP contribution of Rs.397971 crore in 1990-1991 and it rose to Rs.753832 crore in 2011-2012, showing an increase of 47.20 per cent in the absolute level. But in relative percentage sense it declined from 29.53 per cent of GDP in 1990-1991 to 14.37 per cent GDP in 2011-2012, reflecting a slowdown of 102.01 per cent during the post reform period. The industrial sector made a GDP contribution of Rs.376453 crore in 1990-1991 and it rose to Rs.1480657 crore in 2011-2012, indicating an enhancement of 74.57 per cent in the absolute level. In the case of relative percentage sense, it moved from 27.93 per cent of GDP in 1990-1991 to 28.32 per cent GDP in 2011-2012, showing only a mild increase of 1.02 per cent during the post reform period. The service sector made a GDP contribution of Rs.573465 crore in 1990-1991 and it expanded to Rs.3013041 crore in 2011-2012 indicating an absolute increase of 80.96 per cent during the post reform period. In absolute per cent level it increases from 42.55 per cent GDP in 1990-1991 to 57.42 per cent GDP in 2011-2012, showing a growth of 25.89 per cent growth in the period of analysis. The overall GDP of India was Rs.1347889 crore in 1990-1991 and it rose to Rs.5247530 crore in 2011-2012, indicating a growth of 74.31 per cent during the post reform period.

Conclusion

It could be seen clearly from the above discussion the pre reform period 1951-1952 to 1989-1990, the share of agriculture to the GDP decreased by 72.13 per cent. The share of industrial sector GDP increased by 31.22 and the GDP share of service sector increased by 30.41 per cent during the pre reform period. Thus the roles of industrial sector and service sector have played a significant role in increasing the Indian GDP by 77.65 per cent during the pre reform period. It is observed that the share of agriculture and its allied activities to the GDP of India decreased by 102.01 per cent during the post reform period 1990-1991 to 2011-2012. The share of industrial sector to the Indian GDP shows only a marginal increase of 1.02 per cent and service sector share to the GDP is estimated at 25.89 per cent during the post reform period. Thus the major economic development of India depends on service sector during the post reform period in India.

References

Kumar Arvind and Vijay Paul Sharma (2015) Analysis of Agriculture Industry Linkages in Indian Economic Development No WP1998-02-06, IIMA Working Papers from Indian Institute of Management Ahmedabad, Research and Publication Department

Wolfgang Dauth and Jens Suedekum (2014) Globalization and Local Profiles of Economic Growth and Industrial Change No 8161, IZA Discussion Papers from Institute for the Study of Labor (IZA).

Devnath, Avijit and Niranjan Roy (2012), “Structural Change and Inter-sectoral Linkages: The Case of Northeast India”, Economic and Political Weekly, Vol. XLVII, No.6. Pp. 72-76, 11 February.

Timmer Marcel P. and Gaaitzen J. de Vries (2009). "Structural change and growth accelerations in Asia and Latin America: a new sectoral

data set", Cliometrica. vol. 3(2), 165-190, June

Indrani Chakraborty (2010), Financial Development and Economic Growth in India, South Asia Economic Journal September 2010 vol. 11 no. 2 287-308.

Rodrik, D. (2009). Growth after the Crisis, Harvard Kennedy, School, Cambridge, MA. 02138.

Szirmai, A. (2009). Industrialisation as an Engine of Growth in Developing Countries, 1950-2005, UNU-MERIT working paper, 2009-10, february, 2009).

Miklós Koren and Silvana Tenreyro (2003), Diversification and development, No 03-3, Working Papers from Federal Reserve Bank of Boston Miklós Koren and Silvana Tenreyro (2003).

Fagerberg, J. and B. Verspagen (1999). 'Modern Capitalism in the 1970s and 1980s', table 9.1, in M. Setterfield ed., Growth, Employment and Inflation, Houndmills, Basingstoke, MacMillan.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Whose loss and whose responsibility? An economic view point of understanding potential economic losses of farmer suicides in India

Prakash Babu Kodali
Assistant Professor, Department of Public health and Community Medicine, Central University of Kerala, Kasaragod, Kerala, India.

Abstract:

Nearly 70 years post independence, Indian economy is still majorly agrarian. According to the World Bank statistics, over 67% of Indian population reside in rural areas, whose economy is again primarily agrarian with millions working in unorganized sector depending on agriculture either directly or indirectly for their subsistence. Owing to its dependence on several ecological, environmental, economic and political factors, the sector of agriculture in India is considered to be crippled, with majority of those who are dependent on it living in poverty, mostly below subsistence level. These factors resulted in suicides among farmers being the problem of national concern, as agriculture was considered to be the backbone of country's economy. This paper, by considering and calculating the idea of potential years of life lost, and apportioning it to the average percapita income of the farmer for the year 2014, tries to understand the economic costs of farmer suicides. By estimating the potential years of life lost and economic burden associated with it with respect to each age group and each state, the paper tries to reflect on what could be the potential economic losses for each state and the whole country because of farmer suicides, reflecting their seriousness and the urgency to consider apt solutions. By presenting an economic loss dimension to farmer suicides the paper tries to advocate and attract policy solutions for the persisting problem of national importance.

Keywords: *potential years, social reasons, Suicide/self-killing*

Introduction:

More than 68% of the Indian population lives in rural India and an equivalent of around 60% depend directly or indirectly on agriculture for their subsistence(Gupta, 2015). Agriculture was considered to be the backbone of the Indian economy in the early decades of independence contributing to over 51.88% of India's GDP in 1950. Even world bank estimated that agriculture contributed to over 42.56% in the year 1960, however this contribution of agriculture to India's GDP went down to 16.95% in the year 2014(MUKUNTHAN, 2015). Though the share of agriculture to country's GDP is considerably less compared to other industrial and service sectors, the dependence of over 60% of India's population on agriculture for their subsistence make agriculture an important sector to be looked at in the political economy of the country(Ghosh, 2005; SAMBHAJI, 2014). As estimated by the World Health Organization, India accounts for one of the highest burden of suicides in the world. Suicide/self-killing of an individual is mainly considered

from a medical perspective as an outcome of the extreme psychological distress or an underlying psychiatric illness of an individual. Though, there could be several social reasons and socialistic viewpoints behind suicides, in majority of the cases the medical viewpoint overshadows the socialistic viewpoint. However, the situation is different in the case of farmer suicides in India where, the medical viewpoint is overpowered by socialistic viewpoint.Accounting for over 11.2% of all the suicides occurring in India, farmer suicides present themselves as immediate problem to be dealt with(SAMBHAJI, 2014). Additionally, considering the underlying avoidable causes, socio economic profile of the victims, and the economic and political significance of the agrarian economy encompassing over 60% of Indian population, farmer suicide project themselves as a persisting problem of national importance. Considerable number of qualitative research in the form of ethnographies, case studies etc., tried to reflect on the socialistic view point of farmer suicides in the country, citing crop failure, famine and indebtedness, and insufficiency of government's aid being the prime reasons for farmer suicides(SAMBHAJI, 2014). Similarly several quantitative studies reflected on the importance of above mentioned factors as causative factors of farmer suicides with statistical significance (Ghosh, 2005). The current study is neither trying to undermine their importance nor to disgrace the contribution of the above studies; however it tries to give an additional viewpoint to the farmer suicides in the country by looking it from an epidemiological concept of the potential years of life lost.

Objectives of the Study:

1) To estimate the potential years of life lost because of reported cases of farmer suicides in India.
2) To estimate and understand the economic burden of farmer suicides in India.

Methodology:

Study design: The study relies on secondary data analysis. The current study relies itself on the secondary data analysis of the data on farmer suicides from the National Crime Records Bureau (NCRB) published for the year 2014. NCRB data is utilized for the study as it is one of the most commonly used secondary data source used in the studies dealing with farmer suicides in India (SAMBHAJI, 2014; Vadivel & Ponnarasu, 2013).The bureau obtains the data from the police records which are mostly notified cases of farmer suicides which increases the reliability of the data considered. The data is available in the public domain from the website of NCRB which is freely accessible. The data analysis was preceded by the construction of data analysis map which could be visualized in figure 1.

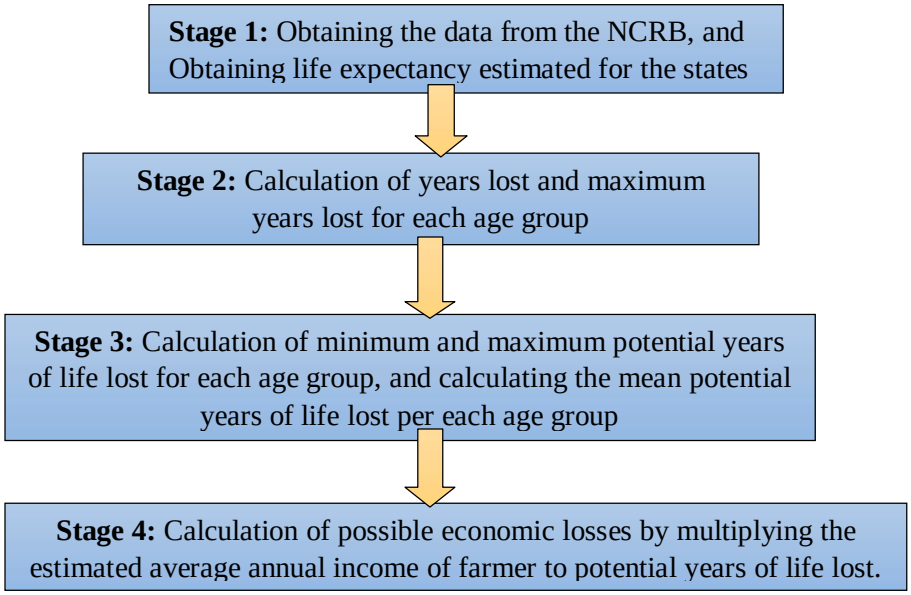


Figure 1: Figure showing the different stages in the data analysis phase

Results:

According to the data, overall a total of 5650 farmer suicides were reported in the country out of which over 91% (5178) were among males and around 9% (472) were females. Within the country, certain sates and union territories (such as north eastren states, goa, bihar etc) reported "0" deaths because of farmer suicides where as, the state of maharasthra leads the country in farmer suicides with maharashtra itself accounting for around 50% (2568)of the reported farmer suicides in the country. Age wise distribution of farmer suicides could be elucidated from table 1, which reflects tht over 38% (2191) of the total reported farmer suicides are in the age group 30-45 years, followed by 45-60 years (26.9%), 18-30 years (23%), 60 and above (10%) and, 14-18 years (1%).

Table 2, also show a similar kind of a pattern as table 1, with age group 30-45 years accounting for around 43.5% (61500) of total potential life years lost, followed by 18-30 years (37.9%), 45-60 years 14.2% (20061), 60 and above 2.41% (3415.1), and 14-18 years 1.8% (2635.2).

Table 3, tries to reflect on the economic lossess with respect to the AGE. It is understood that the economic losses because of farmer suicide amounts to over 10 billion indian rupees, with the age group 30-45 years itself accounting over 43.5% (4.7 billion) of it. It is followed by age group 18 to 30 years 37.9% (4.1 billion), 45-60 years 14.2% (1.5 billion), 60 and above 2.4% (0.26 billion), and 14-18 years which accounted for 1.8% (0. 2billion).

Additionally, the differences in the prevalence of the Farmer sucides within different states in the country and the health and disease burden they impose on respective states could be understood

from table 4 and Maps 1 and 2. From table 1 it can be said that Maharashtra leads the country in the number of farmer suicides with a whooping 2568 reported deaths in the year 2014. Union territories such as pondicherry, Dadar and Nagar Haveli and certain north eastren states like Nagaland, Meghayala, manipur and Northren states of Bihar and Jarkhand reported "0" cases of farmer suicides. A Similar kind of differences in the distribution of potential years of life lost and Economic losses because of farmer suicides can be captured from the Maps 1 and 2.

Discussion:

Agriculture and farming represents itself as the pinnicle of human civilization and is known to be one of the earliest developments of the mankind. Right from the days of early human settlements agriculture played a vey important role in the social, economic and cultural development of the mankind. All the well known ancient civilizations such as mesepetomian civilization, egyptian civilization and harappan and mohenjadaro civilizations were predominantly agrarian econmies. Though considered to be the prime econmic sector on which the mankind relied on for tens of centuries, it is also one of the ignored/ill attended economic sectors, primarily in the low and middle income countries like India.

The structural adjustment poilcies, globalization though were expected to boost all the sectors of the economy, their influence on agriculture was considered to be very low(Shiva & Jalees, 2005), and were actually of no help to small scale farmers with minor land holdings and in worst case actually pushed them in to poverty, indebtedness and theirby abeiting them to commit suicide. The present study tries to calculate the burden of farmer suicides in indian states.

Looking at the mortality data it could be said that majority of the reported farmer suicides in the country were primarily from the states of Maharashtra, Madhya Pradesh, Telangana and Chattisgarh, reflecting them as the high risk states in the indian sub-continent. Maharashtra alone has over 2500 deaths, which are lesser compared to the year 2012 when the farmer suicides in the state were enumerated to be 3786 (SAMBHAJI, 2014) reflecting the decrease. However, in 2012 maharashtra accounted for about 27% of farmer suicides in the country where as in the year 2014 the proportion jumped over 45% of farmer suicides in the country. This reflects a trend where the farmer suicides in the other states of the country decreased at a higher pace compared to maharashtra where the decrease is considerably less. Aditionally, it was seen that the belt with the states of maharashtra, karnataka, telangana and madhya pradesh witnessed considerably higher number of farmer suicides than their contemperories, which was evident from the other studies even(Mohanty, 2005; Posani, 2009). This phenomenon could be understood from certain studies which reflect that "farmers who grow cash crops such as cotton and coffee, with marginal holding of cultivable land, and those who are with debts" are at higher risk of committing suicide (Kennedy & King, 2014; SAMBHAJI, 2014; Vasavi, 2012). Considering the geographic, political and agro-econmic structure of the above states, it could be understood that by reflecting the above characteristics these states fall under the category of high risk

states reflecting the need for additional attention in them.

The table 3 reflecting the suicide prevalence by the age group shows that the age groups between 18 to 60 years themselves comprise of over 5000 deaths of the recorderd 5650 farmer suicides, which inturn turnsout to be a grave situation. This could be further understood by the concept of dependency ratio normally used in demographic studies(Crown, 1985; Harwood, Sayer, & Hirschfeld, 2004). The dependency ratio is simply understood as the ratio between the proportion of population in economically non productive age group (proportion of population below 14 years + proportion of population above 60 years) and the proportion of the population In the economically productive age group (15-60 years)(Crown, 1985). In layman's language it reflects how many economically non-productive people are dependent on one economically productive individual.The increase in the dependency ratio is is attributed to increase the poverty in the community by incresing the proportion of population dependent on the limited proportion of of economically productive population (Cotlear, 2011; Malik, 1996). Considering the high number of farmer suicides (over 5000) in the economically productive age group it could be said that this high prevalence of farmer suicides will for sure increase the dependency ratio in the respective families which will further push them to poverty. Additionally, it reflects the economic loss to not just the family/dependents but also to the state, which could be understood from table 3. From table 3 which tries to reflect on the economic lossess because of famer sucides, it was estimated that the farmer suicides overall amounts to over 10.8 billion indian rupeesof which the age group between 18-60 years aggregate for atleast 10.4 billion which account for over 95% of the economic losses. This visualizes the seriousness of the problem on a large sclae, reflecting that the farmer suicides are not just socio-political issue but also has public health and economic importance too.

The epidemiological and economic burden of the farmer suicides in various states is reflected by the maps 1 and 2. From Map 1 it could be eluceded that maharashtra has the highest epidemiological burden of the farmer suicides In terms of Potential years of life lost, which could be explained form the evidence that maharashtra by and large has the highest number of reported incidents of farmer suicides in the country(SAMBHAJI, 2014). However, it doesnot just reflect that. It also reflects the higher proportion of deaths perticularly of those who are in the younger age groups, interms of possible life years which could be potentially used for grater benefit. On the basis of the economic lossess, Map 2 tries to classify the Indian states in to 7 colour coded regions reflecting the economic loss in those regions. Rather than just discriptively presenting the econmic loss in terms of mere numbers it also reflects the opportunitiy the various states have to bringdown their economic losses becaise of farmer suicides by taking necessary steps to prevent them.

It is untrue to say that the governments are insensitive towards this persisting problem. Moreover, reducing farmer suicides were the political agenda of several governments which is appriciatable(Ghosh, 2005; Suri, 2006). However, majority of the time solutions

within an entitlement approach rather than an empowerment oriented approach are opted for. These solutions are more or less sensitive only towards aspects like crop failure, or drought, or irrigation facilites etc., however, any one size fits all solutions ignoring several other inherent political and social dimensions of the problem is not the kind of solution which is sensitive enough to tackle the problem with multiple dimensions.

Looking at the problem only from the perspective of crop failure or famine or irrigation facilities will only give a one sided solution as studies indicate that farming and related reasons are cited only around 25% of the cases where as other reasons of debt burdens, crashing of prices etc, account for considerable part of the rest 75%(SAMBHAJI, 2014), reflecting the need for much larger social and economic policies rather than just few subsidies(Kennedy & King, 2014). Additionally looking from the perspective of other social determinants it was understood that those farmers who were with small land holdings, and those who were in the lower socio-economic strata have higher risk of falling in to debt and committing suicide(SAMBHAJI, 2014), studies even quantitatively reflect that marginal farmers with small land holdings, who are indebted and are producing cash crops are at higher risk of committing suicide (Kennedy & King, 2014) there by reflecting the need for much larger and holistic policies and reforms which tend to identify the farmers who are at risk, provide them with counselling and other means such as waving the debts, increasing irrigation facilities, providing better quality seeds and fixing minimum price for the farm goods etc. Land reforms present themseleves a possible solution, as majority of the farmers who commmit suicide are those with marginal land holdings. However, considering the local power structure in the typical indian rural setup, land reforms might not actually be practically possible owing to the stong lobbying and power of local elites unless there is an eternal vision of the state and a strict policy decesion to do so. Additionally, crop insurance schemes, better pricing of farm goods, subsidies on essential inputs, along with streamling the ways for provision of loans for farmers preventing their dependence on local money lenders all could actually help to tackle the problem of farmer suicides to the grater extent. Over all, it could be said that what needed is the increased attention of the state towards agriculture sector, which should be translated in terms of the increase in public expenditure on the activities to support the agrarian economy of the country.

Limitations: The current study is not without any limitations. Firstly, the data obtained might not be complete as NCRB takes in to account the reported cases of farmer suicides, and studies indicate that there could be ill reporting of farmer suicides in certain geographical regions such as Uttar Pradesh and Bihar, which reflect that the estimates could be much higher in real time. Secondly, it should be remembered that the estimates of PYLL and Economic lossess are apportioned with respect to life expectancy and average income respectively, which are further dependent on several other confounding factors and are subject to variablility with time. Nevertheless,with the rigirous process of calclulating the estimates and adoption of standard numbers from reliable sources, it could be said that the current paper gives the

estimates which are minimal lossess which India faced because of farmer suicides in the year 2014, and reflects the need the need for measures to prevent them in the years to come.

Conclusion: Farmer suicides are still a cruel reality in which india lives even after 69 years of independence. Farmer suicides is one of the higly discussed issues and is thematter of social and political concern. By utilizing the epidemiological concept of potential years of life lost the current study tried to estimate the epidemiological burden of the farmer suicides in India. It also tried to estimate the economic losses incurred by each state because of farmer suicides. Looking from the perspective of potential years of life lost and economic losses, reflects the seriousness of the situation and the untapped possible losses which are drained. Moreover, it needs to be identified that this figure of economic loss is only a minimum estimate with respect to the average income earned by an averge farmer in 2014. Given the fact that income increases possibly, the lossess which are projected could be much higher given the possiblility that the farmer could earn much more than the estimates if he had lived till the expected life expectancy. By providing such a public health perspective this paper tries to strengthen the argumentsfor better policies and their implementation to prevent farmer suicides.

Tables and Maps:

Table 1: Table reflecting the age specific distribution of Farmer Suicides

	Age group					
	14-18 years	18-30 years	30-45 years	45-60 years	60 and above	Total
Number of Deaths (suicides)	59	1300	2191	1521	579	5650

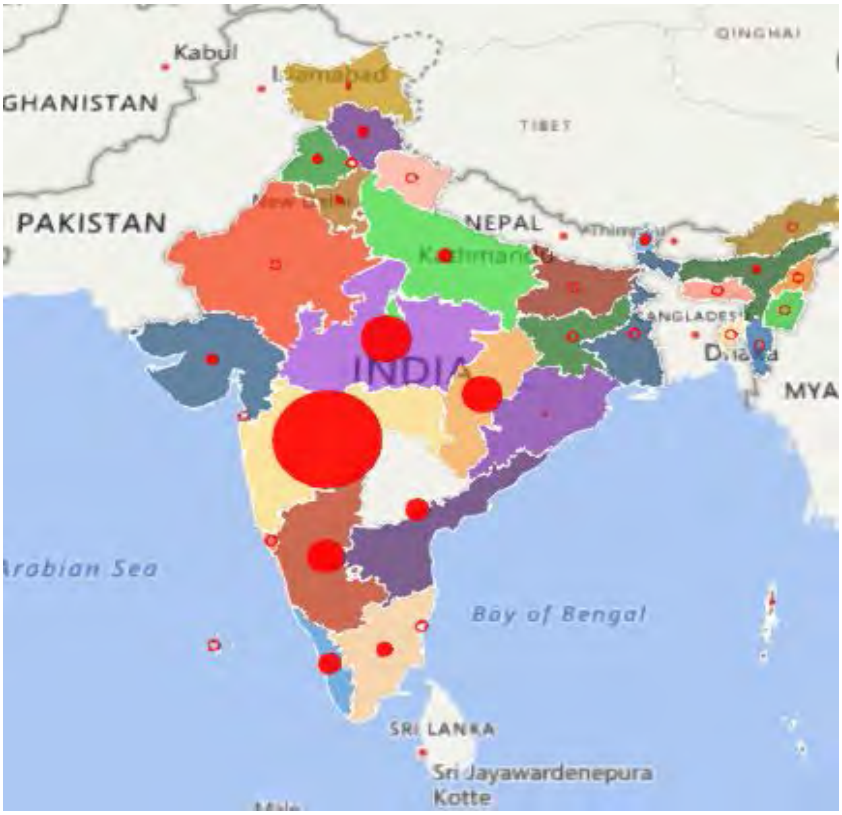
Table 2: Table showing the Age group specific distribution of potential years of Life lost

	Age Group					
	14-18 years	18-30 years	30-45 years	45-60 years	60 and above	Total
Potential years of Life Lost (PYLL)	2635.2	53612.5	61500	20061	3415.1	141224

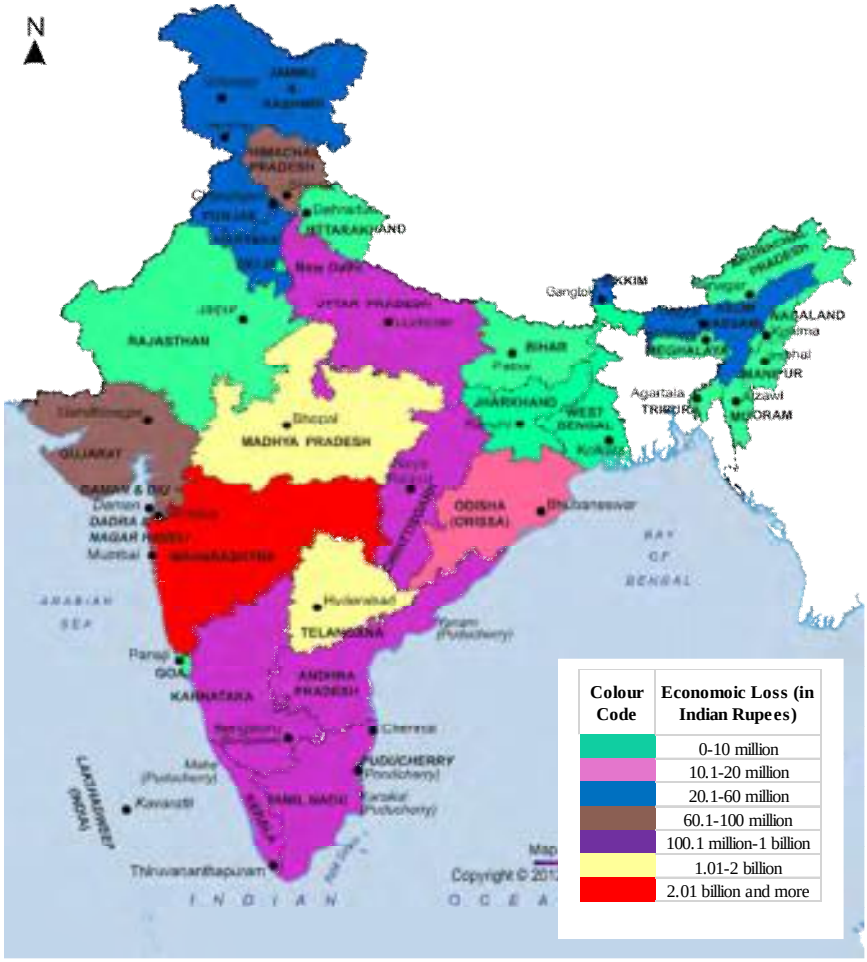
Table 3: Table showing the Age group specific distribution of economic loss because of Farmer suicides

	Age Group(000)					
	14-18 years	18-30 years	30-45 years	45-60 years	60 and above	Total
Economic Loss (in indian rupees)	203205	4134167	4742411	1546928	263345	10890057

Map 1: Map Showing the Burden of Farmer Suicides (as PYLL) in India



Farmer Suicides in Indian States			
State	**Males**	**Females**	**Total Deaths**
Andhra Pradesh	157	3	160
Arunachal Pradesh	0	0	0
Assam	21	0	21
Bihar	0	0	0
Chhattisgarh	391	52	443
Goa	0	0	0
Gujarat	31	14	45
Haryana	14	0	14
Himachal Pradesh	28	4	32
Jammu & Kashmir	7	5	12
Jharkhand	0	0	0
Karnataka	297	24	321
Kerala	107	0	107
Madhya Pradesh	688	138	826
Maharashtra	2498	70	2568
Manipur	0	0	0
Meghalaya	0	0	0
Mizoram	0	0	0
Nagaland	0	0	0
Odisha	5	0	5
Punjab	21	3	24
Rajasthan	0	0	0
Sikkim	33	2	35
Tamil Nadu	63	5	68
Telangana	751	147	898
Tripura	0	0	0
Uttar Pradesh	59	4	63
Uttarakhand	0	0	0
West Bengal	0	0	0
A & N Islands	7	1	8
Chandigarh	0	0	0
D&N Haveli	0	0	0
Daman & Diu	0	0	0
Delhi UT	0	0	0
Lakshadweep	0	0	0
Puducherry	0	0	0
Total	**5178**	**472**	**5650**



Map 2: Map reflecting the Economic Costs of Farmer Suicides in Indian States

References:

Cotlear, D. (2011). *Population aging: is Latin America ready?* : World Bank Publications.

Crown, W. H. (1985). Some thoughts on reformulating the dependency ratio. *The Gerontologist, 25*(2), 166-171.

Gardner, J. W., & Sanborn, J. S. (1990). Years of Potential Life Lost (YPLL)-What Does it Measure? *Epidemiology, 1*(4), 322-329.

Ghosh, J. (2005). The political economy of farmer suicides in India. *Freedom from hunger Lecture Series, New Delhi*.

Gupta, S. (2015). Why rural India Matters. *India Today*. Retrieved from http://indiatoday.intoday.in/story/agriculture-rural-india-gdp-economy-narendra-modi-shekhar-gupta/1/442345.html

Harwood, R. H., Sayer, A. A., & Hirschfeld, M. (2004). Current and future worldwide prevalence of dependency, its relationship to total population, and dependency ratios. *Bulletin of the World Health Organization, 82*(4), 251-258.

Kennedy, J., & King, L. (2014). The political economy of farmers' suicides in India: indebted cash-crop farmers with marginal landholdings explain state-level variation in suicide rates. *Globalization and health, 10*(1), 1.

Malik, S. (1996). Determinants of rural poverty in Pakistan: a micro study. *The Pakistan development review*, 171-187.

Mohanty, B. B. (2005). 'We are like the living dead': farmer suicides in Maharashtra, Western India. *Journal of Peasant Studies, 32*(2), 243-276.

MUKUNTHAN, A. (2015). Rural India is far behind Urban India in every Indicator of Progress. Retrieved 1st January 2017, from FACULTY https://factly.in/rural-india-behind-urban-india-in-progress-indicators/

Posani, B. (2009). Crisis in the countryside: Farmer suicides and the political economy of agrarian distress in India. *London School of Economics Working Paper Series, ISSN*, 1470-2320.

Rukmini, S. (2014, 22 December 2014). Does it pay to be a farmer in India?Does it pay to be a farmer in India? *The Hindu*. Retrieved from http://www.thehindu.com/data/does-it-pay-to-be-a-farmer-in-india/article6713980.ece

SAMBHAJI, D. P. A. (2014). FARMER SUICIDE IN INDIA. *International Journal of Research in Social Sciences And Humanities, 3*(2).

Shiva, V., & Jalees, K. (2005). *Farmers suicides in India*: Research Foundation for Science, Technology and Ecology.

SILVA, J. D., Ramos, V., SILVA, H. C. G. D., & Traebert, J. (2015). Morbidity and mortality due to AIDS: a study of burden of disease at a municipal level. *Revista do Instituto de Medicina Tropical de São Paulo, 57*(5), 407-411.

Suri, K. (2006). Political economy of agrarian distress. *Economic and Political Weekly*, 1523-1529.

Vadivel, M., & Ponnarasu, S. (2013). Farmer suicides in India. *ZENITH International Journal of Multidisciplinary Research, 3*(10), 148-157.

Vasavi, A. (2012). *Shadow space: suicides and the predicament of rural India*: Three Essays Collective.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Industrial development in India during the pre-reform period and post reform period

Dr. I.Sundar, Associate Professor and Economics Wing Head, Directorate of Distance Education, Annamalai University

Dr. T. Sezhiyan, Assistant Professor of Economics, Directorate of Distance Education, Annamalai University

Abstract: *Since July 1991, Indian industry has undergone a sea-change in terms of the basic parameters governing its structure and functioning. The major reforms include wide-scale reduction in the scope of industrial licensing, simplification of procedural rules and regulations, reduction of areas reserved exclusively for the public sector, disinvestment of equity of selected public sector undertakings and so on. This paper deals with Industrial Development in India during the Pre Reform Period and Post Reform Period. It outlines the industrial development in India during the five year plan period into pre reform period 1951-1952 to 1989-1990 and post reform period 1990-1991 to 2011-2012. This paper makes a special note on industrial development on the basis of index of industrial production and industrial sector contribution to the GDP of India. This paper concludes with some interesting findings.*

Key words: *big push, Industrial development, unemployment*

Introduction

After Independence there was virtually no public sector in Indian economy the Industrial policy resolution of 1956 gave public strategic role in Indian economy at the time of Independence the country was backward and underdeveloped economy basically on agrarian economy with a weak Industrial base heavy unemployment, low level of saving and Investment and near absence of Infrastructure facility Indian economy need a big push. This big push could not came from private sector, which was starved for fund and managerial quality and was incapable of undertaking risk involved in long gas station period Investment. It was assumed that government Intervention in a big planned way could raise agriculture and Industrial production, expand employment opportunities etc. Through this paper one may know about Industrial development during the pre reform period 1951-52 to 1989-90. Along this one may also knew prose and crone of economic development by Industrial development. It is very much difficult for a country to convert agro-based economy to industrial economy, but India is a great country in context of achieving Industrial development. By their planning India has achieved strong Industrial based and convert their agro-based economy into modern Industrial economy along with its rise contribution of industries in GDP and also substantial increase in industrial production. The promotion of small scale Industries is essential in developing economics like India to achieve equitable distribution of income and wealth, economic self dependence and entrepreneurial development, to empower this sector is essential because small scale Industries is

the growth engine of Indian economy. The small scale Industries needs to be educated and informed to the latest development taking place globally and helped to acquire skills necessary to keep pace with global development. The above discussion status of industrial development was observed during the time of first five year plan period.

Review on the subject

The study of review literature is very important aspect of any research. Now an attempt is made to analyze the past trends in the area of research on industrial development at the National level Many researchers have conducted studies on role of industries in economic development. Hence the review of such studies enables researcher to identify the research gap. L. G. Burange, Rucha R. Ranadive (2014) examined the performance of manufacturing sector in India. The researchers made a comparison of employment share output level gross value added and capital of the industry with reference to states in India. Biggeri Mario and Mehrotra Santosh (2014) examined the new industrial policy of government of India with reference to cluster Micro, Small and Medium Enterprises Thomas Barnes (2013) examined the role of IT industry in economic development in India. The author pointed out IT industry has received much attention due to preference of skilled and technically qualified young workers. Jaya Mohanty, Bhupal Singh and Rajeev Jain (2013) made a cyclical analysis of index of industrial production in India. The authors found out that India has 13 growth cycles covering the period 1970-71 to 2001-2002. Amit Basole and Deepankar Basu (2010) examined the some industrial features of agriculture and industries in India. The authors found out the trends in industrial production and agricultural production on the basis of number of people engagement and surplus labour shift. Vinish Kathuria, Rajesh Raj and Kunal Sen (2010) made an analysis of productivity performance of Indian manufacturing sector covering the period 1994-95 to 2004-005 with reference to 15 major states. Lakhwinder Singh and Baldev Singh Shergill (2009) made an attempt to study the industrial development in India covering the period 1980 to 2005. Krishna Veni L and Pradeep Choudhury (2007) reported that economic development is mainly related with the level of industrial development. Sudhanshu Mishra (2006) made an analysis of impact of structural change on Indian manufacture sector consequent upon liberalization and globalization. The structural changes in terms of labour employment and capital investment are applied to study the industrial productivity covering the period 1990-91 to 2003-2004. Kwok Tong Soo (2005) identified the relationship between factor endowments, technology and the location of industrial production. Laveesh Bhandari and Dripto Mukhopadhyay (2000) found out the preference of industrial corridors in two or more contiguous districts in India.

It could be seen clearly from the above discussion that many studies have highlighted the industrial development both at the national level and at the international level. Such studies have not highlighted the industrial development in India during the pre liberalization 1951 – 1952 to 1980 – 1990 and posts liberalization period 1989 -1990 to 2011 - 2012. This is a research gap. In order to

fulfill the research gap, the present project in being undertaken.

Methods and Materials

This study deals with pattern of industrial development in India during the pre liberalization 1951 – 1952 to 1980 – 1990 and the posts liberalization period 1989 -1990 to 2011 -2012 This study employs only secondary data. The necessary secondary data are collected from the planning commission reports, statistical reports of ministry of finance, annual reports of ministry of industry and commerce government of India and reports of parliament. The collected data are classified and tabulated with the help of computer programming. Cross tabulation is done by putting independent variables of five year plan period and dependent variables of growth of value of industrial production, industrial sector contribution to the Indian GDP. The general data interpretation is done with the help of growth rate, coefficient of variation and average analysis.

Results and discussion

This section deals with industrial development in India during the pre liberalization 1951 – 1952 to 1980 – 1990 and post liberalization period 1989 -1990 to 2011 -2012. Further the industrial development in India has been analyzed with reference to General index of industrial development, index of Mining and Quarrying development, index of Manufacturing sector development, index of Electricity development, and Industrial GDP contribution to the Indian economy.

Table 1 Indicates the Index of industrial production during the pre reform period 1951-1952 to 1989-1990. It could be observed that during the first five year plan that the index of industrial production showed 21.87 per cent increase for all industries with average index value of 115.42, index of mining and quarrying activities 8.17 per cent growth with average index value of 108.74, index of manufacturing sector 22.42 per cent growth with average index value 135.58, and index of electricity growth 36.32 per cent with average index value of 130.64. An actual GDP contribution of industrial sector was estimated at 6.22 per cent during the first five year plan period.

The second five year plan aimed at development of basic and heavy industries. The second plan focused on development shift from the agriculture sector to the industrial sector. The second five year plan concentrated on development of factory sector, but the development of small scale industry and cottage industries received less attention.

The overall index of industrial production was 137.3 based on 1951 base year value =100 in 1956-57 and it rose to 181.2 in 1960-1961, recording a growth of 24.23 per cent. The average value of index of overall industrial production was estimated at 156. The growth of industrial production was due to introduction of industrial policy in 1956 which encouraged the growth of industries.

During the second five year plan period, annual growth rate contributed by industrial sector was 9 per cent in 1956-1957 and it moved to 10.8 per cent in 1960-1961. The high level of index of industrial production in 1960-1961 was due to recoding of 10.8 per cent annual growth of industrial sector contributed GDP.

It is observed that the general index of overall industrial development showed 24.22 per cent growth with average index value of 156, index of production of mining and quarrying activities 26.14 per cent growth with average index value of 146.40, index of manufacturing sector production growth 23.30 with average index value of 154.48, and index of electricity production 43.32 per cent with average index value of 249.82 during the second five year plan period.

The third five year plan emphasized on industrial production on iron and steel, fossil, fuel, power machine and machine tools. The overall index of industrial production during the third five year plan period was 113.3 in 1961-1962 and it moved to 152.6 in 1965-1966, recording a growth of 25.57 per cent. The overall average index of industrial production was 133.18 during the third five year plan period.

Table 1 Index of Industrial Production during the Pre Reform Period 1951-1956 to 1989-1990

Year	General index	Mining and Quarrying	Manufacturing	Electricity	Industrial GDP contribution annual growth rate
First Five Year Plan Period					
1951-1952	103.6	105.6	103.4	104.5	4.8
1952-1953	105.6	104.2	105.5	113.1	-0.4
1953-1954	112.9	107.2	113.0	127.0	6.2
1954-1955	122.4	111.7	122.7	144.5	8.8
1955-1956	132.6	115.0	133.3	164.1	11.7
Average	115.42	108.74	115.58	130.64	6.22
Growth rate	21.87	8.17	22.43	36.32	58.97
Second Five Year Plan Period					
1956-1957	137.3	126.8	136.9	184.9	9
1957-1958	139.7	133.7	138.5	209.0	-1.8
1958-1959	152.1	142.3	150.6	248.5	7.4
1959-1960	169.7	159.9	167.9	280.5	7
1960-1961	181.2	171.8	178.5	326.2	10.8
Average	156	146.40	154.48	249.82	6.48
Growth rate	24.23	26.14	23.30	43.32	16.67

Third Five Year Plan Period					
1961-1962	113.3	112.8	140.6	285.6	6.9
1962-1963	121.9	116.5	135.2	210.5	6.2
1963-1964	133.2	126.8	148.6	262.6	10.7
1964-1965	144.9	136.5	156.5	301.5	7.4
1965-1966	152.6	142.5	161.5	311.6	3.2
Average	133.18	127.02	148.48	274.24	6.88
Growth rate	25.75	20.84	12.94	8.35	-93.75
Three Annual Plan Period					
1966-1967	153.6	129.5	158.5	295.1	3.7
1967-1968	155.4	140.6	168.6	249.50	3.3
1968-1969	172.5	149.0	174.5	301.1	5.1
Average	160.5	139.5	167.2	281.90	3.92
Growth rate	10.95	13.08	9.16	1.99	27.74

Table 1 Index of Industrial Production during the Pre Reform Period 1951-1956 to 1989-1990 (cont...)

Year	General index	Mining and Quarrying	Manufacturing	Electricity	Industrial GDP contribution annual growth rate
Fourth Five Year Plan Period					
1969-1970	180.8	149	174.5	334.1	7.8
1970-1971	186.1	153.4	178.9	358.5	1.6
1971-1972	199.4	164.2	191.4	390.7	2.5
1972-1973	200.8	163.6	193.1	38.00	3.4
1973-1974 1970=100	112.6	105.9	112.7	121.4	6.5
Average	175.94	147.22	170.12	317.54	4.36
Growth rate	9.96	8.92	9.63	12.76	20.00
Fifth Five Year Plan Period					

1974-1975	115.7	118.3	114	127.7	10
1975-1976	122.7	131.8	118.9	145	6.5
1976-1977	134.3	137.9	130.1	162	9.3
1977-1978	139.6	141.3	136.2	167.6	7.4
1978-1979	156.2	144.2	146.6	187.9	7.3
1979-1980	148.1	145	143.5	191.8	-3.6
Average	136.1	136.42	131.55	163.66	8.1
Growth rate	21.87	18.41	20.55	33.42	3.69
Sixth Five Year Plan Period					
1980-1981 1970=100	154.00	151.3	148.1	202.9	4.5
1981-1982	109.3	117.7	107.9	110.2	7.4
1982-1983	112.8	132.3	109.4	116.5	0.2
1983-1984	120.4	147.8	115.6	125.4	8.5
1984-1985	130.7	160.9	124.8	140.4	4.4
Average	125.44	142.00	121.16	139.08	5.00
Growth rate	16.37	26.84	13.54	21.50	-11.36
Seventh Five Year Plan Period					
1985-1986	142.1	167.5	136.9	152.4	4.3
1986-1987	155.1	177.9	149.7	168.1	4.9
1987-1988	166.4	184.6	161.5	181	5.8
1988-1989	180.9	199.1	175.6	198.2	8.2
1989-1990	196.4	211.6	190.7	219.7	8.4
Average	167.98	188.14	162.88	183.88	6.32
Growth rate	27.64	20.84	28.21	30.63	48.80
Overall CV	19.04	18.15	17.92	40.35	59.50

Socio economic survey of India 2014-2015

The GDP contribution by the industrial sector showed 6.9 per cent growth in 1961-1962 and it slowed down to 3.2 per cent in 1965-1966, showing a slowdown of 93.75 per cent. The index of industrial production was high in 1963-1964 as it is evident from 10.7 per cent growth in industrial sector contribution to the Indian GDP. The growth of industrial sector contribution GDP was quite remarkable in 1964-1965 as it was 7.4 per cent in the period of analysis.

In three annual plan period the overall index of industrial production was 153.6 in 1966-1967 and it went up to 172.5 in 1968-1969 on the basis of base year 1960 value =100, showing a growth of 10.95 per cent during the period. The average overall index of industrial production was estimated at 160.5 during the three annual plan periods.

The index of industrial production during the fourth five year plan period is discussed here. The index of industrial production from 1969-1970 to 1972-73, was based on 1960 base year value and in 1973-1974 it was based on 1970 base year value. The overall index of industrial production in 1969-1970 was 180.8 and it moved to 200.8 in 1972-1973, showing a growth of 9.96 per cent. The index of industrial production in 1973-1974 was 112.6 based on base year value 1970. The average overall index of industrial production during the fourth five year plan was estimated at 175.94.

The industrial sector contribution to the GDP showed 7.8 per cent growth in 1969-1970 and it came down to 6.5 per cent in 1973-1974, showing 20 per cent of shortfall during the fourth five year plan period. The slowdown of overall index of industrial production in 1970-1971 was due to slow down in the annual growth of industrial sector contributed GDP.

The index of industrial production during the fifth five year plan and rolling period 1974-1980 is discussed here. In this plan period, Rs.9691 crore was allocated for industrial sector including mining and quarrying sector, constituted 24.7 per cent of the total budget allocation, but actual expenditure was made only Rs.6888. The average targeted industrial growth during the fifth five year plan was 7.8 per cent, but actual achievement was made only 6 pr cent during the fifth five year plan period.

The overall index of industrial production was 115.7 in 1974-1975 and it moved to 148.1 in 1979-1980 showing a growth of 21.87 per cent during the fifth five year plan and rolling plan period. The average index of overall industrial production was estimated at 136.1.

It is observed that during the fifth five year plan and annual plan period, the industrial growth target was not realized due to political instability in 1978 in terms of power shift from congress party to Janata government.

The status of index of industrial production during the sixth five year plan period is discussed here. The 1980-81 industrial production value was calculated on the basis 1970 base year value and the remaining years, it was calculated based on 1980-81 base year value. The overall index of industrial production was 164, index of mining and quarrying production 151.3, index of manufacturing sector production 148.1 and electricity production 202.9 during the period 1980-81 based on 1970 base year value.

The index of industrial production during the seventh five year plan period is discussed here. In this plan period, the government of India made industrial development expenditure of Rs. 2922030. The total industrial growth estimated at 8 per cent per year, but actual growth was 8.5 per cent. It could be noted that the overall index of industrial production was 142.1 in 1985-1986 and it rose to 196.4 in 1989-1990, showing a growth of 27.64 per cent with the average overall index value of 167.98 during the seventh five year plan period. The index of mining and quarrying production was 167.5 in 1985-1986 and it rose to 211.6 in 1989-1990, recoding an overall increase of 20.84 per cent with average index value of 188.14 during the seventh five year plan period.

The industrial sector contributed GDP growth was 4.3 per cent in 1985-1986 and it moved to 8.4 per cent in 1989-1990 recording an increase of 48.80 per cent during the seventh five year plan period. It could be noted that the general index of industrial production was 103.6 in 1951 to 1952, and it rose to 196.4 in 1989 to 1990, indicating a growth of 47.25 per cent during the pre reform period. The average growth of general index of industrial development is estimated at 145.36 during the pre reform period. The general index of industrial development explains the 19.04 per cent variation as per the result of coefficient of variation analysis during the period 1951-1952 to 1989-1990. This level of variation is due to gradual growth of general index of industrial development as it was 103.6 in 1951-1952 and it moved to 196.4 in 1989-1990.

The index value of mining and quarrying sector production was 105.6 in 1951 to 1952 and it rose to 211.6 in 1989 to 1990, indicating a growth of 50.09 per cent during the period. The average growth of index of mining and quarrying sector production is estimated at 145.36 during the pre reform period. The index of mining and quarrying sector production explains the 18.15 per cent variation as per the result of coefficient of variation analysis during the period 1951-1952 to 1989-1990. This level of variation is due to gradual growth of general index of industrial development and it was 105.6 in 1951-1952 and it rose to 213.6 in 1989-1990.

The growth rate of contribution of industrial sector to the GDP was 4.8 per cent in 1951 to 1952 and it rose to 8.4 per cent in 1989 to 1990, indicating a growth of 48.80 per cent during the period. The average growth of contribution of industrial sector to the GDP is estimated at 6.32 during the pre reform period.

The average growth of contribution of industrial sector to the Indian GDP explains the 59.50 per cent variation as per the result of coefficient of variation analysis during the period 1951-1952 to 1989-1990. This level of variation is due to gradual growth of industrial sector contributed GDP in the range of 4.8 in 1951-1952 to 8.4 in 1989-1990. It could be seen clearly from the above discussion that the index of industrial development increased from 103.6 in 1951-1952 to 196.4 in 1989-1990. The growth level is high in the case of index of electricity and manufacturing sector during the pre reform period. In general an increase in index of industrial development has been observed during the pre reform period 1951-1952 to 1989-1990. Many researchers have indicated the performance of Indian industrial development in India, notably Krishna

Veni L and Pradeep Choudhury (2007) Biggeri Mario and Mehrotra Santosh (2014), Jaya Mohanty, Bhupal Singh and Rajeev Jain (2013), Santosh Sahu and Krishnan Narayanan (2010) and Krishna Veni L and Pradeep Choudhury (2007).

Industrial Production in India during the Post Reform Period

India was a latecomer to economic reforms, embarking on the process in earnest only in 1991, in the wake of an exceptionally severe balance of payments crisis. The need for a policy shift had become evident much earlier, as many countries in East Asia achieved high growth and poverty reduction through policies which emphasized greater export orientation and encouragement of the private sector. India took some steps in this direction in the 1980s, but it was not until 1991 that the government signaled a systemic shift to a more open economy with greater reliance upon market forces, a larger role for the private sector including foreign investment, and a restructuring of the role of government.

Reforms in industrial and trade policy were a central focus of much of India's reform effort in the early stages. Industrial policy prior to the reforms was characterized by multiple controls over private investment which limited the areas in which private investors were allowed to operate, and often also determined the scale of operations, the location of new investment, and even the technology to be used. The industrial structure that evolved under this regime was highly inefficient and needed to be supported by a highly protective trade policy, often providing tailor-made protection to each sector of industry. The costs imposed by these policies had been extensively studied by Bhagwati and Desai (1965), Bhagwati and Srinivasan (1971), Ahluwalia (1985) and by 1991 a broad consensus had emerged on the need for greater liberalization and openness. A great deal has been achieved at the end of ten years of gradualist reforms.

Industrial policy has seen the greatest change, with most central government industrial controls being dismantled. The list of industries reserved solely for the public sector -- which used to cover 18 industries, including iron and steel, heavy plant and machinery, telecommunications and telecom equipment, minerals, oil, mining, air transport services and electricity generation and distribution -- has been drastically reduced to three: defense aircrafts and warships, atomic energy generation, and railway transport. Industrial licensing by the central government has been almost abolished except for a few hazardous and environmentally sensitive industries. The requirement that investments by large industrial houses needed a separate clearance under the Monopolies and Restrictive Trade Practices Act to discourage the concentration of economic power was abolished and the act itself is to be replaced by a new competition law which will attempt to regulate anticompetitive behavior in other ways.

Table 2 presents data on the Index of Industrial Production in India during the post reform period 1990-1991 to 2011-2012. The general index of industrial production was 212.6 in 1990-1991 and it rose to 213.9 in 1991-1992, showing a 0.60 per cent increase during the period with average value of index of 213.25. In general, during the two annul plan period, the index of industrial production

was above 100 per cent as per the index of industrial production base value of 1980-1981. In this plan period structural reforms were introduced towards new path ways of achieving industrial development in India. The index of industrial production in eighth plan period is discussed here. In eighth plan period, the overall index of overall industrial production was 218.9 including mining and quarrying production 223.7, index of manufacturing sector production 210.7 and index of electricity production 269.9. In 1993-1994, the overall index of industrial production was 232, mining and quarrying 231.5, manufacturing 223.5 and electricity 290.

Table 2 Index of Industrial Production in India during the Post Reform Period 1990-1991 to 2011-2012

Year	General index	Mining and Quarrying	Manufacturing	Electricity	Industrial growth to GDP
Two Year Plan Period					
1990-1991	212.6	221.2	207.8	236.8	6.9
1991-1992	213.9	222.5	206.2	257	-0.1
Average	213.25	221.85	207.00	246.9	3.4
Growth rate	0.60	0.58	0.77	7.85	98.55
Eighth Five Year Plan Period					
1992-1993	218.9	223.7	210.7	269.9	3.6
1993-1994	232	231.5	223.5	290	6.1
1994-1995	109.1	109.8	109.1	108.5	9.1
1995-1996	132.3	120.5	124.5	117.3	12
1996-1997	130.8	118.2	133.6	122	7.2
Average	164.62	160.74	160.28	181.54	7.6
Growth rate	16.59	7.10	18.33	11.06	50.00
Ninth Five Year Plan Period					
1997-1998	139.5	126.4	142.5	130	3.3
1998-1999	145.2	125.4	148.8	138.4	4.3
1999-2000	154.9	126.7	159.4	148.5	6.2
2000-2001	162.5	130.3	167.9	154.4	6.5

2001-2002	167	131.9	172.7	159.2	2.7
Average	153.82	128.14	158.26	146.10	4.6
Growth rate	16.46	4.16	17.48	18.34	-22.22
Tenth Five Year Plan Period					
2002-2003	176.6	139.6	183.1	164.3	7.1
2003-2004	189	146.9	196.6	172.6	7.9
2004-2005	211.1	153.4	222.5	181.5	10
2005-2006	108.6	102.3	110.3	105.2	10.7
2006-2007	122.6	107.5	126.8	112.8	12.7
Average	161.58	129.94	167.80	147.28	9.68
Growth rate	11.41	4.83	13.01	6.73	44.19

Table 2 Index of Industrial Production in India during the Post Reform Period 1990-1991 to 2011-2012 (Cont…)

Eleventh Five Year Plan Period					
2007-2008	141.7	112.5	150.1	120	10.3
2008-2009	145.2	115.4	153.8	123.3	4.7
2009-2010	152.9	124.5	161.3	130.8	9.5
2010-2011	165.5	131	175.7	138	9.5
2011-2012	170.3	128.5	181	149.3	3.8
Average	185.12	122.38	164.38	132.28	7.56
Growth rate	16.79	12.45	17.07	19.62	-171.05
Overall CV	22.08	28.75	20.86	33.87	47.02

Socio economic survey of India 2014-2015

It is observed in eighth plan period that the index of industrial production was remarkably increased from 1994-1995 to 1995-1996, due to the increase in the growth of GDP contributed from the industrial sector as it rose from 9.1 per cent to 12 per cent. The index value of industrial production was high in 1992-1993 and 1993-1994 as they were based on base year value 1980-1981. Later it declined since it was estimated based on the base year value 1993-1994. The occurrence of base year decision is the principal cause for this situation. It is observed from the analysis that the industrial growth during the tenth plan

was 5.7 percent in 2002-2003, 7 per cent growth in 2003-2004, 8.4 per cent in 2004-2005, 8.2 per cent growth in 2005-2006 and 11.5 per cent growth in 2006-2007. In general the average annual growth of industrial sector was estimated target of 10 per cent, but it did not achieved. The index value of industrial production was high during the year 2002-2003 to 2004-2005 due to 1993-1994 base year value criteria and it declined in 2004-2005 and 2006 due to base year value 2004-2005. In reality the overall industrial growth increased by 8.2 per cent and 11.6 per cent respectively. The last two years of the tenth five year plan recorded industrial growth of 20 per cent based 20.4 in 2004-2005 base year value.

The index of industrial

The growth rate of contribution of industrial sector to the GDP was 6.9 per cent in 1990-1991 and it declined to 3.8 per cent in 2011-2012, indicating a slowdown of 171.05 per cent during the period. The average growth of contribution of industrial sector to the GDP is estimated at 7.56 during the post reform period. The average growth of contribution of industrial sector to the GDP explains the 47.02 per cent variation as per the result of coefficient of variation analysis during the period 1990-1991 to 2011-2012. This level of variation is due to gradual growth of contribution of industrial sector to the GDP from 4.8 in 1951-1952 to 9.5 in 2010-2011.

It could be seen clearly from the above discussion that the overall index of industrial production has been declined from 212.6 in 1990-1991 to 170.3 in 2011-2012. However, the level of average index value of post reform period 1990-1991 to 2011-2012 is greater than the pre reform period 1951-1952 to 1989-1990. In post reform period a high level index of industrial production has been observed during the period 1990-1991 and 1991-1992. However, the growth of industrial sector contribution to the GDP has declined. Thereafter, the index of industrial development has shown much fluctuation. Many reasons are responsible for fluctuation in the growth of index of industrial development during the post reform period.

Conclusion

The findings of index of industrial production in India during the pre reform period 1951-1952 to 1989-1990 reveal the following facts. It could be noted that the general index of industrial production was 103.6 in 1951 to 1952, and it rose to 196.4 in 1989 to 1990, indicating a growth of 47.25 per cent during the pre reform period. The average growth of general index of industrial development is estimated at 145.36 during the pre reform period. It is observed that the overall index of industrial production has been declined from 212.6 in 1990-1991 to 170.3 in 2011-2012. However, the level of average index value of post reform period 1990-1991 to 2011-2012 is greater than the pre reform period 1951-1952 to 1989-1990. In post reform period a high level index of industrial production has been observed during the period 1990-1991 and 1991-1992. However, the growth of industrial sector contribution to the GDP has declined. Thereafter, the index of industrial development has shown much fluctuation. Many reasons are responsible for fluctuation in the growth of index of industrial development during the post reform period.

References

L. G. Burange, Rucha R. Ranadive (2014)Inter-State Analysis Of The Organised Manufacturing Sector In India, , ISF Institute of Research and Education.

Biggeri Mario and Mehrotra Santosh (2014)Industrial Policies and Development in India: The Role of Manufacturing Clusters L'industria, issue 3, pages 429-460

Thomas Barnes (2013)The IT Industry and Economic Development in India: A Critical Study, Journal Of South Asian Development April 2013 vol. 8 no. 1 61-83

Jaya Mohanty, Bhupal Singh and Rajeev Jain (2013), Business cycles and leading indicators of industrial activity in India, MPRA Paper from University Library of Munich, Germany.

Amit Basole and Deepankar Basu (2010) Relations of Production and Modes of Surplus Extraction in India, UMASS Amherst Economics Working Papers from University of Massachusetts Amherst, Department of Economics

Vinish Kathuria, Rajesh Raj and Kunal Sen (2010) Organized versus Unorganized Manufacturing Performance in India in the Post-Reform Period MPRA Paper from University Library of Munich, Germany

Lakhwinder Singh and Baldev Singh Shergill (2009) Technological Capability, Employment Growth and Industrial Development: A Quantitative Anatomy of Indian Scenario MPRA Paper from University Library of Munich, Germany

Krishna Veni L and Pradeep Choudhury (2007), Changes in the Composition of Industrial Production: Testing for Structural Stability, The IUP Journal of Managerial Economics, vol. V, issue 3, pages 28-40.

Sudhanshu Mishra (2006), Globalization and Structural Changes in the Indian Industrial Sector: An Analysis of Production Functions, MPRA Paper from University Library of Munich, Germany.

Kwok Tong Soo (2005) Factor endowments, technology, and the location of Industry in India No 565980, Working Papers from Lancaster University Management School, Economics Department

Laveesh Bhandari and Dripto Mukhopadhyay (2000) Industrial Corridors in India, No 70, Working Papers from National Council of Applied Economic Research.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Comparative study of Telangana before and after bifurcation in industrial sector

Dr. A.Kalpana, Vice-Principal, Telangana Social Welfare Residential Degree College for women, Warangal

Jhansi Rani. N, Faculty, Dept. of Economics, Telangana Social Welfare Residential Degree College for women, WGL

Prof. P.Krishnamachary, Department of Commerce and Business Management, Kakatiya University, Warangal

Abstract: *Industrial sector plays a vital role in employment generation, providing a higher standard of living and achieving balanced economic development. Industry includes Manufacturing , Electricity, Gas, Water supply, and Construction. Industrial sector plays a vital role in employment generation, providing a higher standard of living and achieving balanced economic development. Giving further boost to industrial sector in the State, Government has initiated measures on following four fronts: making Telangana a business-friendly state, created dedicated cells for facilitating investment projects, providing various kinds of incentives to encourage the first-generation entrepreneurs in the State and providing additional incentives to SCs, STs and Women-owned enterprises. Industrial production measures the output of businesses integrated in industrial sector of the economy such as manufacturing, mining, and utilities. In India, manufacturing is accounts for 75.5 percent of total output, mining for 14.2 percent and electricity for 10.3 percent as on Dec 2016. The Annual Survey of Industries (ASI) is the major source of industrial statistics. Structure of industry sector in the State could be analysed using ASI data of the State from 2008-09 to 2012-13. ASI covers all units registered under the Factories Act, 1948 i.e., those employing 10 or more workers with power and 20 or more workers without power respectively.GDP of Industry sector is $495.62 billion and world rank is 12.*

Key words: *Electrical Equipment, Gross Value,*

Introduction:

The State of Telangana is home to large manufacturing industries in Pharmaceuticals, Agro-processing, Cement & Mineral-based industries, high precision engineering, textiles, Iron & steel, Electrical Equipment's, Defense etc. The State is one among the major industrial states in the Country ranked 6th in terms of industries and ranked 9th in terms of Gross Value Added from industries. The Telangana Government is promoting industrial incentive policy to create quality infrastructure coupled with congenial industrial environment to make Telangana an attractive investment destination for both foreign and domestic investors. The Government of Telangana introduced its new Industrial Policy in November 2014. The development of industrial and related infrastructure will be the responsibility of the Telangana State Industrial Infrastructure Corporation (TSIIC). The policy has

identified 14 sectors as thrust areas, based on the State's geographic location, availability of resources across the state, skill base and raw material availability among others. Each of the sectors will have its own sectoral policy and incentives. High level advisory panels with private sector and academia experts will be constituted for each of the sectors. An interdepartmental task force for each sector chaired by Special Chief Secretary/Principal Secretary of the Industries and Commerce Department will also be in place to achieve the required coordination.

Review of Literature:

According to the Report on district level estimates for the state of Telangana 2013-14 by Chandigarh, At the State level after pooling the central and state sample, Labour Force Participation rate is estimated to be 50 percent under the Usual Principal Status Approach for the age group 15-29 years. While analyzing the rural and urban LFPR, it is seen that in rural areas, the same is found to be 57.6 percent whereas in urban sector, it is 38 percent. The unemployment rate is found to be 4.3 percent whereas in urban sector, the same is found to be 18.4 percent under UPS. Telangana Government has identified 2.5lakh acres of land for industrial use. The land bank will be developed with the assistance of Telangana State Industrial Infrastructure Corporation (TSIIC).

Objective:

To study about the rate of increase of employment in Telangana state before and after Bifurcation through Industrial Sector.

To study about the rate of increase of factories and MSMEs.

To study the development policies of Telangana in industry

To the study the overall contribution of industrial sector in GDP.

The Telangana government plans to promote an industrial corridor between Hyderabad and Warangal, which would also boost employment opportunities in the state. The state government is formulating policies and a single window clearance system among others for attracting investments, thereby enhancing the industrial infrastructure in Telangana. on 11,000 acres at Mucherla location and is expected to create employment opportunities for 70,000 people. The state government recently proposed setting up a separate company named Telangana State Tourism Development Corporation Limited (TSTDC) to promote tourism. The state government is in talks with Steel Authority of India (SAIL) for setting up a steel factory involving an investment worth US$ 5 billion on the Khammam-Warangal border. Telangana government also released a Solar Power Policy 2015 to promote regionalised and dispersed generation of solar energy.

Telangana State has set-up District Industries Centres (DIC), the nodal agencies to provide all required approvals/ clearances for setting up industries under the Single Window System, implement the Micro Small and Medium Enterprises (MSME) Development Act, 2006 and issue Entrepreneur Memorandum (EM) for MSME besides maintaining effective liaison with various financial institutions in facilitating the required credit. The Government of Telangana announced the new industrial incentive scheme T-IDEA, 2014 (Telangana State Industrial

Development and Entrepreneur Advancement for the General category entrepreneurs and T-PRIDE (Telangana State Program for Rapid Incubation of Dalit Entrepreneurs) of 2014 for Scheduled Caste / Scheduled Tribe entrepreneurs, extending various incentives for MSME and Large Industries Sectors.

Infrastructure support for MSME's:

• Reservation of 30-40% of the land for MSME's in the upcoming industrial estates developed by Telangana Industrial Infrastructure Corporation (TSIIC).• "Open access" power restrictions will be removed to enable all types of industries, including MSMEs to access the power exchange.

Micro, Small and Medium Enterprises

The Micro, Small & Medium Enterprises Development Institute (MSME-DI), Hyderabad offers a wide range of services for the Micro, Small and Medium Industrial sector in the State of Telangana. During the period 2001 to 2015 (up to January, 2015), 40,894 MSMEs were established in Telangana with an investment of Rs.22520.63 crores, providing employment to 5,65,496 persons.

Telangana Industrial Policy 2015:

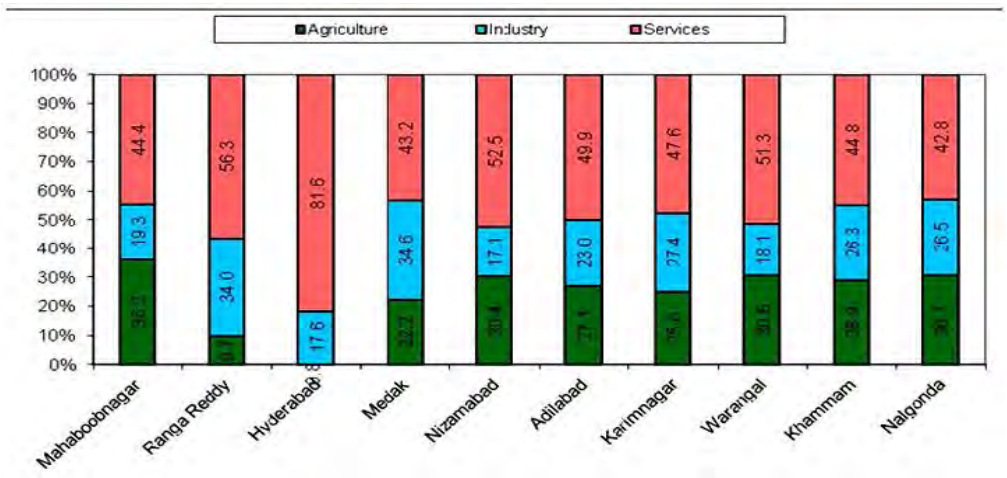
Telangana Government released its new industrial policy for the year of 2015 on 12th June. Chief Minister K Chandrasekhara Rao presented the important features of the policy to industrialists. This new industrial policy mainly concentrated on quick, time-bound and transparent permissions to project proposals.

As part of the policy, Telangana Government has demarcated 14 areas as being of high importance – ones where a focused approach needs to be taken. Some of them may be mentioned as below:

• Lifesciences
• Textiles• Pharmaceuticals
• Minerals • Informationtechnology • Transportation

• Aerospace• Logistics • Automobiles

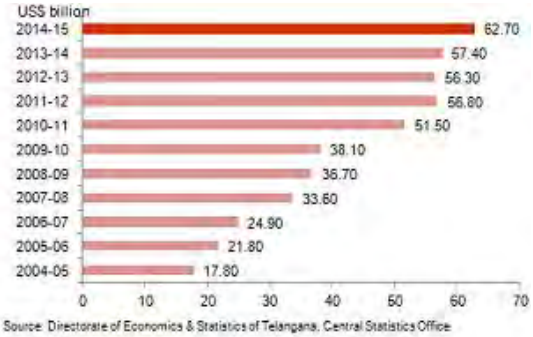
Telangana recorded a GSDP (State Gross Domestic Product) of Rs 3,35,018 crore for the year 2012-13, driven by industry and services sectors. The average annual GSDP growth of Telangana, which came into being as the country's 29th state today, between 2004-05 and 2012-13 was 16.05 per cent. The state GDP grew 13.26 per cent in 2012-13 to Rs 3,35,018 crore over Rs 2,95,767 crore in 2011-12, it said. "In 2012-13, the service sector at Rs 1.81 lakh crore contributed 54 per cent to the GSDP (at current prices). It was followed by the industry sector, contributing 28.8 per cent at over Rs 96,000 crore and the agriculture sector's contribution was at 17.2 per cent at over Rs 57,000 crore," The district wise per capital income (PCI) arrived on the basis of analysis of 2014-15 data at current prices reveal that Hyderabad had the highest PCI at Rs 2.94 lakh followed by Rangareddy and Medak districts. Adilabad had the lowest per capita income at Rs 76,921 followed by Nizamabad, Mahbubnagar and Warangal. The per capita income of the State for the year 2014-15 was Rs 1.29 lakh. The vision for industrialization of Telangana is "Research to Innovation; Innovation to Industry; Industry to Prosperity".



Even though there is growth, there was no balanced growth across the sectors of the state economy. The growth came only from the secondary sector (industries) and tertiary sector the primary sector has been steadily declining since 2012-13 to 2015-16 mainly due to negative growth in the production of crops. Things, however, seem better in industries and services which registered growth of 8.6 per cent and 11 per cent respectively. Telangana, spread in 1,14,840 square kilometres, has 66.46 per cent literacy rate with a population of 3.52 crore.

Similarly, district wise comparison of sectoral share to the Gross District Domestic Product (GDDP) is shown in Chart. It is interesting to see that the services sector contributes a major share to GDDP in most of the districts of Telangana. For instance, in Hyderabad, services sector contribute 81.6 percent to the Hyderabad GDDP in 2013-14. Similarly, in the case of Ranga Reddy and Nizamabad, the services sector contributes 56.3 per cent and 52.5 percent respectively

A comparison of the State's growth with national growth reveals that in 2012-13 (in the erstwhile undivided Andhra Pradesh), Telangana economy grew at 2.41 per cent which was much lower than all India growth rate of 5.62 per cent. "However, since 2013-14, the growth rate of Telangana has picked up and registered higher growth than all India,''



Telangana state was formed in June 2014 post the split of erstwhile Andhra Pradesh. The earlier capital city of Hyderabad is part of Telangana. The state holds an advantage as it possesses readymade capital with necessary infrastructure and ecosystem. Between 2004-05 and 2015-16, Gross State Domestic Product (GSDP) expanded at a Compound Annual Growth Rate (CAGR) of 14.49 per cent to US$ 89.1 billion whereas the Net State Domestic Product (NSDP) expanded at a CAGR of 14.79 per cent to US$ 81.13 billion.

Conclusion:

The Industrial Sector is contributing around 25% to 30% to the Gross State Domestic Product with a direction of positive growth in the state. The long-term average annual growth of industries comprising mining & quarrying, manufacturing, electricity, gas and water supply and construction, during the period between 2005-06 and 2014-15, averaged at 7.8% as against GSDP growth of 9.4% in the state. The contribution of industry sector is showing almost the same trend in respect of share and growth as that of all India. The Telangana Government has said that it has succeeded in reversing the deceleration in the State economy by registering a growth rate of 5.3 per cent in the Gross State Domestic Product (GSDP) in 2014-15. The industrial growth rate for the year was put at 4.1 per cent. The Economic Survey, titled Reinventing Telangana – the First Steps', has said that the growth rate in 2013-14 was 4.8 per cent at constant prices of 2004-05. "This marks a reversal of the declining trend registered during the past three years. Though agricultural growth suffered a decline during the last year due to adverse seasonal conditions, allied sectors like livestock, forestry and fisheries sectors have shown positive growth rates of 6.5 per cent, 2.7 per cent and 11.4 per cent respectively," the document said. During FY15, the services sector recorded the highest growth in GSDP at 9.7%, followed by Industry sector at 4.1%. However, the overall growth was marred by agriculture sector, with estimated de-growth of 10.3%. The agriculture sector was affected by adverse seasonal conditions.

Telangana is predominantly a service-driven economy with services sector estimated to contribute 62.9% of the GSDP at constant prices for FY15 as compared to 53.8% in FY05. The structural composition of the Telangana's economy has undergone a notable change in the last decade with high growth witnessed in services sector in comparison to agriculture and industry. The primary sector2 in the GSDP has been witnessing a steady declining from 17.9% in FY05 to 12.8% in FY15.

Reference:

By: Press Trust of India | Hyderabad | Published: June 2, 2014 3:43 pm

http://www.ibef.org/states/telangana-presentation

www.sakshieducation.com

http://ecostat.telangana.gov.in/PDF/PUBLICATIONS/ASI-2012-13.pdf

http://www.thehansindia.com/posts/index/Telangana/2015-10-23/Growth-Of-Services-Sector-In-Bangaru-Telangana/182078

Telangana One - The Road Ahead

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Status of Sugarcane and Sugar Factories in Pre and Post LPG era in Indian Economy

Dr. Ankasala Samba Siva Rao
Faculty, Department of Economics, Kakatiya University, Warangal, TS India

Abstract : *Sugarcane is an important commercial crop among the different commercial crops in India. It is the agro and industrial based crop, like jute and cotton. Through the cultivation of sugarcane more than 40 million farmers are depending by the growing of this crop. At the same time more than 35 million of work force engaged in different cultivation activities in the production activities of sugarcane, and about 5.5 lakhs skilled and un-skilled workmen are directly employed in the sugar factories in addition to in informal sector of cottage industries which have run by the sugarcane and its by products the significant level of people are directly employed in Jaggary, Khandsari and the other by products. This study shall be use the secondary data only. In the description of the data the researcher uses the simple percentages and averages.*

Keywords: *Productivity, Recovery rate, Growth rate, pre and post LPG Period, Output*

Background of the Study

Sugarcane is an important commercial crop but at the same time it is capital, labour and irrigation intensive crop. Sugarcane is the basic raw material for jagery making which is one of the important cottage industries. The crop of sugarcane an important role in the Indian economy for livelihood of the rural masses and contributes around 2 percent GDP. It employs over 40 million cane growers and their families, constituting 7 percent of the rural population and about 3.5 lakh skilled and unskilled labourers. It provides the raw material for more than 40 industrial products. At global level, more than 100 countries are producing the sugarcane in different climatic zones. Brazil, Cuba, Mexico and Thailand are the leading producers of sugarcane. There is 78.0 percent sugarcane production from tropical and sub-tropical zones. India is the second largest producer of sugar and cane sugar after Brazil. As per FAO estimations for 2014 – 15 in India sugarcane and its products accounted for 6 percent of the total value of agriculture output and occupied about 2.5 percent of India's gross cropped area with the production of 362.33 million tons, 71.5 tons yield per hector and 94 percent sugarcane cultivated in irrigated areas. As per DES 4th Adv Estimate for 2012-13, Andhra Pradesh occupied 1.96 lkhs hectors and it is sixth rank, fifth rank in overall production of 15.68 million tons and surprisingly the average yield is 80 tons per hector in this aspect it is third rank after Tamilnadu and Karnataka states.

Out of 74.0 percent of sugarcane using to sugar production in 2014-15 and the remaining could have been used for production of Jaggery, Khandsari etc[4]. The sugarcane production directly linked with the sugar factories according to Annual Survey of Industries 2011 – 12, there are 671 installed sugar factories of which 527 are working with a production capacity of 243.94 lakh MTs of sugar. Of them 322 factories under private, 297 under cooperative and 52 in the public

sector.[5] In Andhra Pradesh installed sugar factories are 37 of which, Coastal Andhra 20, Telangana 10 and the remaining 7 are from Rayalaseema. In which 27 sugar factories are working in which 20 from private and the remaining 7 under the co-operative sector and 10 factories are in Telangana under private management.

Review of the Earlier Studies

Amongst 10 major producing country Colombia has the highest yield of sugarcane due to the richest biodiversities in the world and has access to multiple climates. The yield gap of sugarcane in India with respect to 10 major sugarcane producing countries during the last 5 years is ranges 1.33 – 31.22 t/ha. Sugarcane is the major source for the production of sugar, as per the Directorate of Sugarcane Department Government of India 2013,the domestic need of the sugar 22 to 23 million tons per annum for that the cane is needed around 250 million tons. Major sugarcane states in India are Maharashtra, Uttar Pradesh, Haryana, Tamil Nadu, Andhra Pradesh, Karnataka, In Tropical zone Maharashtra is the major sugarcane cultivating state spread about 9.4 lakh ha area with production of 61.32 Million ton, whereas the productivity of Tamil Nadu is highest in tropical zones. In Sub Tropical zone, Uttar Pradesh is the highest sugarcane area about 22.77 Lakh ha with the production of 135.64 Million Ton cane whereas Haryana has highest productivity of sugarcane in Sub tropical zone. Satinder Kumar and Surender Singh (2014) State of Haryana agriculture has undergone impressive change during green revolution. The scholars presents trends in area, production and productivity of sugarcane crop in Haryana state most recent period from 2000-01 to 2009-10 by using simple descriptive statistics; linear growth rates (compound annual growth rates).

Akwilin J.P. Tarimo (1998) in Tanzania sugarcane production has declininig trend during the mid 1980s and during the early 1990s increases trend also observed by the authors, it is due to the positive economic situation in Tanzania. C.E.Pankurst et,al (2003), sugarcane yield decline is a widespread problem throughout the Australian sugar industry. It is defined as “the loss of productive capacity of sugarcane-growing soil under long-term monoculture”. The soil quality directly interrelated to the production and productivity of sugarcane. Apart from, major changes to the cane cropping system need to be considered. Thippalwal Srijantr et,al (1998) During the 1985 to 1997 the area under the sugarcane has increase in Thailand it is 3 million hectors to 60 million it show the LPG era the area under the sugarcane, production and productivity and the factories all are in the progressive in the Thailand Economy.

All these studies covered different aspects of the sugarcane production, productivity and as well as sugar factories. But any study dons’ covered the pre and post globalization era in the Indian context. The present study will try to fulfil the gaps whatever mentioned above.

Objectives of the Study:

1. To analyse the five year plan-wise area, production, yield of sugarcane and sugar factories during the planning period of 65 years (1950-51 to 2014 – 15)
2. To discusses the how the area, production, yield of sugarcane and

sugar factories have reflected during the pre LPG (40 years1950-51 to 1990-91), post LPG (25 years 1991 – 2016) and even in the planning period.

Hypothesis

This study has adopt the one hypothesis, The sugarcane area, production and productivity are in positive way in pre and post globalization periods, but variations between pre and post globalization are at significant.

Methodology:

This study used the secondary data only, the secondary data has been collected from the Idiastat.com and the statistical abstracts of India, reports from various government and research institutions. This is the analytical study on the sugarcane area, production, productivity and apart from the sugar factories at national level. How the area under the sugarcane was increased during the planning, pre and post LPG periods, how the cane production and productivity responses in the same periods, along with the sugar factories are responded by the area and the production of sugarcane are the focal theme of the paper. To analyze the data the simple percentage and average have been used. The collection of data is the first step, then it was divided in the two parts one is pre LPG period and second one is post LPG period and then derived the tables based on the objectives.

Results and Discussion:

To fulfil the objectives and hypothesis, the gathered data simple converted in to exile and then derived the total 8 table four tables for the overall planning period and another 4 tables for separate pre and post LPG periods. Area under sugarcane cultivation, production of sugarcane, yield of sugarcane and sugar factories in planning period of 65 years at plan wise, in the same issues shall be discussed for three periods as separately. The following discussion gives the results planning period of 65 years the area under sugarcane has been increased at significant 295 percent in India

The area under sugarcane cultivation has seen from the table – 1. In the In the initial stage 1707 thousand hectors and it was spread as 5038 thousand hectors over the planning period of 65 years it is almost 3 times increased and it is 4.53 percent average yearly growth rate in the entire planning period. The area under the sugarcane cultivation has significantly increased from 1707 thousand hectors to 5038 thousand hectors the overall 3313 thousand hectors increased it is equals to 295 percent of growth with 4.53 average annual growth.

When we look into plan wise, during the second plan 610 thousand hectors its total growth rate is 33.04 percent and the average annual growth rate is 6.61 percent as the highest when compared to rest of plans. But at the same time 11^{th} and 12^{th} plans there is a negative growth rates have been observed. Plan 2, 3, 6, 7 and 10 are significantly reported as the double digit growth rates. The rest of the plans also in the positive growth but these are very slow. During the 65 years the area under the sugarcane has tremendous changes have been observed, it is due to the various development activities such as green revaluation, different irrigation projects and even increase in the sugar factories etc have been took place in agriculture along with industrial sectors

in the Indian economy. The following tables reveals the sugarcane production in thousand tons in different plans in India. From first plan to 11th the production has gradually increased but the increased rates are not uniformly. The plan wise details as follows.

Table – 1

Plan-wise Area under Sugarcane cultivation and Growth Rates

(Area in 000 Hec)

Plan	Plan Period	Initial Period	End of Plan	Variation	Plan GR	PYGR
1	1950-56	1707	1846	139	8.14	1.63
2	1956-61	1846	2456	610	33.04	6.61
3	1961-66	2456	2836	380	15.47	3.09
4	1969-74	2749	2894	145	5.27	1.05
5	1974-78	2894	3088	194	6.70	1.34
6	1980-85	2667	2953	286	10.72	2.14
7	1985-90	2953	3438	485	16.42	3.28
8	1992-97	3844	4174	330	8.58	1.72
9	1997-02	4174	4412	238	5.70	1.14
10	2002-07	4412	5151	739	16.75	3.35
11	2007-12	5151	5038	-113	-2.19	-0.44
12	2012-17	5038	4918	-120	-2.38	-0.48
	Total			3313	295.0	4.53

Source: Indiastat.com

During the First plan period the growth rate is 5.02 percent for five years and it is only one percent annual growth rate. In the Second plan period of 1956 – 61 the growth rate is 52.07 percent and the 10.41 percent of annual growth rate as the highest than the other plans. In the period of 1961 – 66 the overall growth rate is 12.16 percent and 2.43 percent for annual growth rate in Third Plan. In the Fourth plan period only 4.28 total growth but only 0.86 is the annual, in the Fifth plan is 7.71 percent as the overall growth rate and it is 1.54 percent annual growth rate. During the Sixth plan 1980 – 18, 10.42 and 2.08 percent are overall and annual growth rates respectively. In the 7th, 8th, 9th, 10th, 11th and 12th Plans the overall growth rates are noted as 32.44, 9.29, 7.08, 19.62, 1.55 and – 0.42 percent respectively. In case of annual growth rates, 6.49, 1.86, 1.42, 3.92, 0.31 and – 0.09 percent for 7th plan to 12th plan respectively.

Table – 2 : Plan-wise Production of Sugarcane and Growth Rates

(Production in 000 Tons)

Plan	Plan Period	Initial	End of Plan	Variation	Plan GR	PYGR
1	1950-56	69220	72692	3472	5.02	1.00
2	1956-61	72692	110544	37852	52.07	10.41
3	1961-66	110544	123990	13446	12.16	2.43
4	1969-74	135024	140805	5781	4.28	0.86
5	1974-78	140805	151655	10850	7.71	1.54
6	1980-85	154248	170319	16071	10.42	2.08
7	1985-90	170319	225569	55250	32.44	6.49
8	1992-97	253965	277560	23595	9.29	1.86
9	1997-02	277560	297208	19648	7.08	1.42
10	2002-07	297208	355520	58312	19.62	3.92
11	2007-12	355520	361037	5517	1.55	0.31
12	2012-17	361037	359330	-1707	-0.47	-0.09
				248087	161.16	32.23

Source: Indiastat.com

The highest overall growth rate and annual growth rate is noted in only second five year plan and the lowest is in 12th plan. After 2ed plan the 7th plan only in the significance way the rest of plans are noted as insignificantly growth rates. Particularly the 12th five year plan is noted as the negative growth rate in the sugarcane production. The sugarcane production and sugarcane yield are correlated it is general, if there is higher the production that is caused by the higher the yield per hector during the plan period how the yields are increased and decreased one plan to another has given in the following table. The overall growth rate of yield of sugarcane production is 76.72 percent which means in the beginning of plan period in 1951 to 2015 -16 during of 65 years, in 1951 the yield of sugarcane is 40.55 MT and it is gone up to 72.66 MT per hector the variation is 31.11 MT as positive. The plan wise yield of sugarcane per hector from First plan to 12th plan initial and end of the plan year for each plan has been given form the table – 3.

The variation has given to first year to last year for each plan the variation was estimated for each plan. All the plans are same direction but the figures are not supported as the same. Because 1st, 3rd, 5th 6th and 12th plans have been observed as the negative yields i.e., - 1.17, - 1.29, - 0.16 and -2.24 yields respectively, the rest of plans are noted as the positive increases. The Second, 4th, 7th, 8th, 9th, 10th and 11th. Particularly the second five year plan duration 14.30 percent of yield has been increase and it is equals to 2.86 percent per annum. In the 7th plan period 13.37 percent of yield was increased and it is 2.26 percent yearly growth in this plan.

Table 3 : Plan-wise Yield of Sugarcane and Growth Rates (Production in Tons Per Hec)

Plan	Plan Period	Initial	End of Plan	Variation	Plan GR	PYGR
1	1950-56	40.55	39.38	-1.17	-2.89	-0.58
2	1956-61	39.38	45.01	5.63	14.30	2.86
3	1961-66	45.01	43.72	-1.29	-2.87	-0.57
4	1969-74	49.12	51.16	2.04	4.15	0.83
5	1974-78	51.16	49.11	-2.05	-4.01	-0.80
6	1980-85	57.84	57.68	-0.16	-0.28	-0.06
7	1985-90	57.68	65.39	7.71	13.37	2.67
8	1992-97	66.07	66.5	0.43	0.65	0.13
9	1997-02	66.5	67.36	0.86	1.29	0.26
10	2002-07	67.36	69	1.66	2.46	0.49
11	2007-12	69	71.66	2.64	3.82	0.76
12	2012-17	71.66	69.42	-2.24	-3.13	-0.63
				14.06	26.89	5.38
		31.55	**30.16**	**72.76**		

Source: Indiastat.com

In the rest of the plans are 1st, 3rd, 5th and 12th are in the negative and it is significantly in current five year (12th) plan. The annual yield growth rates are also in the same direction. However, in the entire plan period of 65 years the sugarcane yield has been increased at significantly i.e., 31.55 tons per hector, it is achievement of planning era not only by the private and public both together only.

Every one accepted that the sugarcane is one of the contract farming nature, the contract between sugarcane farmers and the sugar factories, every year the management of sugar factories have under take the farmers to cultivate the sugarcane. And at the same time the sugarcane growers (farmers) directly depend on the sugar factories for marketing of their produce and other inputs like credit, fertilizers, pesticides, harvesting and even transport, these are all together influenced the area under sugarcane, production and productivity. In this connection the following table reveals the status of sugar factories at national level.

Table – 4 : Plan-wise Sugar Factories and Growth Rates

Plan	Plan Period	Initial	End of Plan	Increases of Sugar Factories	Plan GR	PYGR
1	1950-56	138	143	5	3.62	0.72
2	1956-61	143	174	31	21.68	4.34
3	1961-66	174	200	26	14.94	2.99
4	1969-74	215	229	14	6.51	1.30
5	1974-78	229	299	70	30.57	6.11
6	1980-85	314	338	24	7.64	1.53
7	1985-90	338	385	47	13.91	2.78
8	1992-97	392	412	20	5.10	1.02
9	1997-02	412	434	22	5.34	1.07
10	2002-07	434	453	19	4.38	0.88
11	2007-12	453	527	74	16.34	3.27
12	2012-17	527	538	11	2.09	0.42
				363	132.11	2.03

Source: Indiastat.com

Sugarcane is a traditional crop and at the same time it is commercial crop. Before the plan period in India 138 sugar factories are existed, it is evident that sugarcane is not new crop. The growth rate of sugar factories are entire the planning period is 132.11 percent which means these are increased 363. The plan wise details are as follows; in the first plan only 5 factories are introduced as newly with 3.62 plan growth rates of sugar factories. In the total plan 11th plan has tremendously peak of 74 factories with 16.34 percent of plan growth and 3.27 percent of annual growth rate. The increasing trend of sugar factories are in India, 143, 174, 229, 299, 338, 385, 412, 434, 453, 527 and 538 for first plan to 12th plan. In the same direction the increased factories are 5, 31, 26, 14, 70, 24, 47, 20, 22, 19, 74 and 11 factories are increased from First plan to 12th plan respectively. It shows that the sugar factories are increasing tendency in India in the planning era. When we look into plan wise and annual growth rate of sugar factories are not in the similar way why because, the establishment nature, management nature, policies of governments, International exports and imports for sugar and allied products of sugar and etc are directly or indirectly linkup with the establishment of sugar factories. The overall plan growth rate of sugar factories 132.1 percent and it is 2.03 percent annual increase rate. The plan wise growth rates are 30.57, 21.68, 16.34, 14.94, 13.91, 7.64, 6.51, 5.34, 5.10, 4.38, 3.62 and 2.09 percent of growth rates are in 5th, 2ed, 11th, 3rd, 7th, 6th, 4th, 9th, 8th, 10th, 1st and 12th plans respectively . The annual sugar factories growth rates are also in the same direction. However, the sugar factories are in positive increasing rate not only in the overall planning period but also in every five year plan and even every year. It is an evident that the sugar demand has increase every year due to population increase as the basic reason.

Table – 5: Area and its Growth Rates of Sugarcane in Pre and Post Globalization Periods

Pre LPG Period of 40 Years				
1950 - 51	1990-91	Area Increases in 1000 Hec	TG	AG
1707	3686	1979	115.93	2.90
Post LPG Period of 25 Years				
1990 - 91	2014 - 15	Area Increases 1000 Hec	TG	AG
3686	5144	1458	39.56	1.58
Overall Planning Period of 65 Years				
1950 - 51	2014 - 15	Area Increases 1000 Hec	TG	AG
1707	5144	3437	201.35	3.10

Source: Indiastat.com

After the initiation of planning in India the initiation of LPG of new economic reforms have one of the mile stone in Indian economy. The entire planning period broadly divided into two phases according to phase-1 is pre LPG period of 1951-1991, 40 years and the post LPG i.e. 1991-2015and 16 of 25 years. In the pre and post LPG era the number of changes have been taken place in Indian economy. The above table reveals the area and its growth rates under sugarcane cultivation. In the overall area has gone up to 1707 hectors to 5144 thousand hectors, the overall growth rate is 201.35 percent in the planning period and the 3.1 percent growth per annum. Before the LPG 40 years the areas have increase 1979 thousand hectors and its equal to 115.19 percent and the 2.90 percent of annual growth under the cultivation of sugarcane. After the LPG of 25 years the area increased by 1458 than hectors in the LPG 25 years 36.56 and 1.58 percent of area has increased overall and annum respectively. Thus it is clear that the overall planning period growth rate is 201 percent before the planning 116 percent after the planning period around 40 percent. It shows that the area under the sugarcane positively @ 3.1 percent but the growth rate of areas under sugarcane is more in pre LPG than the past LPG. It is also reflection on annual growth rates of area under the sugarcane.

Table – 6: Production and its Growth Rates of Sugarcane in Pre and Post Globalization Periods

Pre LPG Period of 40 Years				
1950 - 51	1990-91	Production Increases in 1000 Tons	TG	AG
69220	241045	171825	248.23	6.21
Post LPG Period of 25 Years				
1990 - 91	2014 - 15	Production Increases in 1000 Tons	TG	AG
241045	359330	118285	49.07	1.96
Overall Planning Period of 65 Years				
1950 - 51	2014 - 15	Production Increases in 1000 Tons	TG	AG
69220	359330	290110	419.11	6.45

Source: Indiastat.com

The above table reveals the production particulars of the sugarcane pre and post globalization era in India. As per the table the total production in 1951 id 69220 thousand tonnes and it is 359330 thousand tonnes in 2014-15 year the production has increased 290110 thousand tonnes it is equal to 419.11 percent of overall growth rate for 65 years and it is 6.45 annual growth rate of production of sugarcane.

Table – 7

Yield and its Growth Rates of Sugarcane in Pre and Post Globalization Periods

Pre LPG Period of 40 Years				
1950 - 51	1990-91	Yield Increases in Tons	TG	AG
40.55	68.39	27.84	68.66	1.72
Post LPG Period of 25 Years				
1990 - 91	2014 - 15	Yield Increases in Tons		
65.39	69.42	4.03	6.16	0.25
Overall Planning Period of 65 Years				
1950 - 51	2014 - 15	Yield Increases in Tons	TG	AG
40.55	69.42	28.87	71.20	1.10

Source: Indiastat.com

During the pre LPG period the overall growth rate is 248.23 percent and 6.21 percent of annual growth rate. After the globalization period 49.07 percent and it is 2.0 percent annual growth rate. Thus, the growth rates of pre LPG period

are significantly higher and lower in post LPG period. The variations of gross growth rate and yearly growth rates in both periods are in positive progressive but the variations in both the growth rates are significant. The above table shows the yield growth rates of sugar cane per hector. The average yield is 40.55 tonnes, in 1950-51 and it was increased up to 69.42 tonnes. The variation is 28.87 tonnes per hector. The overall growth rate is 71.20 percent and 1.10 percent per year. The yield growth rate was 68.66 and 1.72 percent for overall and annual yield growth rates in pre LPG period of 1951-91 of 40 years. After the LPG period of 25 years 6.16 percent of overall yield growth rate and only 0.25 percent of annual growth rates. The yield growth rates of overall and annual have been positively increase in the pre, post and overall planning periods. But the yield growth rates significantly more in pre LPG. In the post LPG period the growth rates are increase but only little bit of 0.25 percent it is very in significant growth rate after LPG period.

Table – 8

Sugar Factories and Growth Rates in Pre and Post Globalization Periods

Pre LPG Period of 40 Years				
1950 - 51	1990-91	Increases of Sugar Factories	TG	AG
138	385	247	178.99	4.47
Post LPG Period of 25 Years				
1990 - 91	2014 – 15	Increases of Sugar Factories		
385	538	153	39.74	1.59
Overall Planning Period of 65 Years				
1950 - 51	2014 – 15	Increases of Sugar Factories	TG	AG
138	538	400	289.86	4.46

Source: Indiastat.com

The above table depicts the growth rates of sugar factories in the planning era, pre and post LPG periods in India. In the overall planning period the sugar factories was increased from 138 to 538 exactly 400 factories its equals to 290 percent and 4.4 percent overall and annual growth rates of sugar factories. In the pre LPG period the sugar factories was increased from 138 to 385 factories it was increased 247 factories i.e. 179 percent of overall growth rate during the 40 years and 4.47 percent of annual growth rate. After the LPG period the factories raised to 153 growth rates 40.0 percent and 1.6 percent of annual growth rates. The sugar factories growth rates are significantly higher in both the periods but surprisingly in the post LPG factories growth rate are low than pre LPG period.

Conclusion:

This study covers the two objectives along with one hypothesis. The first objective is to analyse the plan-wise area, production, yield of sugarcane and sugar factories during the planning period of 65 years (1950-51 to 2014 – 15) during the planning ear the sugarcane area, production yield and the sugar factories are in the progressive path, especially the production of sugarcane and yield are at remarkable progress have been noted in the study. Especially in the second, third, sixth and 10th five year plans. Before the 1991 the growth rate of area and production yield and factories have been observed at significant. After the 1990 only tenth plan is at remarkable progressive has observed. Due to more irrigational facilities, technological changes and institutional changes have been taken in these plans than the rest of the plans, like nationalized policies, green revaluation. The second objective is to discusses the how the area, production, yield of sugarcane and sugar factories have reflected during the pre LPG (40 years1950-51 to 1990-91), post LPG (25 years 1991 – 2016) and even in the planning period. The average yield of sugarcane is also in positive aspect in all the periods but significant before the LPG period. In the LPG period it is also nominal way when compared to pre LPG periods. The sugar factories are in tremendously increases during the planning and pre LPG but in the post LPG these are increases in number but percentage aspect also in nominal growth. However the area, production, yield and sugar factories are in the positive growth rates before the LPG period but after the LPG in some years noted as negative growth rates other than the sugar factories. Due to this the progressing in post LPG is at in significant. Thus the study observed the sugarcane area, production and the yields are very nominal growth rates, this study suggested that the irrigational potentiality have to be improve by the providing the local participation of the farmers at gross root level. The sugar factories have mould based on the needs of local farming community and as well as the economy, the government have to revise the sugar policy to strengthen the sugar sector in the form of more technolical incentives credit subsidies, supporting prices, better marketing facilties for not only sugar but also jagary and khandasari, these are the cottage industries in the rural areas. In addition to this the trade policy of sugar related issues have to change for the benefit of the farmers not for the traders.

Reference:

1. Centre for Monitoring Indian Economy Pvt. Ltd 110-120 Kaliandas Udyog Bhawan Near Prabhadevi Post Office Bombay 400025, India Email: info@cmie.ernet.in.
2. Indian Sugar Mills Association (ISMA)
3. Ansal Plaza, 'C' Block, 2nd Floor, August Kranti Marg, Andrews Ganj, New Delhi- 110049 (INDIA) E-mails: isma@indiansugar.com.
4. South India Sugar Mills Association- Andhra Pradesh 5-9-22/99 Adarshanagar Hyderabad – 500 063, email: sismaandhra@sify.com.
5. Directorate of Sugarcane, Department of Food and

Agriculture, Government of India, 2015.

6. Kwilin J.P. TARIMO (1998) Sugarcane Production, Processing and Marketing in Tanzania.

7. Department of Crop Science and Production, Sokoine University of Agriculture, Centre for African Area Studies, Kyoto University African Study Monographs, 19(1): 1-11, May 1998.

8. C.E. Pankurst et,al (2003), Management practices to improve soil health and reduce the effects of detrimental soil biota associated with yield decline of sugarcane in Queensland, Australia, Volume 72, Issue 2, August 2003, Pages 125–137.

9. Thippalwal Srijantr et,al: Profitability and yield gap of sugarcane in Mae Klong Region, Thai Agriculture Journal Vol 18, No;1 pp 53- 69.

10. Satinder Kumar and Surender Singh (2014) Trends in Growth rates in rea, Production And Productivity of Sugarcane in Haryana, International Journal of Advanced Research in Management and Social Sciences, Vol. 3 | No. 4 | April 2014.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Status of Industrial Establishments in Telangana: Issues and Challenges

Dr. S. Lingamurthy
UGC-Dr. S. Radhakrishnan Post Doctoral Fellow
Centre for Economic Studies and Planning, Jawaharlal Nehru University, New Delhi

Abstract :*This paper endeavour to make an attempt on the status of industrial establishments in Telangana State using Sixth Economic Census Provisional results and brief industrial profile of all districts of Telangana for Registered Industrial Units provided by Ministry of Micro Small and Medium Enterprises (MSME), Government of India. To analyze the status of industrial establishments, variables like type of establishment, area wise distribution, regional disparity, employment and investment have been used. To examine the performance of establishments, ratios such as district-wise share in total establishments and employment, employment share per unit of establishment, status of industrial estates, average annual growth rate of establishments and employment over Fifth Economic Census have been covered. Compound Annual Growth Rate (CAGP) is also used for different regions within the state for registered industrial units and its employment over the period. The analysis shows that, 20.86 lakh establishments have been employing about 56.12 lakh persons which show less than three persons per establishment by engaging 56.3 percent of the hired workers in the State. Out of total establishments, 56.6 percent operating in rural areas with 41.9 percent share in total employment. 31.4 percent of the establishments operate from outside household without fixed structure.*

Key Words: - *Micro, Small Scale, Industries, MSME, Economic Census, Growth and Performance*

I. Introduction:

Micro and Small Scale Enterprise sector always plays an important role in providing employment comparatively with lower capital of investment, high standard of living, and balanced economic growth in rural and backward areas and these enterprises are complementary to large industries as ancillary units. Micro and Small scale sector contributes enormously to the socio-economic development of the country[1]. The National Manufacturing Policy of the Twelfth Five Year Plan of India aims at increasing the share of manufacturing in Gross Domestic Product (GDP) from the present 16 percent to 25 percent by 2025[2]. In achieving the stated goal, Government of India and policy makers consistently made their efforts. Though, the growth performance of the manufacturing sector in the recent period is not seems to be in line with the goal achievement. The low growth of the

[1] See, Brief Profile of Telangana Industries, Ministry of MSME, Government of India (GoI)

[2] Twelfth Five Year Plan (2012-17) Economic Sectors – Volume II, Planning Commission, Government of India, 2013

manufacturing sector has led to strengthen the low employment profiled service sector. Growth of productivity is an important source for manufacturing growth, but there are many evidences after reviewing several studies showing that decline of productivity after the introduction of economic reforms. However, some studies showed revival in the second decade of economic reforms[3]. However, over the periods, despite having manufacturing policies for India as well as States on their own, this sector has been facing severe constraints in achieving high growth owing to power shortage, limited opportunities for technological modernization, insufficient availability of cheap credit and bias in the financial sector reforms in favour of larger firms[4].

Definition of Micro and Small Scale Enterprises: These units consists of many enterprises engaged in production and rendering services, subject to limiting the factor of investment in plant & machinery and equipments respectively as defined by MSME Act, 2006, Government of India. For manufacturing sector, an enterprise is classified as: a) micro enterprise, if investment in plant and machinery does not exceed twenty five lakh rupees; b) small enterprise, if investment in plant and machinery is more than twenty five lakh rupees but does not exceed five crore rupees; In case, enterprise is engaged in providing or rendering of services, it is classified as: (a) micro enterprise, if investment in equipment does not exceed ten lakh rupees; (b) small enterprise, if investment in equipment is more than ten lakh rupees but does not exceed two crore rupees[5].

Micro and small scale sector has it's significant footprint on Telangana development and it is home for several major manufacturing industries such as bulk drugs, pharmaceuticals, agro-processing, cement & mineral-based industries, high precision engineering, textiles, leather, apparels, automobiles and auto components industry, spices, horticulture, poultry farming, biotechnology, defence equipment etc. Manufacturing sector contributes above 55 percent in total industrial sector Gross Value Addition (GVA) but the pattern of investment is concentrated in only few industries such as pharmaceuticals, other non-metallic mineral products, rubber and plastic products, electrical equipments and food products which account for about 54 percent in fixed capital within total manufacturing sector of Telangana State.

II. Methodology:

This paper is analysed both Sixth Economic Census (EC) and Brief Industrial Profiles of Telangana State provided by Micro Small and Medium Enterprises (MSME) – Development Institute, Ministry of MSME, Government of India, Hyderabad where the data has been adopted from the District Industrial Centres (DICs).

Sixth EC (2013) brought out on number of enterprise establishments[6] and persons

[3] See, Goldar, 2014
[4] See, Thomas, 2014

[5] See, Annual Report, 2014, M/o. MSME, GoI
[6] the establishments are entrepreneurial units situated in a particular location in which predominantly focus on one kind of economic activity carried out like part of the goods and/or services produced by the

usually working in respect of all the sectors of economy excluding crop production, plantation, public administration, defence & compulsory social security services activities. By using this 6th EC, the growth performance of establishments and employment over 5th EC; distribution of establishments across the districts of Telangana State and per unit of employment has been examined.

For registered industrial units and their employment and investment, brief industrial profiles data has been considered. There are total 10 districts (Of course these are further divided into 31 districts which came into function on 2nd October, 2016) in Telangana state. All these 10 districts have been formed into three regions based on their geographical locality and industrial penetration. They are namely, Region-I formed with Hyderabad and Ranga Reddy districts where the predominant share of industries took place. Region-II consist Medak, Karimnagar, Nizamabad and Adilabad districts based on their geographical area. Remaining four districts such as Mahabubnagar, Nalgonda, Warangal and Khammam covered under Region-III. The growth performance of registered industrial units, employment and triennium share of investment along with its change in percentage has been analysed district-wise by considering 16 years of time series data from 1996-97 to 2011-12. However, for the analysis of employment and investment it is being used only 13 years of data from 1996-97 to 2008-09 owing to non-availability of further data for some districts.

This paper has been presented in five sections; section-I covers with the background of the micro and small scale industrial sector and its significance in Telangana State, section-II elaborates methodology; section-III covers the results of Sixth EC and Registered Industrial Units; section-IV explains the status of industrial estates and clusters; section-V concludes with existing problems and policy suggestions.

III. Structure of Establishments, Registered Industrial Units and Employment:

The total number of establishments in Telangana State is estimated about 20.86 lakh units engaged in different economic activities other than crop production, plantation, public administration, defence & compulsory social security services by providing employment to 56.12 lakh persons. Though, majority of the establishments located in rural areas (56.61 percent), predominant share of employment provided by urban areas about 58.12 percent engaging with 3.6 persons of employees per unit of establishment. The average size of employment per unit is very low in rural areas accounted for less than two persons where the state average for the same is 2.69 persons per unit (Table–1 & Graph–1).

There is a significant disparity in number of establishments and employment among the districts in the State. Graph-2 & Table-2 shows that urban areas are in better position for attracting high number of establishments and employment and also in hiring more workers rather than rural areas with evidenced in Hyderabad and Ranga

unit goes for sale. The activity may be carried out within fixed premises i.e., permanent structure or without having any permanent structure.

Reddy districts. Hyderabad district stands first in terms of both sharing in establishment with 16.97 percent and employment with 26.27 percent by hiring more than four persons per unit of establishment. Adilabad district forms least number in sharing mere 5.29 percent of establishments and 3.92 percent of employment by hiring less than two persons per unit. It is examined that, only Hyderabad and Ranga Reddy districts are above the State average in providing per unit of employment and remaining eight districts engaging with slightly below two or just above it in per unit of employment in the state.

Table – 1: Area-wise Establishments and Employment in Telangana

Item	Rural	Urban	Total
No. of Establishments	11,81,123 (56.61%)	9,05,146 (43.39%)	20,86,269 (100%)
No. of Persons Employed	23,50,588 (41.88%)	32,61,612 (58.12%)	56,12,200 (100%)
Employment Share Per Unit	***1.99***	***3.60***	***2.69***

Source: Sixth Economic Census, Provisional Results

Table – 2: Distribution of Establishments and Employment in Telangana

Sl. No.	District	No. of Establishments	No. of Persons Employed	Employment Per Unit
1	Hyderabad	3,54,047	14,74,118	4.16
2	Ranga Reddy	2,71,033	9,84,011	3.63
3	Nalgonda	2,76,912	5,29,643	1.91
4	Medak	2,02,883	4,76,959	2.35
5	Khammam	2,10,414	4,61,249	2.19
6	Mahabubnagar	1,88,199	3,83,184	2.04
7	Warangal	1,99,065	3,78,712	1.90
8	Karimnagar	1,60,054	3,71,512	2.32
9	Nizamabad	1,13,357	3,33,056	2.94
10	Adilabad	1,10,305	2,19,756	1.99
Telangana State		**20,86,269**	**56,12,200**	**2.69**

Source: Sixth Economic Census, Provisional Results

Establishments by Its Nature:

It is observed that (Table-3 & Graph-3), the majority of the establishments 7.47 lakh forms 35.79 percent in total establishments found to be operating in inside household; 6.85 lakh establishments with 32.84 percent operating from outside household with fixed structures and remaining 6.54 lakh establishments with 31.37 percent operating from outside household without fixed structures in the state. Thus, it can be said that, majority of the establishments (43.76%) operating in inside household and 36.74 percent outside household without fixed structures are found to be in rural areas. The majority of the establishments operating from outside household with fixed structures are found in urban areas with 49.47 percent in the state.

Out of 6.54 lakh establishments operating from outside household without fixed structures, about 4.27 lakh (65.23%) establishments are found to be in rural areas and 2.27 lakh (34.77%) establishments are in urban areas. Khammam district with 15.81 percent stands first by holding highest number of Establishments and Adilabad district (2.37 percent) with least number of Establishments in the same category in the state.

Table – 3: Distribution of Establishments by Its Nature

Area	Outside HH With Fixed Structure	Outside HH Without Fixed Structure	Inside HH	All
Rural	2,37,401 (34.65)	4,26,810 (65.23)	5,16,912 (69.23)	11,81,123 (56.61)
Urban	4,47,799 (65.35)	2,27,550 (34.77)	2,29,797 (30.77)	9,05,146 (43.39)
All	**6,85,200**	**6,54,360**	**7,46,709**	**20,86,269**

Source: Sixth Economic Census, Provisional Results

It is observed that in Table – 4, the establishments predominantly run by male workers. In rural areas, most of the establishments operate by household members with least hired workers, where it is just opposite in urban areas. At the state level, hired workers account for about 56.25 percent of the total employed persons and the corresponding figures in the rural and urban areas are 39.89 percent and 68.04 percent respectively. In a similar way, majority of the non-hired workers engaged in rural areas with above 60 percent as against to 43.75 percent for state average. As it is discussed, the major share of establishments run by male workers is evidenced with 72.69 percent in urban areas which are greater than the state average 67.89 percent and corresponding results for rural areas is found to be 61 percent.

While female workers account for about 32.11 percent of the total persons employed and the corresponding figures in the rural and urban areas are found to be 38.77 percent and 27.31 percent respectively. Therefore, it can be argued that even in urban areas also it is far away in providing employment to female workers in this sector.

Table - 4: Structure of Employment by Establishments in Telangana

Percentage of Employment	Hired	Non-Hired	Male (H+NH)	Female (H+NH)
Rural	39.89	60.11	61.23	38.77
Urban	68.04	31.96	72.69	27.31
Combined	56.25	43.75	67.89	32.11

Source: Sixth Economic Census, Provisional Results

Growth in Establishments and Employment

The overall growth rate in number of establishments in Telangana State during Fifth EC (2005) and Sixth EC (2013) found to be 77.82 percent as against to 41.73 percent growth of All India. Similarly, the growth rate in Employment in the state is observed 37.78 percent as against to 34.35 percent of All India. The dramatic upsurge in growth performance in number of establishments is found to be about 112 percent in urban areas, where it is around 58.3 percent in rural areas. In the same pattern, the percentage growth rate in total employment in urban areas of the State found to be 54.35 percent and in rural areas it is observed near about 20 percent shown in Graph-4.

Table - 5: Growth Rate (%) of Establishments over Fifth Economic Census

District	Rural	Urban	Combined
Adilabad	118.98	91.52	110.09
Nizamabad	26.77	48.15	31.26
Karimnagar	16.60	90.04	29.74
Medak	85.87	128.28	93.49
Hyderabad	0.0	96.36	96.36
Ranga Reddy	29.09	167.19	108.94
Mahabubnagar	34.82	121.18	47.72
Nalgonda	113.03	172.12	121.26
Warangal	25.03	63.85	33.98
Khammam	113.74	143.35	121.50
Telangana	**58.28**	**111.97**	**77.82**

Source: Sixth Economic Census, Provisional Results

Table-5 shows the district wise corresponding growth rates in number of establishments and graph-5 for employment growth rate in the state. It has been evidenced in Khammam, Nalgonda, Adilabad, Ranga Reddy, Hyderabad and Medak that the growth rate is higher than the state in number of establishments with corresponding results 121.5%, 121.26%, 110.09%, 108.94%, 96.36% and 93.49% respectively. In the same pattern with slight change in the order, the growth rate in employment is also observed more than the state average growth rate with corresponding results in Ranga Reddy (90.5%), Khammam (69.56%), Nalgonda (53.96%), Adilabad (44.47%), Medak (42.43%) and Hyderabad with 30.32 percent. It is also being noticed that the negative (-8%) growth rate in employment in rural area of Warangal district and very insignificant growth rate in rural areas of Ranga Reddy, Karimnagar and Nizamabad districts with 0.25 percent, 0.82 percent and 3.29 percent respectively.

The Regional Level Analysis of Regestered Industrial Units in Telangana

Registered industrial units are such that the enterprises registered with District Industries Centers (DICs) in the State under the coverage of section 2 m(i) and 2 m(ii) of the Factories Act 1948, Government of India[7]. The annual average growth rate of registered industrial units among the regions has been examined in below graph-6. It is found that, the annual growth performance of Region-I has been drastically declined to just 2.8 percent during the recent period where the state average accounted for the same is 5.47 percent. However, the Region-I hold greater share of growth performance in the State during 1997-98 to 2008-09. The annual growth performance of the Region-II and Region-III have been improved significantly and over crossed the Region-I during 2008-09 onwards where these regions accounted for 7.34 percent and 8.42 percent respectively.

During 2000-01 to 2005-06 the annual growth performance has been registered just below 2 percent in all regions and particularly just 0.28 percent in Region-III.

The average annual growth rate has been shown in Graph-7 reveals that the average growth performance of employment by registered industrial units found to be about 9 percent from below 2 percent in all three regions during 2001-02 to 2008-09. There is significant fluctuation in growth of employment during the early period i.e., 1997-98 to 2001-02 accounted for more than 200 percent of growth to negative 45 percent in Region-I and the same has been reflected in the state growth performance.

The share of registered enterprises depicted below graph-8. It is found that more than 45 percent of the enterprises located in region-I i.e., Hyderabad and Ranga Reddy districts only. The remaining 55 percent of enterprises shared by eight districts comes under region-II and region-III. The employment share for these regions in registered industries is almost stagnant in entire period except during FY 1997-98 to 199-2000 which shown in Graph-9 with near about 48 percent in Region-I, 28 percent

[7] see, Annual Report-2014, M/o. MSME, Government of India

in Region-II and about 24 percent in Region-III.

The share of employment per unit of industry has been shown in Graph-10. It is noticed that the highest number of employment per unit in Region-II which increased from near about 9 persons to around 11 persons during 1996-97 to 2008-09. The remaining regions are engaging merely below 10 persons per unit of industry in the state.

The CAGP is calculated for the registered industries for 16 years of period i.e., from 1996-97 to 2011-12. Region-I shows its perform with about 4 percent against to 3.2 percent of the State Growth. The growth performance of the Region-III is accounted for very low 2.5 percent where Region-II performs slightly less than the state which accounted for 2.96 percent (Graph-11).

The employment growth rate for these regions are shown in below (Graph-12). It is observed that the growth performance is almost followed with same pattern of the growth rate of industries in all three regions. Region-I stands with highest growth rate accounted for 3.94 percent against to the state growth 3.24 percent. Region-II and Region-III performed less than the state average accounted for 2.96 percent and 2.48 percent respectively.

Investment:

Investment is also known for capital expenditure by firms towards plants & machinery and buildings for productive purposes. It is depended on many short term and long term factors such as demand of products or services by firms and rate of returns over investment. With this background, region-wise triennium averages of investment by industrial units during 1996-97 to 1998-99 and 2006-07 to 2008-09 is examined along with the changes in investment shown in table-6.

Region-wise analysis reveals that there is a tremendous decline in investment share in region-III from 29.72 percent to 20.87 percent which is accounted for negative change with about 9 percent in the total investment. In the same way, region-I accounted for negative 0.4 percent during the same period which declined from 54.37 percent to 53.98 percent in total share. It is noticed that the share of investment is increased in region-II with 9.25 percent in total investment of the state.

The investment at district level has been observed in table-7 during 1997-99 triennium end and 2007-09 TE. The total share of investment declined in Hyderabad (-3.35 percent), Khammam (-11.48 percent) and Warangal (-0.61 percent). The only district which has attracted significant amount of investment is Medak with 8.15 percent and followed by Ranga Reddy 3 percent, Mahabubnagar 2 percent, Nalgonda 13.3 percent. Karimnagar, Nizamabad and Adilabad forms share mere with less than 1 percent.

I. Status of Industrial Estates and Clusters in Telangana State:

An industrial estate is a place where the required facilities are provided by the Government to the entrepreneurs to establish their industrial units in a particular area or region. Industrial estates have been utilized as an effective tool for the promotion and growth of micro and small scale enterprises to decentralise the entrepreneurial activity i.e., rural areas and backward areas by providing incentives, tax soaps and institutional support.

Table – 6: Region-wise share of Investment in Telangana

Region	1997-99 E	2007-09 E	Change
Region-I	107294.67 (54.37)	228801.33 (53.98)	121506.67 (-0.39)
Region-II	31385.00 (15.9)	106597.67 (25.15)	75212.67 (9.25)
Region-III	58657.33 (29.72)	88440.00 (20.87)	29782.67 (-8.86)
Telangana	**197337.00**	**423839.00**	**226502.00**

Table – 7: District-wise share of Investment in Telangana

Triennium Share of Investment (Rs. In Lakhs)			
Year	1997-99 E	2007-09 E	Change
Adilabad	2731.67 (1.38)	6775.33 (1.60)	4043.67 (0.21)
Nizamabad	4846.33 (2.46)	13439.67 (3.17)	8593.33 (0.72)
Karimnagar	8157.33 (4.13)	18236.33 (4.30)	10079.00 (0.17)
Medak	15649.67 (7.93)	68146.33 (16.08)	52496.67 (8.15)
Warangal	6534.67 (3.31)	11439.67 (2.70)	4905.00 (-0.61)
Khammam	34463.33 (17.46)	25352.00 (5.98)	-9111.33 (-11.48)
Nalgonda	13140.33 (6.66)	33866.00 (7.99)	20725.67 (1.33)
Mahaboobnagar	4519.00 (2.29)	17782.33 (4.20)	13263.33 (1.91)
Ranga Reddy	91839.67 (46.54)	209799.00 (59.50)	117959.33 (2.96)
Hyderabad	15455.00 (7.83)	19002.33 (4.48)	3547.33 (-3.35)
Telangana	197337.00	423839.00	226502.00

The availability of developed industrial plots, ready built industrial structures in preferably convenient locations with basic infrastructure facilities like, better roads, water, electricity, availability of raw material, un-interrupted communication facilities, market facilities, credit facilities with banking services are prerequisite to attract and to encourage industries in a particular region. In Telangana State, the industrial estates area ranges from 15 acres to 2500 acres with fully equipped internal roads, water supply, and uninterrupted electricity and approved layouts[8].

[8] See, tsiic.telangana.gov.in/industrial-parks/

Table – 8: District-wise Industrial Estates of Telangana State

Sl. No.	District	No. of Industrial Estates	Percent	Land acquired (acres)	Percent	Total No. of Plots	Total No. of Structures	Units in Production
1	Hyderabad	2	1.44	116.82	0.46	62	45	74
2	Adilabad	3	2.16	104.55	0.41	84	53	84
3	Karimnagar	3	2.16	104.77	0.41	252	47	245
4	Mahabubnagar	6	4.32	1379.75	5.45	789	131	292
5	Khammam	6	4.32	1236.26	4.88	299	52	164
6	Nalgonda	6	4.32	279.7	1.10	520	74	295
7	Warangal	8	5.76	503.84	1.99	826	145	548
8	Nizamabad	8	5.76	202.53	0.80	655	93	372
9	Medak	27	19.42	5764.29	22.76	1832	166	1099
10	Ranga Reddy	70	50.36	15633.38	61.73	5178	1730	5595
Telangana		**139**	**100.00**	**25325.89**	**100.00**	**10497**	**2536**	**8768**

Source: APIIC, 2012; Compiled from Industrial Profile of Districts, M/o. MSME, Govt. of India

There are around 140 total industrial estates operating in Telangana State occupied in more than 25.3 thousand acres of acquired land which is developed by Andhra Pradesh Industrial Infrastructural Corporation (APIIC) (Table-8 & Graph-17). Among the total industrial estates, around 70 percent of the estates located in only two districts i.e., Ranga Reddy forms 50.36 percent and Medak with 19.42 percent and remaining minor 30 percent of the estates scattered majorly in eight districts of the state which ranges from 5.76 percent in Nizamabad and Warangal districts to 2.16 percent in Adilabad and Karimnagar districts. And it is very important to observe that Hyderabad as a district forms minuscule share in total industrial estates with just 1.44 percent. However, it is also important to notice that the greater share of industrial estate districts such as Ranga Reddy and Medak are sharing the boundaries with Hyderabad district or just adjacent.

Land acquired status also followed the same pattern with industrial estates which accounted for more than 84 percent share in both Ranga Reddy and Medak districts only. There are around 10,497 total numbers of plots with 2,536 industrial structures existing in Telangana state.

Industrial Clusters:

Industrial clusters are known for inter-related industrial activities which can drive massive manufacturing production and employment in a particular region aimed at primarily export of goods and services. In Telangana, majority of the manufacturing units highly concentrated in urban areas such as Hyderabad and its adjacent area and some industrial clusters because to reduce their cost of production, transportation, electricity and availability of raw material.

It is noticed from the brief industrial profile of the Telangana districts (Table-9), there are more than 23 industrial clusters existing for Micro and Small Scale Enterprises. More than 7,400 industrial units functioning in these state sponsored clusters, providing employment to more than 2.1 lakh people. Majority of these clusters are belonged to Rice Mills, Leather Products, Powerlooms, Fan and Fan components, Granite, Bricks, Slab Cutting, Plastic, Pharma and Electronics. Rice Mill units from Khammam, Warangal and Nizamabad districts exporting their produce significantly to Bangladesh, Singapore, Thailand, Nepal and Gulf Countries. In a similar way, Granite from Khammam district exporting to developed countries such as the United States of America (USA), China, Japan, Taiwan, Germany and Australia. Slab Cutting Units from Ranga Reddy district also exporting their products to the USA, Australia, Switzerland and the Gulf Countries, etc.

Table – 9: Distribution of Clusters among the Districts of Telangana

Sl. No.	Name of the Clusters	Districts	No. of Functional Units in the Cluster	Turnover of the Clusters (Million)	Employment in Clusters	Exporting Countries
1	Rice Mills	Karimnagar, Khammam, Nalgonda, Nizamabad and Warangal	1112	18000	34700	Gulf Countries, Bangladesh, Singapore, Thailand and Nepal
2	Agri. Seed	Ranga Reddy	70	1250	12000	NA
3	Powerloom	Karimnagar and Nalgonda	834	970	24768	NA
4	Cement Plants	Nalgonda	18	4000	2000	NA
5	Plastic	Hyderabad and Nalgonda	150	3500	5000	NA
6	Granite	Khammam	600	3500	25000	USA, China, Japan, Taiwan, Germany and Australia
7	Leather	Hyderabad	1530	10200	20000	NA

8	Pharma	Ranga Reddy	391	81870	20000	US, European countries
9	Fabrication	Ranga Reddy	400	1000	4000	NA
10	Fiber Glass	Ranga Reddy	300	10000	5000	NA
11	Electronics	Ranga Reddy	250	1500	3000	NA
12	Foundry & Fan and Fan components	Ranga Reddy	700	4200	10400	NA
13	Slab Cutting	Ranga Reddy	500	650	30000	USA, Australia, Switzerland, Gulf Countries, etc
14	Bricks	Nalgonda	550	3000	15000	NA
Total			**7405**	**143640**	**210868**	**NA**

Source: Compiled from Industrial Profiles of the Districts, M/o. MSME, Government of India

II. Summary and Policy Suggestions:

The growth of industrial sector is a key for solving the problem of unemployment and rural-urban imbalances in Telangana State. It is evidenced that there is a high fluctuation in growth of registered industrial sector in recent years across the districts and regions of Telangana. Besides, majority of the industries located in urban areas with low level of employment for female workers.

However, the State Government of Telangana has taken major steps to strengthen micro and small scale sector through loan weaving scheme for handloom & textile sector and other incentives to MSME sector. The newly State has come out with Telangana Industrial Policy-2015 which focused on infrastructure, market and institutional credit development. The Telangana State Industrial Project Approval and Self Certification (TS – iPASS) Act, 2014 is formed for single window clearance system for approval of the industrial projects within the stipulated time. Industrial Infrastructure Development Fund (IIDF) scheme is launched to provide better infrastructural facilities and Telangana State Programme for Rapid Incubation of Dalit Entrepreneurs (T-PRIDE) scheme has been initiated to boost the industrial sector to make Telangana a business friendly state by providing various kinds of incentives to encourage the first generation entrepreneurs by providing additional incentives to SCs, STs and Women entrepreneurs in the State.

Though there is a momentous effort from the Government functionaries and policy makers to the development of the Micro and Small Scale sector, still there are many considerable problems prevailed in Telangana industrial sector particularly in rural areas such as working capital, infrastructural, skilled labour, and product innovation & branding, industry up-gradation and marketing problems.

Therefore, the study has been suggested to focus on the following points based on the findings;

1. The Government of Telangana has to be given more concentration on rural industries by providing working capital, un-interrupted electricity supply, highly equipped infrastructure facilities such as roads, water, market so as to provide more employment to the locale in general and women in particular.
2. Most of the manufacturing units lacking by skilled labour. Therefore, it is required to more emphasis on vocational training courses for its youth and skill up-gradation for labour as well as management of the enterprises.
3. The activities like textiles need to be introduced new technologies and equipment as the productivity of workers is very low despite high per capita intensity.
4. In conclusion, it is suggested that rural enterprises should be examined closely and interventions have to be made after identifying their problems. The DICs have to organize workshops for the entrepreneurs to identify their problems and take remedial measures particularly in the area of government schemes, subsidies and incentives.

References;

1. Annual Report, 2014, M/o. of MSME, Government of India, New Delhi
2. Government of India (2013); 'Twelfth Five Year Plan 2012-17: Economic Sectors – Volume-II', Planning Commission, Government of India, Sage Publications
3. Telangana Planning Department (2016); 'Reinventing Telangana: The Way Forward', Socio Economic Outlook – 2016, Government of Telangana State, Hyderabad, pp - 55
4. Goldar Bishwanath (2014); 'Productivity in Indian Manufacturing in the Post-Reform Period: A Review of Studies', in Productivity in Indian Manufacturing: Measurements, Methods and Analysis, by Vinish Kathuria, Rajesh Raj S.N. and Kunal Sen (Ed.), Routledge Taylor and Francis Group Publications
5. Brief Profile of Telangana Industries, M/o. of MSME, Government of India, New Delhi
6. Thomas Jayan Jose (2014); 'Manufacturing in India: Has There Been a Revival since the 1990s', Productivity in Indian Manufacturing: Measurements, Methods and Analysis by Vinish Katuria, Rajesh Raj S.N. and Kunal Sen (Ed.), Routledge Taylor and Francis Group Publications
7. Sixth Economic Census (2013), Directorate of Economics and Statistics, Government of Telangana, Hyderabad

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Challenges to agriculture sector in Indian economy

Dr Koti Reddy Tamma, Professor in Economics, IBS Hyderabad (A Constituent of ICFAI Foundation for Higher Education)

Dr I.R.S.Sarma & Dr M.Aruna, Associate Professors in Economics, IBS Hyderabad (A Constituent of ICFAI Foundation for Higher Education)

Abstract :This paper examines the performance and challenges to the agricultural sector of Indian Economy by using the annual data for the period 1950-51 to 2014-15. In this paper an attempt has been made to study the change in cropping pattern and the reasons for deceleration in the growth of agricultural sector in Indian Economy. The authors opine that the cropping pattern in India has undergone significant changes with a significant shift from the cultivation of food grains to commercial crops. The key challenges documented are related with small size of landholdings, low productivity, fall in the value of agricultural exports in the total value of exports, low public investment,, low food grain production, gap between irrigation potential and utilization and growing indebtedness of the farmer households. The study suggests that Government policies must be supportive for small and marginal farmers and agricultural laborers.

Key words:

I. Introduction:

Indian agriculture has witnessed a profound change since Independence. Agriculture is considered as the only source of primary occupation as a huge size of rural population of the country is solely depending on agriculture. From the very beginning, agriculture is contributing a major portion to our national income. In 1950-51 agriculture and allied activities contributed about 57 per cent of the total national income. Although the share of agriculture has been declining gradually with the growth of other sectors but the share still remained very high as compared to that of the developed countries of the world. The share of agriculture has declined to 54 per cent in 1960-61, 48 per cent in 1970-71 and then to 17 per cent in 2015-16.According to 2011 census the workforce dependent on agriculture is 48.9 per cent.

Economic reforms were introduced in India in 1991 in many sectors except in agricultural sector. As a result, reforms failed to yield the desired progress in the overall development of the economy. Attempts were made to introduce reforms in agricultural sector by some state governments in 1996. Further, many state governments in India are not keen in implementing reforms in agriculture sector and hence the policy changes in agriculture are still slower. The rate of structural changes in agriculture sector is lower in 1990's.Further the export growth of agricultural product was slow and agricultural demand declined steeply after East Asian Crisis. Economic reforms moved in the direction of privatizing the distribution of input , providing some

services and agricultural extension. The critical values are low value agriculture, high cost benefit ratio, inefficient use of natural resources and deterioration in self-help institutions. Scale of high value of crops is not due to production levels but due to high value of processing. The contribution of agriculture and allied sectors to the GVA (at 2011-12 prices) of the country has been declining. The growth rates in agriculture have been fluctuating at 1.5 per cent in 2012-13, 4.2 per cent in 2013-14, (-) 0.2 per cent in 2014-15 and a likely growth of 1.1 per cent in 2015-16. The uncertainties in growth in agriculture are explained by the fact that 60 per cent of agriculture in India is rainfall dependent and there have been two consecutive years of less than normal rainfall in 2014-15 and 2015-16 (Economic Survey 2015-16). As per the Agriculture Census, 2010-11, the total number of operational holdings in the country has increased from 129.22million in 2005-06 to 138.35million 2010-11 i.e. an increase of 7.06 %. There is a marginal increase in the operated area from 158.32 million ha in 2005-06 to 159.59 million ha. in 2010-11 showing an increase of 0.80%.

1.1 Objectives of the study:

a) To study the performance of Agricultural Sector in terms of its contribution to Gross Domestic Product

b) To study the trends in cropping pattern in India since 1970-71.

c) To identify the issues confronted and provide policy implications for the development of Agricultural sector.

1.2. Methodology

The entire study is backed by secondary data only. The data is collected from various published sources like Ministry of Agriculture, Ministry of statistics and programme implementation, the Statistical Abstracts published every year by the Directorate of Economics and Statistics, Publications of National Sample Survey Organization, Reserve Bank of India, Centre for Economic and Social Studies and Indian Institute of Population Studies etc. for the period 1949-50 to 2015-16 Simple statistical techniques are extensively used such as percentages, averages, index numbers and co-efficient of variation.

II. Contribution of agricultural sector to GDP, employment and capital formation

Table-2.1.shows the trends in GDP at Factor cost and Primary sector GDP, contribution of primary sector to GDP at factor cost and primary sector growth rate since 1950-51.It is clear from the table the annual average rate of growth of the primary sector which was 7.1 per cent in 1960-61 increased to 12.8 per cent in 1980-81 gradually declined to 0.4 per cent during 2008-09 and then increased to 4 per cent in 2013-14.The contribution of primary sector which is composed of agriculture, forestry, fishery and mining gradually declined from 53.7 per cent of Gross Domestic Product in 1950-51 to 33 per cent in 1990-91 and then finally to 15.8 per cent in 2013-14.This is due to the development strategy followed in economic planning of the country, structural changes occur in the composition of its national income by industry of origin. With the rapid expansion of manufacturing industries, the share of manufacturing sector

recorded a sharp increase. But the agricultural sector could not record a faster rate of growth.

Table-2.1 : Agricultural GDP, share of agriculture in GDP and growth (2004-05 Price)

		Primary Sector		
Year	GDP@FC (Rs.Crores)	Primary sector GDP (Rs. Crores)	Share of Primary Sector in GDP@FC	Growth Rate (%)
1950-51	2,79,618	1,50,191	53.7	----
1960-61	4,10,279	2,04,340	49.8	7.1
1970-71	5,89,787	2,58,665	43.8	6.3
1980-81	7,98,506	3,05,906	38.3	12.8
1990-91	13,47,889	4,44,880	33.0	4.7
2000-01	23,48,481	5,92,227	25.2	0.3
2001-02	24,74,962	6,24,923	25.2	5.5
2002-03	25,70,932	5,94,280	23.1	-4.9
2003-04	27,75,749	6,43,183	23.1	8.2
2004-05	29,71,464	6,50,454	21.9	1.1
2005-06	32,53,073	6,80,628	20.9	4.6
2006-07	35,64,364	7,11,768	19.9	4.6
2007-08	38,96,636	7,51,077	19.3	5.5
2008-09	41,58,676	7,53,744	18.1	0.4
2009-10	45,16,071	7,64,817	16.9	1.5
2009-10	49,18,533	8,28,431	16.8	8.3
2011-12	52,47,530	8,64,557	16.5	4.4
2012-13	54,82,111	8,72,838	15.9	1.0
2013-14	57,41,791	9,07,386	15.8	4.0

Source: Various Economic Surveys, GOI

Table-2.2

Area and production of food grains among the major states: 2014-15

State	Area (In million Hectares)	Rank in Area	Production (in Million Tonnes)	Rank in Production	Yield (Kgs/ Hect)	Rank in Yield Rate Per Hectare
Uttar Pradesh	20.23	1	50.05	1	2474	5
Punjab	6.56	7	28.90	2	4409	1
Madhya Pradesh	14.94	2	24.24	3	1622	14
Rajasthan	13.42	3	18.30	4	1364	17
West Bengal	6.24	8	17.05	5	2732	4
Haryana	4.40	11	16.97	6	3854	2
Maharashtra	11.62	4	13.92	7	1198	18
Bihar	6.67	6	13.15	8	1971	9
Karnataka	7.51	5	12.17	9	1622	13
Telangana	3.43	15	10.69	10	3115	3
Andhra Pradesh	**4.18**	**13**	**9.41**	**11**	**2251**	**7**
Tamilnadu	3.55	14	8.49	12	2396	6
Odisha	5.15	9	8.33	13	1617	15
Gujarat	4.29	12	8.21	14	1917	11
Chattisgarh	4.95	10	7.58	15	1532	16
Assam	2.53	16	4.94	16	1952	10
Jharkhand	2.24	17	4.19	17	1874	12
Uttarakhand	0.89	18	1.78	18	2001	8
Others	3.24		6.40			
All India	126.04		264.77		2101	

Source: Agricultural Statistics at a Glance, 2014-15, Directorate of Economics & Statistics, Telangana

2.2 Area Production and Yield among major states in India

Special emphasis was laid on the development of agricultural sector since 1965.All the initiatives taken up for the development and modernization of agricultural sector have

lead to (a) a steady increase in areas under cultivation (b) a rising trend in agricultural production and (c) a steady rise in agricultural productivity. However, there were variations in terms of area, production and productivity of food grains across the states in India. The differences in Area, Production and productivity levels of food grains across the states are presented in the following Table 2.2

The gross area under all food grains has increased from 99 million hectares in 1949-50 to 118 million hectares in 1964-65 and then to 126.04 million hectares in 2014-15.Area, production and yield of food grains in India for the year in 2014-15 is presented in the above table From the above table it is clear that Andhra Pradesh and Telangana were lagging behind in terms of area, production and productivity of food grains when compared with major states of India. Punjab ranks first In terms of area under food grains in 2014-15 followed by Madhya Pradesh and Rajasthan. Andhra Pradesh and Telangana ranks 13th and 15th respectively in terms of area under food grains compare with other major states. The total area under foodgrains in Andhra Pradesh is 4.18 million hectares, while it was 3.43 million hectares in Telangana. Andhra Pradesh was ranked eleventh among other Indian states in terms of production of food grains and seventh in terms of yield. Telangana was ranked 10th in terms of production of food grains and third in terms of yield.

2.3 Changes in Cropping Pattern in India

Table-2.4: Area under different major crops in India during 1970-71 to 2014-15

(Million Hectares)

Crops	1970-71	1980-81	1990-91	2000-01	2005-06	2009-10	2010-11	2014-15
Food grains	124.3	126.7	127.8	121.0	121.6	121.3	125.7	122.1
Oilseeds	16.6	17.6	24.1	22.8	27.9	26.0	26.8	25.7
Groundnut	7.3	6.8	8.3	6.6	6.7	5.5	6.0	4.7
Sugarcane	2.6	2.7	3.7	4.3	4.2	4.2	4.9	5.1
Cotton	7.6	7.8	7.4	8.6	8.7	10.1	11.1	13.1
Jute	0.8	0.9	0.8	0.8	0.8	0.8	0.8	
Mesta	0.3	0.4	0.2	0.2	0.1	0.1	0.1	
Potato	0.5	0.7	0.9	1.2	1.4	1.8	1.8	
Plantation Crops	0.7	2.3	3.1	3.9	4.22	4.3	4.4	
Total	**160.7**	**165.9**	**176.3**	**169.4**	**175.62**	**174.1**	**181.6**	

Source: EPW database & Various Economic Surveys, GOI

The above Table-2.4 reveals the average yield per hectare of all major crops in India since 1970-71. It is inferred from the table that after the introduction of modern agricultural technique along with the adoption of hybrid seeds, extension of irrigation facilities and application of intensive method of cultivation yield per hectare of all crops has recorded a steep rising trend. The yield of paddy has been

substantially increased from 1123 kgs per hectare to 2390kgs per hectare in 2014-15.The yield of wheat also increased from 1307 kgs per hectare to 2872 kgs per hectare during the same period. Yield of pulses was registered at 524 kgs per hectare in 1970-71 and decreased to 473 kgs per hectare in 1980-81and then finally increased to 744 kgs per hectare in 2014-15.yield of oilseeds decreased from 579 kgs per hectare in 1970-71 to 532kgs per hectare in 1980-81and then increased to 1037 kgs per hectare in 2014-15.the yield of tea substantially increased from 1182 kgs per hectare in 1970-71 to 2170kgs per hectare in 2014-15.Itis clear from the above table that the Yield of cotton has witnessed fluctuations during the study period .Yield of cotton decreased from 510 kgs per hectare in 2013-14to 461kgs per hectare in 2014-15.

3. Issues confronted to agricultural sector

3.1 Size of Agricultural Holding in India

In India, the size of agricultural holding is quite uneconomic, small and fragmented. With the growth of the size of families, the agricultural holdings are gradually being sub-divided among the heirs, in this way generation after generation the land is being subdivided and fragmented as well. The growing sub-division and fragmentation of holding make the adoption of modernized method in agricultural operation quite difficult. Application of new technology, use of fertilizers and making provision for irrigation facilities will be difficult in uneconomic holding, this result in low productivity. The following table 3.1 shows the size and number of operational holding and area operated upon by these various sizes.

Table 3.1: Number of Holdings, Operated area and average size of holdings

	Number of Holdings (in '000)		Operated Area (in '000 ha)		Average size of holding (in ha)	
Size Groups	2005-06*	2010-11	2005-06*	2010-11	2005-06*	2010-11
Marginal	83694	92826	32026	35908	0.38	0.39
Small	23930	24779	33101	35244	1.38	1.42
Semi-Medium	14127	13896	37898	37705	2.68	2.71
Medium	6375	5875	36583	33828	5.74	5.76
Large	1096	973	18715	16907	17.08	17.38
All Sizes	129222	138348	158323	159592	1.23	1.15

Source: Agricultural Census 2010-11

**Excluding Jharkhand*

It is observed from the above Table-3.1 the total number of operational holdings in the country has increased from 129.22million in 2005-06 to 138.35million 2010-11 i.e. an increase of 7.06 %. There is a marginal increase in the operated area from 158.32 million ha in 2005-06 to 159.59 million ha in 2010-11 showing an increase of 0.80%. The operated area has primarily increased because the State of Jharkhand participated for the first time in Agriculture Census operation in 2010-11 after the State came into being in the year 2000. The average size of operational holding has declined to 1.15 ha in 2010-11 as compared to 1.23 ha in 2005-06.

The small and marginal holdings taken together (below 2.00 ha.) constituted 85.01 percent in 2010-11 against 83.29 in 2005-06 and the operated area at 44.58 percent in the current Census as against the corresponding figure of 41.14 percent in 2005-06. The semi-medium and medium operational holding (2.00 ha – 10.00 ha) in 2010-11 were 14.29 percent with the operated area at 44.88 percent. The corresponding figures for 2005-06 census were 15.86 percent and 47.05 percent. The large holdings (10.00 ha. & above) were 0.70 percent of total number of holdings in 2010-11 with a share of 10.59 percent in the operated area as against 0.85 percent and 11.82 percent respectively in 2005-06 Census

Table 3.2: Investment on Agriculture during Five-Year plans

(*Rs. Crores*)

Five-Year Plan	Investment on Agriculture and allied	Total Plan outlay	% of agri and allied sectors total outlay
First Five-Year Plan	350	2380	14.9
Second Five-Year Plan	500	4500	11.3
Third Five-Year Plan	1090	8580	12.7
Fourth Five-year plan	2320	15800	14.7
Fifth Five-year plan	4870	39430	12.3
Sixth Five-year plan	5700	97500	5.8
Seventh Five-year plan	10530	180000	5.9
Eighth Five-year plan	22470	434100	5.2
Ninth Five-year plan	42460	859200	4.9
Tenth Five-year plan	79810	1525640	5.2
Eleventh Five-year plan	136381	3644718	3.7

Source: Various Five-year plan Documents.

The above Table-3.2 shows the pattern of investment on agriculture in different five-year plans. It is observed that with the increase in total outlay in each plan, the outlay on agriculture and allied sectors had also increased considerably. But the percentage of plan outlay on agriculture and allied sectors to total plan outlay varied from11.3 per cent to 14.9 per cent during the first plan to fifth plan period. During this period agricultural sector includes special area progammes, animal husbandry and rural development, forestry and wild life. Since sixth plan agricultural sector includes only animal husbandry, research and education only. During the sixth plan the share of agriculture and allied sectors in the total outlay of the plan was registered at 5.8per cent. The share of agriculture and allied sectors in the total outlay of the Eleventh Five-year plan has further decreased to 3.7 per cent. The above table clearly reflects reduction in public expenditure on agriculture and allied activities.

Table 3.3: Productivity of Some Important Crops

Crop	China	USA	France	Japan	Egypt	World	India
Cereals (2014)	5886	7637	5829				2981
Paddy (2012)	6744	8349	-----	5391	9702	4395	3591
Wheat(2012)	4995	-----	7599	------	6516	3115	3173
Maize(2012)	5956	7744	9085	----	-----	4494	2507
Groundnut (2012) (in shell)	3575	4699	----	2410	-----	1676	1179
Sugarcane (2012)	68,811	------	------	-----	1,14,983	68,854	68,344

Source: Various Economic Surveys, GOI

The above table reveals information about the comparison of yield per hectare of major crops in India with developed countries. It is clear from the table that India lags far behind the other developed countries of the world in terms of average yield per hectare of major crops. In 2014 the annual average yield of cerals per hectare in 2014 was 2981 quintals in India as against 7637 quintals in USA, 5886 quintals in China and 5829 quintals in France. The annual average yield of paddy in 2012 per hectare was only 3591 quintals in India as against 9702 in Egypt,8349 quintals in USA and 6744 quintals in china. The annual average yield of wheat per hectare was only 3173 quintals in India as against 7599 quintals in France and 6516 quintals in Egypt .It is inferred that the conditions of Indian agriculture still largely remains backward

although it is considered as the backbone of the Indian economy. In the era of Indian Planning although some steps have been undertaken for improving the conditions of agriculture but its conditions have not changed much.

Table 3.4

Development of Irrigation Potential and its utilization

(*Million Hectares***)**

Items (Plan end additional)	**At the end of VII Plan**	**At the end of VIII Plan**	**At the end of IX Plan**	**At the end of X Plan**
Major and Medium Irrigation Potential	29.9	32.96	37.1	42.4
Utilization	25.5	28.44	31.0	34.4
Minor Irrigation Potential	46.6	53.30	56.9	60.4
Utilization	43.1	48.8	50.0	52.8
Total Potential	76.5	86.3	94.0	102.8
Utilization	68.6	77.2	81.0	87.2

Source: Up to X Plan; Economic Survey 2007-08

The above Table-3.4 provides information about development of irrigation potential and its utilization in India since 7th five-year plan. The table reveals that the irrigation potential developed through major, medium and minor irrigation projects has not been fully utilized. By the end of the seventh five-year plan out of the total irrigation potential of 76.5 million hectares, the actual utilization was 68.6 million hectares. The total irrigation potential developed by the end of the tenth five-year plan in India was to the extent of 102.8 million hectares which consist of 42.4 million hectares under major and medium irrigation and the remaining 60.4 million hectares under minor irrigation. It is observed that there has been a large gap in utilization of created potential. At the end of the Tenth plan, total utilization of irrigation potential was to the extent of 87.2 million hectares as against the total created potential of 102.8 million hectares showing a gap of 15.6 million hectares.

The above Table-3.5 reveals the targets and achievements of food grain production during the planning era .The first five-year plan set its aim to solve the food problem and also tried to improve the agro raw materials like raw jute, raw cotton, oil seeds etc. It is observed from the above table that in respect of production of food grains, the country could produce 67 million tones as against the target of 62 million tones. In

respect of food grains although the target was fixed at 81 million tones, 100 million tones and 129 million tonnes during the second, third and fourth plan but the actual realized were 80 million tones,72 million tones and 104 million tonnes respectively showing shortfalls in realizing targets. Similarly the targets fixed in the remaining five-year plans were also not fulfilled

Table 3.5

Targets and achievements of Food grains during planning era

Five-Year Plan	Target (In Million Tonnes)	Achievements (In Million Tonnes)
First Five-Year Plan	62.0	67
Second Five-Year Plan	81.0	80.0
Third Five-year plan	100.0	72.0
Fourth Five-year plan	129.0	104.0
Fifth Five-year plan	125.0	132.0
Sixth Five-year plan	154.0	152.0
Seventh Five-Year plan	180.0	171.0
Eighth Five-year plan	210.0	199.0
Ninth Five-year plan	234.0	212.0
Tenth Five-year plan	234.0	216.0
Eleventh Five-year plan	270.0	250.14

Source: Plan documents and Economic surveys

.

Table 3.6
Exports of agriculture and allied activities in India

Year	Value of total exports (Rs. In crores)	Value of exports of agriculture and allied products (Rs. In crores)	% of value of agriculture and allied products in the total value of exports
1960-61	642	284	44.2
1970-71	1535	487	31.7
1980-81	6711	2057	30.7
1990-91	32553	6317	19.4
2000-01	203571	28582	14.0
2006-07	571779	58959	10.3
2011-12	1142922	111393	9.7
2014-15	1896348	240642	12.68

Source: Economic Survey 2015-16

The above Table-3.6 reveals the proportion of value of the exports of Agriculture and allied in the total exports value of the country since 1960-61. The total value of exports which was Rs. 642 crores in 1960-61 gradually increased to

Rs. 32553 crores in1990-91and then to Rs. 1896348 crores in 2014-15. The value of exports of Agriculture and allied which was Rs.284 crores in 1960-61 gradually rose to Rs. 6317 crores in 1990-91and then to Rs. 240642 crores in 2014-15.The share of the value of Agriculture and allied in total exports value was 44.2 per cent in 1960-61.But its share gradually declined to 19.4 per cent in 1990-91 and then to only 9.7 per cent in 2011-12. The share of value of Agriculture and allied in total value of exports gradually improved to 12.68 per cent in 2014-15.

Table-3.7: Farmer's Suicides in India

	Farmer's Suicides	
Year	**Number**	**As a per cent of all suicides**
1997	13622	14.2
1998	16015	15.3
1999	16082	14.5
2000	16603	15.3
2001	16415	15.1
2002	17971	16.3
2003	17164	15.5
2004	18241	16.0
2005	17131	15.0
2006	17060	14.4
2007	16632	13.5
2008	16196	12.9
2009	17368	13.6
Total	**216500**	**14.7**

Source: Various volumes of ADSI, NCRB, GOI.

The above Table-3.7 provides information about farmer's suicides in India from 1997 to 2009.Fqarmer's suicides in India accounted for14.7 per cent of all the suicides in the country for the period 1997-2009.In 1997 the proportion of farmer's suicides in the total suicides in the country was 14.2 per cent. The farmers suicides have been increased to 16.3 per cent of the total suicides in the country in 2002.By 2003, this trend has slightly fallen to 15.1 per cent. From 2005to 2008 this trend has slightly reduced from 16 per cent to 12.9per cent

Conclusion & policy implications:

There is a need for inventing new agricultural technology relevant to rain fed areas specifically. Agricultural sector needs another revolution and increasing agricultural production should be given more priority. It is important that the benefits of new technology like micro irrigation must be widespread. Increase in agricultural productivity may serve as the catalyst for growth, as well as help in reducing poverty due to a larger section of the people depend upon agriculture. In order to avoid the

problems arising from small and marginal holdings consolidation of land holdings programme should be taken up for the larger interests of the society in general and that of the interest of the poor farming community in particular. Irrigation plays a major role to reap the benefits of consolidation of land holdings. The number and rate of farmer suicides are very high and increasing rapidly. Government policies must be supportive for small and marginal farmers and agricultural labourers. The need to support small holding farmers, small-scale, ecological farming and means of bio-diversified-based agricultural production that are sustainable, particularly in the context of climate change is the need of the hour.

References:

Lokesh Kumar Meena, Chandra Sen & Saket Kushwaha (2016) "Implications of the methods of crop diversification: A Comparative study", International Journal of Environment, Ecology, Family and Urban Studies,Vol6 ,Issue 1, Feb 2016, P.95-102

M.K.Sharma & Vinit kumar (2014) "Crop-diversification in Uttar Pradesh: Evidence of village**,** International Journal of Scientific & Innovative Research Studies, Vol (1), Issue-8, July-2014.

Malik and Singh, (2002) "The Determinants and Extent of Crop Diversification among Small holder Farmers: A Case Study of Southern Province Zambia", Indian Journal of Agricultural research, Volume 36, Issue 1

Mohan, R. (2006), "Agricultural Credit in India: Status, Issues and Future Agenda", Economics and Political Weekly, March (18-24), Vol. XLI No.11, pp. 1013-1040.

Pandhy, K.C., Commercial Banks and Rural Development, New Delhi, Asian Publication, 1980.

Ramesh Chand, (2005) "Impact of Trade Liberalization and related Reforms on India's Agricultural Sector, Rural Food Security, Income and Poverty", Institute of Economic Growth, Delhi.

Tripathi, Amarnath and Prasad, A. R. (2009) "Agricultural Development in India since Independence: A Study on Progress, Performance, and Determinants," Journal of Emerging Knowledge on Emerging Markets: Vol. 1, Article 8.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

An analysis of managing risk in banks using camel approach

Dr. A.Kalpana, Vice-Principal, Telangana Social Welfare Residential Degree College for women, Warangal

Prof.P.Krishnamachary, Department of Commerce and Business Management, Kakatiya University, Warangal

Abstract: *The Bank in the course of its business is exposed to various risks, of which the most important are credit risk, market risk (including liquidity risk and price risk) and operational risk. The identification, measurement, monitoring and control of risks remain key aspects of the Bank's risk management system. Sound risk management supported by a balanced risk-reward trade-off is critical to achieving the Bank's business strategy for business and revenue growth. Specific to credit risk, the Bank has distinct policies and processes in place for the retail and wholesale businesses. The credit cycle in the retail assets business is managed through appropriate front-end credit, operational and collection processes. There are programs for each product, which define the target customer segments, underwriting standards, security structure etc., to ensure consistency of credit origination patterns. The CAMELS Rating system has proved to be an effective internal supervisory tool for evaluating the soundness of a firm, on the basis of identifying those institutions requiring special attention or concern. The rating ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as the financial statements, funding sources, macro economic data, budget and cash flow. The camels rating system is highly confidential and it is only exposed to top management for the purpose of projecting the business strategies, and to appropriate supervisory staff. Its rating is never exposed publicly. The system became internationally known with the abbreviation CAMELS, reflecting the five assessment areas like, capital, asset quality, management, earnings, liquidity and sensitivity to market risk.*

Key words: liberalized economy, potential outcome

Introduction:

In the new liberalized economy in India, Banks and regulators in recent years have been making sustained efforts to understand and measure the increasing risks they are exposed to. With the Indian economy becoming global, the Banks are realising the importance of different types of risks. A risk can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings. Therefore, a risky proposition is one with potential profit or a looming loss. Risk stems from uncertainty or unpredictability of the future. In commercial and business risk generates profit or loss depending upon the way in which it is managed. Risk can be defined as the volatility of the potential outcome. Risk is the possibility of something adverse happening. Risk management is the process of assessing risk, taking steps to reduce risk to an acceptable level and maintaining that level of risk.

Thus, we can say that after the risks have been identified, risk management attempts to lessen their effects. This is done by applying a range of management techniques.

Definition: In the world of finance, risk management refers to the practice of identifying potential risks in advance, analyzing them and taking precautionary steps to reduce/curb the risk.

In risk management exercise the top management has to lay down clear cut policy guidelines in quantifiable and precise terms - for different layers line personnel business parameters, limits etc. It is very important for the management to plant at the macro level what the organization is looking in for in any business proposition or venture and convert these expectations into micro level factors and requirements for field level functionaries only then they will be able to convert these expectations into reality. A very important assumption is made but normally omitted or over looked is provision of infra-structural support and conductive climate. Ultimately top management has a greater role to play in any risk management process

Review of Literature:

Rajni Saluja,Sheetal Sharma, Dr. Roshan Lal has found that the financial performance of HDFC Bank has improved in post merger period in almost all parameters of CAMEL Model that is capital adequacy, asset quality, management capability, earning quality and liquidity. Merger has significant impact on the financial performance of HDFC Bank. Various ratios calculated under CAMEL Model indicate better performance and improved position of HDFC Bank after merger with Centurion Bank of Punjab. Merger of CBOP and HDFC Bank highlights the fact that two successful banks merged to form the strong entity that could match Public sector banks in size and strength.

Uyen Dang explains that the camel rating is significant to banking supervision and is currently popular among regulators worldwide. Its approach is beneficial as it is an internationally standardized rating, and provides flexibility between on-site and off-site examination. Vradi, Vijay, Mauluri and Nagarjuna (2006), in their article entitled "Measurement of efficiency of bank in India" examines that in modern world performance of banking is more important to stable the economy in order to see the efficiency of Indian banks and they examined the following indicators i.e. profitability, productivity, assets, quality and financial management for all banks.

Brijesh K. Saho, Anandeep Singh (2007), this paper attempts to examine, the performance trends of the Indian commercial banks for the period: 1997-98 - 2004-05 their broad empirical findings are indicative in many ways. Their finding also highlights the possible stronger disciplining role played by the capital market indicating a strong link between market for corporate control and efficiency of private enterprise assumed by property right hypothesis. And, finally, concerning the scale elasticity behavior, the technology and market-based results differ significantly supporting the empirical distinction between returns to scale and economies of scale, often used interchangeably in the literature.

Management is a process consisting of the following steps.

1. Identify all areas of risk
2. Evaluate these risks
3. Set various exposure limits for
4. Type of business
5. Mismatches
6. Counter parties
7. Issue clear policy guidelines / directives.

Different Types of Risks:

. Some of the risks are credit risks, market risks, operational risks, reputational risks and legal risks, using quantitative techniques in risk.

(1) Credit Risk - This is the risk of non recovery of loan or the risk of reduction in the value of asset. The credit risk also includes the pre-payment risk resulting in loss of opportunity to the bank to earn higher interest income. Credit Risk also arises due excess exposure to a single borrower, industry or a geographical area.

(2) Interest Rate Risk-This risk arises due to fluctuations in the interest rates. It can result in reduction in the revenues of the bank due to fluctuations in the interest rates which are dynamic and which change differently for assets and liabilities. With the deregulated era interest rates are market determined and banks have to fall in line with the market trends even though it may stifle their Net Interest margins.

(3) Liquidity Risk-Liquidity is the ability to meet commitments as and when they are due and ability to undertake new transactions when they are profitable. Liquidity risk may emanate in any of the following situations-

(a) net outflow of funds arising out of withdrawals/non renewal of deposits

(b) non recovery of cash receipts from recovery of loans

(c) conversion of contingent liabilities into fund based commitment and

(d) increased availment of sanctioned limits

(4) Foreign Exchange Risk - Risk may arise on account of maintenance of positions in forex operations and it involves currency rate risk, transaction risks (profits/loss on transfer of earned profits due to time lag) and transportation risk (risks arising out of exchange restrictions)

(5) Regulatory Risks- It is defined as the risk associated with the impact on profitability and financial position of a bank due to changes in the regulatory conditions, for example the introduction of asset classification norms have adversely affected the banks of NPAs and balance sheet bottom lines.

(6) Technology Risk - This risk is associated with computers and the communication technology which is being increasingly introduced in the banks. This entails the risk of obsolescence and the risk of losing business to better technologically

(7) Market Risk-This is the risk of losses in off and on balance sheet positions arising from movements in market prices.

(8) Strategic Risk-This is the risk arising out of certain strategic decisions taken by the banks for sustaining themselves in the present day scenario for example decision to open a subsidiary may run the risk of losses if the subsidiary does not do good business.

The essential components of any risk management system are –

(i) Risk Identification- **N**aming and defining of each type of risk associated with a transaction or type of product or service

(*ii) Risk Measurement*-Estimation of the size, probability and timing of potential loss under various scenarios

(*iii) Risk Control*-Framing of policies and guidelines that define the risk limits not only at the individual level but also for particular transactions.

Risk management in Indian banks:

Risk management in Indian banks is a relatively newer practice, but has already shown to increase efficiency in governing of these banks as such procedures tend to increase the corporate governance of a financial institution. In times of volatility and fluctuations in the market, financial institutions need to prove their mettle by withstanding the market variations and achieve sustainability in terms of growth and as well as have a stable share value. Hence, an essential component of risk management framework would be to mitigate all the risks and rewards of the products and service offered by the bank. Thus the need for an efficient risk management framework is paramount in order to factor in internal and external risks. Introduction of innovative products, and financial instruments as well as innovation in delivery channels have highlighted the need for Indian Banks to be prepared in terms of risk management.

Indian Banks have been making great advancements in terms of technology, quality, as well as stability such that they have started to expand and diversify at a rapid rate. However, such expansion brings these banks into the context of risk especially at the onset of increasing Globalization and Liberalization. In banks and other financial institutions, risk plays a major part in the earnings of a bank. The higher the risk, the higher the return, hence, it is essential to maintain a parity between risk and return. Hence, management of Financial incorporating a set systematic and professional methods especially those defined by the Basel II becomes an essential requirement of banks. The more risk averse a bank is, the safer is their Capital base.

Challenges faced by Indian banking industry

Private sector banks are also facing certain challenges which are mentioned below:

India is a developing country. In India still there are huge numbers of people who do not use banking services due to their locations. But if we say about the people who generally use banking services, their expectations are raising due to the emergence of information technology and competitions in these industries. In India there are many foreign banks working since many years. They provided the best services to the customer and fulfill the expectations of customer. Now, the current situation has created many opportunity and challenges for Indian new private sector banks. Rural Market, Risk Management, Human Resource Management, Global Banking,

Asset Quality management and Employee' Retention.

. It recommended that the banks should be rated on a five point scale (A to E) based on the lines of international CAMEL rating model. CAMEL rating model measures the relative soundness of a bank. .The components of a bank's condition that are assessed below:

C- Capital adequacy, A-Asset quality, M-Management capability, E- Earnings, L-Liquidity

Discussions and conclusions:

I. Capital adequacy: Capital Adequacy signals the banks' ability to maintain capital commensurate with the nature and extent of all types of risk and the ability of management to identify, measure, monitor and control these risks. It also tells about the ability of bank to absorb a reasonable amount of loss and still complies with statutory Capital requirements.

Table-1: Capital adequacy ratio

Year	Total capital funds	Risk weighted Assets	Ratio
2008-09	20,29,520	134,53,075	15.0
2009-10	27,04,079	154,98,301	17.4
2010-11	31,46,216	193,96,026	16.2
2011-12	39,96,646	241,89,632	16.5
2012-13	51,40,036	305,87,889	16.8

From the Table-1, It is understood that the HDFC Bank is maintaining more than 9 percent of Capital Adequacy of RBI standard norm. It can be concluded from the study that the HDFC Bank is in a comfortable position to absorb losses since they have more capital to cover their risk weighted assets.

II. Asset quality:

The Asset quality rating is a function of present conditions and the likelihood of future deterioration or improvement based on economic conditions, current practices and trends. Asset Quality reflects the amount of existing credit risk associated with the loan and investment portfolio as well as off-balance sheet activities. The Ratio portrays the quality of the asset class in the portfolio and also the extent of deterioration of the quality of the asset portfolio. This dimension of CAMEL analysis conveys the portfolio risk the bank is subjected to and the effects it could have in the overall performance of the bank's Non-Performing Asset or NPA. Net NPA to Net Advances of HDFC from Table 2, it is observed that HDFC is able to maintain NPA's as below the standard norm of 0.4 for more than half of the study period and it is able to reduce its NPA's during the last three years drastically. HDFC Bank is efficient in allocation of resources to productive sectors.

Net NPA to Net Advances

Table-2

Year	Net NPA	Net Advance	Ratio
2008-09	62,762	98,883.0	0.63
2009-10	39,206	1,25,830.6	0.31
2010-11	29,641	1,59,982.6	0.19
2011-12	35,233	1,95,420.0	0.18
2012-13	46,895	2,39,720.6	0.20

II. Management Efficiency:

The management dimension in CAMEL analysis has assumed much important position like never before. Sound management is a key element to bank performance but is very difficult to measure since it is primarily a qualitative factor. Credit Deposit Ratio is the ratio between the Total Deposits and Advances of the bank during a given period expressed in terms of percentage. It shows the management's aggressiveness to improve income by higher lending operations.

Table-3: Credit Deposit Ratio

Year	Total Advances	Total Deposits	Ratio
2008-09	98,883.0	142,811.6	69.24
2009-10	125,830.6	167,404.4	75.16
2010-11	159,982.6	208,586.4	76.70
2011-12	195,420.0	246,706.4	79.21
2012-13	239,720.6	296,246.9	80.92

From the above Table-3 the CD ratio of the bank is more than the ideal norm of 65 to 75 percent. It can be interpreted from the table that HDFC management is following aggressive approach to improve its income by higher lending operations.

IV. Earning Quality: Earning is one of the conventional indicators of measuring financial performance of bank. This parameter is being increasingly used as indicator to measure performance of the bank due to fact that bank's are earning much of their income through core activities like investments, treasury

operation and corporate advisory services etc.

Return on Equity (ROE): It measures the rate of return on the owner's equity. It indicates bank's efficiency in generating profits from every unit of shareholders equity. ROE shows how well a bank uses its investment funds to generate earnings

Table-4: Return on Equity (ROE)

Year	PAT	Equity shareholders	Ratio
2008-09	224493	42538	5.27
2009-10	294870	45774	6.44
2010-11	392640	46523	8.43
2011-12	516707	46934	11.00
2012-13	672628	47588	14.13

From Table – 4, It can be concluded from the study that increase in the ratio indicates that the HDFC Bank is efficient in generating profits by investing its funds, and we can observe how well the bank's equity share holders are getting returns on their equity.

V. Liquidity: Liquidity reflects the adequacy of the institutions current and prospective sources of liquidity and funds management practices. The inadequacy of liquidity in a bank causes liquidity risk which is the risk of inability to meet financial commitments as they fall due, through available cash flows through sale of assets at fair market value.

Table-5: Liquid Assets/Total Assets

Year	Liquid Assets	Total Assets	Ratio
2008-09	76,324.1	18,32,707.7	0.041
2009-10	88,550.0	22,24,585.6	0.039
2010-11	1,00,598.2	27,73,525.9	0.036
2011-12	1,18,420.6	33,79,094.9	0.035
2012-13	1,38,893.7	40,03,318.9	0.034

Liquid Assets to Total Assets: This ratio shows the degree of liquidity preference adopted by the bank. . Higher value of this ratio indicates lower liquidity of banks.

It can be concluded from the Table – 5, Liquid Assets to Total Assets during the study period that this ratio of HDFC Bank indicates a fair level of consistency over a period of time.

References:

''Performance of Private sector Banks-A case study of HDFC Bank" Ph.D Thesis.

From Wikipedia, the free encyclopedia.

The economic times

www.hdfcbank.com

Rajni Saluja, Sheetal Sharma,Dr. Roshan Lal "Impact Of Merger On Financial Performance Of Bank-A Case Study of Hdfc Bank" Ijrfm Volume 2, Issue 2 (February 2012) (ISSN 2231-5985).

Uyen Dang, "The Camel Rating System In Banking Supervision A Case Study "Arcada University of Applied Sciences International Business 2011.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Commodity Derivatives – Growth, Issues and Challenges

Dr. M V S Mahendra
Associate Professor Department of Management Studies
Bhavan's Vivekananda College of Science, Humanities and Commerce, Sainikpuri, Secunderbad

Abstract: *During the 21st century derivatives are innovative financial instruments in the field of finance. The introduction of commodity derivatives has helped the market participants to hedge against risk. In India the commodity derivatives market was rationalised in 2003 and futures contracts trading have seen growth in terms of volume and value. One of the biggest contributions of the commodity futures market is its role in price stabilisation. Preventing such volatility in turn creates condition for asserting the otherwise upward pressure on prices. On other hand transparency and price dissemination initiatives by commodity exchanges and entities ensure smooth and wide information flow. The present study analyses the growth and challenges of the commodity markets in India. The study highlights the recent amendments in commodity derivatives market and the challenges. The study is based on secondary data, statistical tools like mean; graphs etc are used for the analysis of the study.*

Keywords: *Commodities, Derivatives, Price.*

Introduction:

Commodities can be defined as the products which can be purchased, sold or traded in different kinds of markets. Commodities are the raw materials that are used to create products which are consumed in everyday life around the world. The commodities can be classified into two categories; they are soft commodities and hard commodities. Soft commodities are agricultural products such as corn, wheat, sugar, Soya etc., hard commodities are natural resources that are to be mined or processed such as crude oil, gold, and silver. Commodities play an important role in economic development of any nation. There are two types of commodity markets they are spot (physical) and derivatives market. Spot market is a market where the transaction is settled on the same day. Where as a derivative market is a market where the contract is made today and the settlement of the transactions takes place at a predetermined date. The commodity derivatives are traded through an exchange, in India there are five national commodity exchanges and sixteen regional exchanges. The commodity exchanges are regulated through forward market commission. However from September 2015 onwards the forward market commission has been merged with SEBI.

Review of Literature:

Narender (2006) identified that Indian commodity derivatives market has made tremendous increase since 2003, with the increased number of commodity exchanges, transparency and trading activity. There was unpredicted mark in terms of volume and value of commodity markets. This had happened due to the role played by market forces and the active encouragement of government by

changing the policy concerning commodity derivative. Kamal (2007) found that in within short span of time, the commodity futures market has achieved exponential growth in terms of turnover. They have identified several factors that are required to be considered for making commodity market as an efficient instrument for risk management and price discovery. They suggested that the policy makers should consider specific affairs related with agricultural commodities marketing, export and processing and the instruments involved in their actual production. K Lakshmi (2007) discussed the implications of the grant of permission to FIIs, Mutual Funds and Banks in commodity derivative markets. In their study it was found that participation of these institutions may boost the liquidity and volume of trade in commodity market and they could get more opportunities for their portfolio diversification. Harwinder Pal Kaur and Bimal Anjum (2013) found that there has been tremendous growth in commodity futures market in terms of volume of trade, number of products, participants and technology. The growth of commodity derivatives market in India will lead to further development in the field of electronic warehouse receipts which may facilitate seamless nation wide commodity spot market. It would strengthen the Indian economy to face the challenge of globalization.

Objectives of the Study:

1. To Study and analyse the growth of commodity derivatives in India and with special reference to MCX.
2. To know the latest amendments in the derivative markets with special reference to commodity markets.
3. To know the various challenges of commodity derivatives market and suggest for the better performance of the market.

Commodity Exchanges: There are five national Exchanges which are presently operating in India they are

1. Multi Commodity Exchange of India Ltd.
2. National Commodity & Derivatives Exchange Ltd.
3. National Multi Commodity Exchange of India Ltd.
4. Indian Commodity Exchange Ltd.
5. ACE Derivatives & Commodity Exchange Ltd.

The following are the regional exchanges:

1. Bikner Commodity Exchange Ltd, Bikaner.
2. Bombay Commodity Exchange Ltd. Mumbai
3. Chamber of Commerce, Hapur.
4. Central India Commercial Exchange Ltd, Gwalior
5. Cotton Association of India, Mumbai.
6. East India Jute and Hessian Exchange Ltd.
7. First Commodities Exchange of India Ltd, Kochi.
8. Haryana Commodities Ltd, Sirsa.
9. Indian Pepper and Spice Trade Association, Kochi.

10. Meerut Agro Commodities Exchange Commodity Ltd, Meerut.
11. National Board of Trade, Indore.
12. Rajkot Commodity Exchange Ltd.
13. Rajdhani Oil & Oilseeds Exchange Ltd, Delhi.
14. Surendranagar Cotton Oil and Oilseeds Association Ltd, Gujarat.
15. Spices and Oilseeds Exchange Ltd, Sangli.
16. Vijay Beopar Chamber Ltd, Muzzafarnagar.

Growth of Commodity Derivatives Market:

Aggregate Turnover of Commodity Exchanges (Figures in Lakh Crs)

Year	ACE	ICEX	MCX	NCDEX	NMCE	Total
2010		2.9	86.5	11.27	3.76	104.43
2011	1.01	2.5	148.88	18.14	4.17	174.7
2012	1.73	1.51	147.8	18.29	5.16	174.49
2013	0.68	1.33	107.33	11.4	3.37	124.11
2014	0.37	0.21	52.1	10.17	1.39	64.24
2015	0.01		54.62	10.14	0.69	65.46

(Source: BS Research Bureau)

The above table shows the information relating to the aggregate turnover of commodity exchanges in India. From the above table it can be seen that there is a growth in turnover from 2010 to 2012. However from 2012 onwards the turnover in commodity exchanges has shown a declining trend because regulations and scams.

Commodity Derivatives Issues and Challenges

Commodities Suspended:

Tur and Urad were suspended from trading from 23rd January, 2007 and Rice was suspended on 27th February, 2007.

FMC Merged with SEBI

Forward market commission (FMC) is a regulatory authority for commodity futures market in India. It is a statutory body setup under forward contracts (Regulation) act 1952. The commission functions under the administrative control of the ministry of finance, department of Economic Affairs, Government of India. Forward Market Commission has been merged with SEBI with effect from September 28, 2015.

Introduction of Options in Commodity Derivatives Market:

At present the only instrument available in commodity derivatives market is futures on Individual commodities. During the union budget speech (2016-17), the Hon'ble finance minister announced that "new derivative products will be developed by SEBI in the commodity derivatives market".

Trends in Commodity Futures at MCX

Year	Agriculture		Metals		Bullion		Energy		Total	
	Volume ('000 tonnes)	Turnover (` crore)	Volume ('000 tonnes)	Turnover (` crore)	Volume ('000 tonnes)	Turnover (` crore)	Volume ('000 tonnes)	Turnover (` crore)	Volume ('000 tonnes)	Turnover (crore)
2010-11	27241.2	114152	124162.66	2508858.1	710.3504	5169268	631869	2049224.4	783983.67	9841502
2011-12	32465.17	197781.2	118499.24	2709757.7	1011.16	9963667	730401	2725889.5	882376.68	15597095
2012-13	32925.97	270295.4	151396.28	3140109.5	723.1667	7807063	816377	3663589.5	1001422.5	14881057
2013-14	20878.05	171391.4	85674.043	1726335.7	399.7552	4263195	421353	2450526.8	528305.81	8611449
2014-15	13503.88	110267.7	62083.361	1274213	240.0562	2153427	404555	1645799.4	480382.85	5183707
2015-16	9672.696	89468.46	66513.238	1151210.1	179.4326	1472769	537955.3	1430877.4	614320.76	4144324
Total	136687	953356.1	608328.81	12510484	3263.921	30829389	3542512	13965907	4290792.3	58259136

Based on this, SEBI has constituted a committee of experts as 'Commodity Derivatives Advisory Committee' (CDAC) to advise SEBI on matters concerning effective regulation and development of the commodity derivatives market. The committee has decided that commodity derivatives exchanges shall be permitted to introduce trading in 'Options'.

Physical Delivery:

Physical deliveries are not compulsory in commodity futures market. Even in instances where exchanges have introduced compulsory delivery in price sensitive agricultural commodity contracts, the low penalty rates (ranging from 1.5 – 3% in case of delivery default) fail to act as a deterrent to speculators.

Circular Trading:

This trading helps fraudulent traders create false expectations that there is a lot of demand of particular futures contracts and lures the small investors to trade in them.

Open Interest:

The growing trend of high trading volumes and low open interest is not a healthy development in the Indian futures market. Market observers believe that average global volume of open interest in agricultural commodities is 30% and for non agricultural commodities it is 40%. In contrast, the ratio between volume and open interest is much higher in the Indian commodity futures market.

Dabba Trading:

Under dabba trading, derivatives are traded on an unregulated trading platform managed by a broker, while the reference prices are based on regulated futures exchange. Dabba trading is officially banned but it is still one of the major contributors of illicit money in the Indian economy.

Wash Delivery

Wash trading is illegal and its purpose is to manipulate the market and prompt other investors into buying the positions. It is observed that over Rs.30,000 crore worth is thriving in futures exchange.

Profit and loss accounting in commodity futures trading lead to tax evasion.

The Guar Futures Trading Scandal:

The guar seed and guar gum prices rose at an extraordinary rate during the six months period between October 2011 and March 2012. Large traders in the futures market in collusion with spot market traders managed to hoard a sizeable portion of physical stocks and thereby created an artificial shortage in the spot market. Investigations carried out by Forward Market Commission found that 4,490 entities were involved in guar gum price manipulation and they together made profits of Rs.12,190 million.

The NSEL Payment Scam:

NSEL was virtually allowed to run the operations without any controls, checks and balances in regulatory vacuum from 2007 till February 2012. According to NSEL's stock position, 11190 tonnes of raw wool almost 1/4th Of India's annual wool production was stored in the warehouse of ARK imports in Lothian on July 26, 2013. Can any one imagine such a large quantity of raw wool lying in a single warehouse? This was mainly because most of the warehouse keepers were themselves involved in trading and they have issued warehouse receipts which were forged.

Conclusion:

The commodities derivatives trading was started from 2003 and it has shown a tremendous performance till 2012. However from 2012 there was a decline in trading of commodity derivative. The slow down in trading is mainly because of frequent suspension of commodities that were traded. Lack of regulatory body, lack of awareness of among the general public to trade. The merger of FMC with SEBI is a good imitative and it may lead to increase in the transparency in trading resulting in increasing in the trading of commodity derivatives. The participation of banks in trading and creating awareness among the stake holders will result in better performance of the commodities trading.

Acknowledgements

I thank UGC SERO, Head, Department of Management Studies, Principal and Management of Bhavan s Vivekananda College of Science, Humanities and Commerce for encouraging us to do research work.

References:

1. Ahuja, Narender L. (2006), "Commodity Derivatives market in India: Development, Regulation and Future Prospective", International Research Journal of Finance and Economics. Vol. 1 No. 2, pp. 153-162

2. Kabra , Kamal Nayan (2007), "Commodity Futures in India", Economic and Political Weekly, Money, Banking and Finance, Vol. 42, No. 13, pp.1163-1170.

3. K. Lakhsmi (2007), "Institutional Investors in Indian Commodity Derivative Market- Prospective for the Futures", working paper series

4. Chakrabarty, Ranajit and Sarkar Asima (2010), "Efficiency of the Indian Stock Market with Focus on Some Agricultural Product", Paradigm Vol.14 No. 1, pp. 85-96

5.Dummu, Tata Rao (2009), "Commodity Futures Market in India: Its Impact on Production and Prices", Indian Journal of Agricultural Economics, Vol. 64 No. 3, pp. 333-356.

6. Iyer, Vishwanathan and Pillai Archana (2010), "Price Discovery and Convergence in the Indian Commodities Market." Indian Growth and Development Review, Vol. 3 No.1, pp. 53 61

7. Srivastava ,Swami Prakash and Saini ,Bhawana (2009), "Commodity Futures

Markets and its Role in Indian Economy", Indian Journal of Agricultural

Economics, Vol. 64 No.3, pp. 398

8. Srivastava ,Swami Prakash and Saini ,Bhawana, (2009), "Commodity Futures

Markets and its Role in Indian Economy", Indian Journal of Agricultural

Economics, Vol. 64 No. 3, pg. 398

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

The Dynamic Relationship between Financial Development, FDI, Industrialisation and Energy Consumption in India

Mallaiah Jalle, Osmania University Hyderabad

Narasimha Rao Jadi, Professor, Department of Economics Osmania University Hyderabad
Santhosha Gujjunuri, PhD Scholar, Osmania University Hyderabad

Abstract : *The study aims to investigate the dynamic relationship between energy consumption, financial development, foreign direct investment (FDI), industrialization and trade openness in India using annual data from 1975 to 2010. Our empirical analysis employs robust Johansen cointegration test and VECM Granger causality framework. The empirical results of Johansen cointegration suggest that there is a significant long-run equilibrium relationship between energy consumption, financial development, foreign direct investment, industrialization and trade openness. Similarly, the short-run Granger causality results display that there is an evidence of a feedback relationship between energy consumption-financial developments, energy consumption-foreign direct investment (FDI). We also found one way causality runs from financial development, FDI, industrialization and trade openness. The results on long-run (error correction term) causality shows that energy consumption, financial development, FDI, industrialization and trade openness have bidirectional causality.*

Key words: *financial liberalization, energy consumption, industrialization*

1. Introduction

India is the second largest commercial energy consumer in Non-OECD East Asia, comprising 19 percent of the region's total primary energy consumption. Economic growth in India has largely been associated with increased energy consumption. While 60% of total energy needs in India are met by commercial energy sources, remaining 40% are comprised of non-conventional fuels. Over past few years, climate change has become one of the main concerns driving energy policy. More than 150 countries, including India, have committed themselves under the United Nations Framework Convention on Climate Change to formulate and implement mitigation and adaptation measures to climate change. India accounts for over 3.5% of world carbon emissions. Since energy use is a major source of emissions, it is necessary to focus on the management of energy demand and supply as a means to abatement.

Financial development, FDI, industrialization, and trade openness may affect the consumption of energy in various ways. First, financial development increases energy use through an efficient stock market and banking/other financial intermediation. Tamazian et al. (2009) declare that

financial development may reduce energy consumption through increasing energy efficiency and energy savings. Second, on the one hand, FDI could decrease energy consumption because of the FDI technology effect. However, on the other hand, it may lead to increased energy consumption due to the FDI scale effect. According to the FDI technology effect, engaging multinational firms through FDI can bring their advanced greener technology to the host country, which promotes less energy consumption by increasing energy efficiency (Hubler, 2009 and He et al., 2012). Conversely, the FDI scale effect suggests that FDI plays an important role in increasing the host nation's industrial output, and thus, its overall energy consumption (Sadorsky, 2010). Third, the link between industrialization and energy use is based on the idea that industrialization allows the introduction of new equipment and machinery to carry out production of goods and services, which uses more energy than traditional agriculture or manufacturing. Finally, trade openness also increases energy use as it is a reflection of a significant amount of imported and exported goods.

2. A critical review of literature

The relationships between financial development, foreign direct investment, industrialization and energy consumption has attracted the attention among the environment economists and policy makers. However, there are a number of studies that have investigated between these variables.

Tamazian et al. (2009) examined the effect of financial development in the BRIC (Brazil, Russia, India, and China) countries using the modelling approach of the standard reduced form during 1992 to 2004. Results showed that higher levels of financial and economic development reduce environmental pollution, while financial liberalization and financial openness are crucial factors for reducing CO2 emissions. In addition, adopting policies relevant to financial liberalization and openness to attract greater levels of research and development (R&D) and foreign direct investment (FDI) may reduce environmental pollution in these countries. Kakar et al. (2011) find that there is no significant relationship between financial development and energy consumption in the short-run in Pakistan, when financial development is measured by the broad money and domestic credit to the private sector. However, the study finds a long-run relationship between these variables.

Tang and Tan (2012) explore the causality between energy consumption, economic growth, relative price, financial development and FDI in Malaysia from the sample period 1972 to 2009. The study uses the Johansen–Juselius cointegration test and ARDL bounds testing approach and finds that energy use plays an important role in developing the financial sector. Conversely, Islam et al. (2013), investigating the same issue in the same country, find that financial development has a positive significant effect on energy consumption both in the short- and long-run. Shahbaz et al. (2013) employ the multivariate framework to analyse the link between energy consumption, economic growth, financial development and trade in China from 1971 to 2011. The ARDL bounds testing approach yields evidence of a long-run relationship between per capita energy consumption and financial development in China. In addition, the authors reveal

that there is a bi-directional causality between energy consumption and financial development.

Meilnik and Goldemberg (2002) examine the relationship between FDI and energy intensity in a sample of 20 developing countries over the period between 1987 and 1998. From a short-time span data set, the study provides empirical evidence that there is a positive significant relationship between FDI and energy intensity. Mudakkar et al. (2013b) attempted to empirically verify the causality between energy demand and the four macroeconomic factors of economic growth, industrialization, environmental degradation and resource depletion in Pakistan from 1975 to 2011. They also employ the Granger causality test in the frequency domain using the Pierce framework. Their results show that energy demand granger causes industrialization. Using panel data from 76 developing countries, Sadorsky (2013) addresses how urbanization and industrialization affect energy intensity. The author employs heterogeneous panel regression techniques and concludes that industrialization increases energy intensity both in the short- and long-run.

3. Data sources and methodology

3.1 Data sources

The present study uses annual data covering the period from 1975 to 2010 for India. The variables in this study include energy consumption, financial development, foreign direct investment, GDP per capita, industrialization and trade openness. The measurement of the variables as follows: energy consumption (EC) is measured by sum of primary energy sources; financial development (FD) is measured by domestic credit to private sector as share of GDP; foreign direct investment (FDI) as, net inflows, share of GDP; industrialization (IND) is measured using total value added by industry as share of GDP; economic growth is measured by real GDP per capita (GDPPC, constant 2005 US$); and trade openness (TRDOPN) is measured by sum of exports and imports (goods and services) as share of GDP. Data collected from the World Development Indicators (WDI) online data source (World Bank). We transformed all the variables into natural logarithms, because, log-linear specification can produce better results as compared to the linear functional form of the model.

3.2 Methodology

3.2.1 Cointegration test

The above unit root test results show that the energy consumption (EC), financial development (FD), foreign direct investment (FDI), GDP per capita (GDPPC), industrialization (IND) and trade openness (TRDOPN) are stationary at first difference. Thus we explore cointegration methodology to investigate whether any long run relationship exists between energy consumption (EC) and explanatory variables.

3.2.2 VECM Granger causality test

In this section, we describe the methodology that aims to explore the dynamic causal relationship between economic growth, renewable energy consumption, non-renewable energy consumption, gross fixed capital formation and labour force. Engle and Granger (1987) argue that if non-stationary variables are cointegrated in the long-run, then the vector error correction model (VECM) can be applied for exploring the direction of causality among the variables in the short-run as

well as in the long-run. The short-run Granger causality can be established by conducting a joint test of the coefficients based on the F-test and the x^2 test. Likewise, the long-run Granger causality between the variables can be understood through the statistical significance of the lagged error term in the VECM framework based on the t-statistics.

Ganger causality test for short-run and long-run can be described based on the following equations:

$$\Delta EC_t = \beta_1 + \sum_{j=1}^{p} \beta_{1j} \Delta EC_{t-j} + \sum_{j=1}^{p} \beta_{2j} \Delta FD_{t-j} + \sum_{j=1}^{p} \beta_{3j} \Delta FDI_{t-j} + \sum_{j=1}^{p} \beta_{4j} \Delta GDPPC_{t-j} + \sum_{j=1}^{p} \beta_{5j} \Delta IND_{t-j} + \sum_{j=1}^{p} \beta_{6j} \Delta TRDOPN_{t-j} + \lambda_7 ECM_{t-1} + \varepsilon_{1t}$$

$$\Delta FD_t = \beta_1 + \sum_{j=1}^{p} \beta_{1j} \Delta FD_{t-j} + \sum_{j=1}^{p} \beta_{2j} \Delta EC_{t-j} + \sum_{j=1}^{p} \beta_{3j} \Delta FDI_{t-j} + \sum_{j=1}^{p} \beta_{4j} \Delta GDPPC_{t-j} + \sum_{j=1}^{p} \beta_{5j} \Delta IND_{t-j} + \sum_{j=1}^{p} \beta_{6j} \Delta TRDOPN_{t-j} + \lambda_7 ECM_{t-1} + \varepsilon_{1t}$$

$$\Delta FDI_t = \beta_1 + \sum_{j=1}^{p} \beta_{1j} \Delta FDI_{t-j} + \sum_{j=1}^{p} \beta_{2j} \Delta EC_{t-j} + \sum_{j=1}^{p} \beta_{3j} \Delta FD_{t-j} + \sum_{j=1}^{p} \beta_{4j} \Delta GDPPC_{t-j} + \sum_{j=1}^{p} \beta_{5j} \Delta IND_{t-j} + \sum_{j=1}^{p} \beta_{6j} \Delta TRDOPN_{t-j} + \lambda_7 ECM_{t-1} + \varepsilon_{1t}$$

$$\Delta GDPPC_t = \beta_1 + \sum_{j=1}^{p} \beta_{1j} \Delta GDPPC_{t-j} + \sum_{j=1}^{p} \beta_{2j} \Delta EC_{t-j} + \sum_{j=1}^{p} \beta_{3j} \Delta FD_{t-j} + \sum_{j=1}^{p} \beta_{4j} \Delta FDI_{t-j} + \sum_{j=1}^{p} \beta_{5j} \Delta IND_{t-j} + \sum_{j=1}^{p} \beta_{6j} \Delta TRDOPN_{t-j} + \lambda_7 ECM_{t-1} + \varepsilon_{1t}$$

$$\Delta IND_t = \beta_1 + \sum_{j=1}^{p} \beta_{1j} \Delta IND_{t-j} + \sum_{j=1}^{p} \beta_{2j} \Delta EC_{t-j} + \sum_{j=1}^{p} \beta_{3j} \Delta FD_{t-j} + \sum_{j=1}^{p} \beta_{4j} \Delta FDI_{t-j} + \sum_{j=1}^{p} \beta_{5j} \Delta GDPPC_{t-j} + \sum_{j=1}^{p} \beta_{6j} \Delta TRDOPN_{t-j} + \lambda_7 ECM_{t-1} + \varepsilon_{1t}$$

Note: The estimation of summary statistics is natural logarithms

The summary statistics of this study are presented in above table 1. This indicates that all the series are having positive mean. The series of energy consumption, foreign direct investment, GDP per capita and trade openness are having positive skewness and financial development and industrialisation series shows negative skewness. This implies that the positively skewed series are flatter to the right as compared to the normal distribution and while negative skewed series is flatter to the left. Kurtosis is concentrated with the flatness or peakedness of frequency curve. Here, the kurtosis values of energy consumption, GDP per capita and trade openness are less than 3, which indicates that these variables have normal kurtosis while other variables of financial development, foreign direct investment and industrialization have leptokurtic (more peaked than the normal curve). Results of JB test find that the null hypothesis is rejected for all the variables and suggest that all the observed series are not normally distributed.

The table 2 provides information on correlation between the observed variables. The energy consumption is

highly positively correlated GDP per capita and trade openness. It is also identified that financial development, foreign direct investment and industrialization are positively correlated to energy consumption. It signifies that all the variables energy consumption, financial development, foreign direct investment, GDP per capita, industrialization and trade openness are moving in the same direction. The results also reveal that there is high correlation between the identified variables.

Table 2: Correlation Matrix

	EC	FD	FDI	GDPPC	IND	TRDOPN
EC	1	0.844	0.802	0.989	0.779	0.937
FD		1	0.702	0.846	0.921	0.865
FDI			1	0.843	0.562	0.839
GDPPC				1	0.748	0.950
IND					1	0.787
TRDOPN						1

Note: Variables were in natural logarithms

The unit root tests are performed on the natural logarithm data series. The ADF and PP tests are carried out on the assumption that the null hypothesis of a unit root (non-stationary) is tested against the alternative hypothesis of no unit root (stationary). These tests models are estimated at the levels and first-difference in each case. At levels, the ADF and PP tests results of GDP per capita reject the null hypothesis of unit root at l % level of significance variable. Hence, it suggests that the stationary at their level. The ADF and PP tests results on the other variables do not reject the null hypothesis of unit root at the 5 % level of significance. This signifies that these series are non-stationary at their levels. Therefore, we applied ADF and PP tests statistics on the first differenced data. The first differenced data results reject the null hypothesis of unit root at 1 % significance level and 5% level of significance for all the variables. In other words, all the variables are integrated of order I (1).

The study applied cointegration test and the results of this test displayed in table 4. The findings show that there is a significant cointegration relationship between the energy consumption, financial development, foreign direct investment, industrialization and trade openness in India, meaning that there is a long run equilibrium relationship between energy consumption, financial development, foreign direct investment, industrialization and trade openness

Table 3: ADF and PP Test Results

Variables	ADF		PP	
	Level	First Difference	Level	First Difference
EC	1.752 (0.999)	-5.483 (0.000)*	1.867 (0.999)	-5.476 (0.000)*
FD	-0.359 (0.905)	-7.690 (0.000)*	0.603 (0.857)	-5.058 (0.000)*
FDI	-1.349 (0.595)	-4.761 (0.000)*	-1.351 (0.594)	-6.057 (0.000)*
GDPPC	3.044 (1.000)*	-5.628 (0.000)*	5.484 (1.000)*	-5.634 (0.000)*
IND	-1.467(0.537)	-7.095 (0.000) *	-1.359 (0.590)	-7.095 (0.000)*
TRDOPN	0.432 (0.981)	-2.913 (0.054) **	0.162 (0.966)	-4.260 (0.002)*

Note: Where (*) and (**) denote significance level at 1 % and 5 %, respectively. ADF and PP tests examine the null hypothesis of a unit root against the alternative of no unit root. These two tests are performed on the natural logarithm data series.

5. Conclusion

Empirical results of cointegration test suggest that there is a significant long-run relationship between energy consumption, financial development, FDI, industrialization, economic growth and trade openness in India. This indicates that all the above variables share a common trend in the long-run. Further, results from the short-run Granger causality test shows evidence of a dynamic feedback relationship between energy consumption and FDI, energy consumption and economic growth. In addition to that, there is also one-way causality that runs from financial development, industrialization and trade openness to energy consumption.

These evidences suggest that higher FDI inflows and economic growth leads to higher consumption of energy and vice versa. Furthermore, growth in financial development, industrialization and trade openness also leads to higher energy consumption. The long-run Granger causality test results also reveal that there is significant long-run causality between these variables.

Table 4: Cointegration test results

Hypothesed (Trace)	Statistic	Critical Value	Prob. **
None*	132.13	95.75	0.00
At most 1*	85.66	69.81	0.00
At most 2*	51.84	47.85	0.02
At most 3	28.59	29.79	0.06
Hypothesed (Max-Eign)	**Statistic**	**Critical Value**	**Prob. ****
None*	46.46	40.07	0.00
At most 1	33.82	33.87	0.05

*denotes rejection of the hypothesis at 0.05 level ** MacKinnon-Haug-Michelis (1999) p-values

Table 5: VECM Granger Causality Test

		ΔEC	ΔFD	ΔFDI	ΔGDPPC	ΔIND	ΔTRDOPN
Short-run Granger causality							
ΔEC	F- Statistic		11.980**	6.222**	0.803	0.744	0.072
	Prob.		0.008	0.044	0.669	0.689	0.964
ΔFD	F- Statistic	2.591*		0.255	4.006**	0.028	1.833
	Prob.	0.273		0.880	0.134	0.985	0.399
ΔFDI	F- Statistic	2.722*	1.162		0.137	0.201	1.120
	Prob.	0.256	0.559		0.933	0.904	0.571
ΔGDPPC	F- Statistic	10.435**	3.707**	8.335		0.738	2.103*
	Prob.	0.005	0.156	0.015		0.691	0.349
ΔIND	F- Statistic	11.132**	0.282	4.561**	6.569		3.196**
	Prob.	0.003	0.868	0.102	0.037		0.202
ΔTRDOPN	F- Statistic	14.208**	3.429**	3.200**	7.349**	4.927**	
	Prob.	0.000	0.180	0.201	0.025	0.085	
Long-run Granger causality							
Ect (-1)	t- Statistic	2.281**	4.059**	1.651	1.672	2.706**	6.265**
	Prob.	0.030	0.000	0.109	0.105	0.011	0.000

Note: $Ect_{(-1)}$ represents the error correction term with one lagged period;

Δ represents the first difference; The optimal lag length is selected based on the AIC; ** & * denote rejection of null hypothesis of no Granger causality at the 1% and 5% significance levels, respectively.

References

Akhmat, G., Zaman, K., Shukui, T., Irfan, D., Khan, M.M., 2014. Does energy consumption contribute to environmental pollutants? evidence from SAARC countries. Environmental Science and Pollution Research, 21, 5940-5951.

Al-mulali, U., Binti Che Sab, C.N., 2012a. The impact of energy consumption and CO2 emission on the economic and financial development in 19 selected countries. Renewable and Sustainable Energy Reviews, 16(7), 4365-4369.

Al-Mulali, U., Binti Che Sab, C.N., 2012b. The impact of energy consumption and CO2 emission on the economic growth and financial development in the Sub Saharan African countries. Energy, 39(1), 180-186.

Kakar, Z.K., Khilji, B.A., Khan, M.J., 2011. Financial Development and Energy Consumption: Empirical Evidence from Pakistan. International Journal of Trade, Economics & Finance, 2(6).

Islam, F., Shahbaz, M., Ahmed, A.U., Alam, Md.M., 2013. Financial development and energy consumption nexus in Malaysia: a multivariate time series analysis. Economic Modelling, 30, 435-441.

Hübler, M., 2009. Energy saving technology diffusion via FDI and trade: a CGE model of China: Kiel working paper.

Kakar, Z.K., Khilji, B.A., Khan, M.J., 2011. Financial Development and Energy Consumption: Empirical Evidence from Pakistan. International Journal of Trade, Economics & Finance, 2(6).

Mudakkar, S.R., Zaman, K., Shakir, H., Arif, M., Naseem, I., Naz, L., 2013a. Determinants of energy consumption function in SAARC countries: Balancing the odds. Renewable and Sustainable Energy Reviews, 28, 566-574.

Mudakkar, S.R., Zaman, K., Khan, M.M., Ahmad, M., 2013b. Energy for economic growth, industrialization, environment and natural resources: Living with just enough. Renewable and Sustainable Energy Reviews, 25, 580-595.

Mielnik, O., Goldemberg, J., 2002. Foreign direct investment and decoupling between energy and gross domestic product in developing countries. Energy Policy, 30(2), 87-89.

Sadorsky, P. 2010. The impact of financial development on energy consumption in emerging economies. Energy Policy, 38(5), 2528-2535.

Sadorsky, P., 2013. Do urbanization and industrialization affect energy intensity in developing countries? Energy Economics, 37, 52-59.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Goods and Services Tax: It's Impact on Various Sectors

Dr. Raavi Radhika, Associate Professor, GITAM University, Hyderabad

Siva Krishna Golla, Research Scholar, School of Economics, University of Hyderabad

Abstract: *"One Nation, one Tax" proposes a national value-added tax to be implemented in India from the first of April 2017. Goods and Services tax bill (GST bill) is being considered as the biggest tax reform in India, after independence it is 122 Amendment. Goods and Services tax would be a comprehensive indirect tax on manufacture sale and consumption of goods and services throughout India to replace indirect taxes imposed by the central and state governments. Goods and Services tax would be imposed and collected at each stage of sale or purchase of goods or services based on the input tax credit method the introduction of goods and services tax GST would be a significant step in the reform of indirect taxation in India amalgamating several central and state taxes into a single tax would mitigate cascading or double taxation facilitating a common national market from the consumer point of view the biggest advantage would be in terms of a reduction in the overall tax burden on goods which is currently estimated at twenty five percent to thirty percent free movement of goods from one state to another without stopping at state borders for hours for payment of state tax or entry tax and reduction in paperwork to a large extent.This Paper main objective is to study basic concepts of proposed GST and to find out reasons why India needs GSTand also to find out the impact of GST on various sectors in India.*

Keywords: *Goods and Services tax (GST),indirect taxation, Tax reforms,*

Historical background about GST

The slogan "one nation one tax" which means same tax rate anywhere in India. Atal Bihari Vagpai a formerprime minister of indiain 2000 put forth the idea of GST P.Chidambaram former finance minister of india in 2006 announced that GST to be implemented on 1/April/2010, but due to various amendments and queries it took this long. More than 20 different types of taxes will be put to rest proposed GST isaround 18% analytics believe that this will be reflected as 1-2% percent increase in the country's GDP.

Objectives:

- To understand the basic concept of the proposed GST.
- To find out various indirect taxes that are proposed to be included and excluded from GST.
- To find out reasons why India needs GST.
- To study GST effect on various Sectors and there share price.

Concept of the Proposed GST in India:

The present India indirect tax landscape can be broadly classified into three buckets

Table – I

Central taxes levied by the central government of India.	State taxes levied by the respective state governments.	Municipal taxes levied by the municipal corporations located within the state boundaries.
Excise Duty: tax on the activity of production or manufacturing of goods	Value added tax: it is levied by the respective state governments on sale of goods within the boundaries of the state	Octroi: On entry of goods into the local area
Service Tax: tax on the activity of services providing or receiving	Entry tax: it is levied on entry of goods into the state	Local Body Tax: on entry of goods into the local area
Customs Duties: tax on import of goods	Luxury tax: On Luxury goods not considered essential (hotels) and movies	
Central Sales tax course CST: which is levied on sale of goods from one state to another state	Entertainment Tax: On movies	

Various Indirect taxes

Indirect taxes that would be included and excluded from GST:After implementation actually we will have to pay one taxe. It goes to

- CST that is central GST this will be taken by central government.
- GST that is state GST this will be taken by state government.
- IGST that is integrated GST that is tax on business between two states
- Already 165 countries in the world have GST like tax system example: Australia 10-percent, new zealand 15-percent, France 19.6 percent, Pakistan 18-percent, Germany 19-percent .

In India GST council proposed a three-tiered tax structure:

- A low rate of 12 % for essential items,
- A high rate of 40 % for luxury cars, tobacco products and aerated beverages.
- A standard rate of 17-18 %.

Why India would need to implement GST as soon as possible:

Table –II

CGST Central GST	(SGST)States GST
Taxes to be Included (Merged) within CGST • Excise Duty • Service Tax • Customs Duties (except basic custom duty) • Central Sales tax	**Taxes to be Included (Merged) within SGST** • Value added Tax (VAT) • Entry tax • Luxury Tax • Entertainment Tax
Taxes not to be Included within CGST • Basic custom duty	**Taxes not to be Included within SGST** • Municipal Octroi • Toll tax • Taxes on lottery

Complex Indirect tax regime:

India is the home for indirect taxes and probably has all the possible combination of indirect taxes, these taxes are levied by different authorities under the power granted by different legislations and each of this legislation has its own compliance requirement to be managed. The businesses find it very difficult to operate through such a complex indirect tax regime and a lot of time, effort goes in managing the indirect tax on a day-to-day basis. GST is essentially required to simplify such a complex regime.

Cascading Effect:

The second important reason is the cascading effect of taxes. India has a lot of scenarios of tax on taxExample: Excise duty is charged on the activity of manufacture and VAT is charges on the activity of sale, when VAT has to be charged it has to be charged on the value including the Excise duty. So the VAT is charged and paid even on the excise duty component resulting in cascading effect of taxes and increasing the cost burden. GST by way of its legislation and a strong principle of not having any cascading effect should go away this cascading effect and thereby reduce the cost of taxes that are embedded in goods and services.

Changing Business environment:

The other reason is that the businesses are changing rapidly most of our indirect tax legislations where formed are made for brick-and-mortar manufacturing kind of businesses the central sales tax legislation comes from 1956 the Central Excise comes from 1944. the Excise and Customs registration belong to the 70s and 80s decade, though these legislations have been repeatedly amended they have not kept base with the growing businesses and the changing nature of businesses the legislation's - don't appropriately accommodate the

transaction pattern of the current online or internet form of businesses and these online internet for businesses are going to the businesses of future and therefore there is a requirement for government to revamp the entire existing indirect tax in the GST so that it can accommodate the new kind of businesses that are coming up.

Leakage of revenue to governments:

The other important aspect is the leakage of revenue to governments under the present indirect tax systems there are various concessions benefits and exemptions that are available under the indirect tax regime that results in lower revenue to the government. The GST proposes on a principal level to have very few exceptions and very few conditions and therefore GST will enable to increase the revenue and prevent the present leakage happening under the existing indirect tax system.

Trade barriers:

There various trade barriers in the current indirect tax system the central sales tax which is paid on interstate transaction of goods act to the trade Barrier as it is not creditable whereas various restrictions in terms of input tax credit that leads to increase in cost there are various statutory forms road permits etc are required for moments of goods between the states within the country all these aspects access trade barrier GST is expected to simplify all these processors and abolish various of this requirement and therefore supporting the businesses to grow and develop.

What are the key things that needs to be done for the purpose of implementation of GST in India

The Constitutional Amendment Bill (CAB) provides the powers to both the state governments and the central government to tax all transaction in both goods and services in the present situation there are various restrictions for example services can be taxed only by the central government and sale of goods within the state can be taxed by the state governments.

GST aims for harmonization of indirect tax across the country for this the Constitution needs to be amended to give powers to both the central government and state government to tax all aspects of both goods and services.

This (CAB) should be approved in Rajyasabha in the budget session 2016

IT infrastructure: Open a GST portal where one has to register their PAN number and they will be provided with an unique identity number through which citizens can pay tax at once now before its implementation the bill has to be passed from at least half of the Indian state's legislative assembly then GST council will be established and GST legislations, IT infrastructure etc will take time.GST implementation requires huge Administrative setup and training.

After implementation Problems:

- There is no tax on packaged food items but after GST it will go upto 18% thus increasing the cost too.
- Buying jewelry will become more expensive.
- Today tax is after the discount but after GST tax will be on MRP
- Now tax on mobile phones and credit cards is around 15%but after GST it will be 18%.

Advantages:

- Today taxon house and car is about 30% that will go down to eighteen percent after GST is implemented.
- Restaurant rates will go down.
- home appliances will become less expensive it will boost the industry's

GST Impact on Various Sectors:

FMCG

GST will be positive for household and personal care space, because of tax rate reduces by 200-500 basis points (bps), with this there will be less warehousing and logistical requirements. But, working capital for retailers, negative effect because of tax rates

Tobacco Manufacturers

Negative effect on cigarette and tobacco manufacturers like ITC Godfrey Phillips Finance Ministry panel headed by CEA Arvind Subramanian suggested 40 per cent goods and services tax (GST) rate on tobacco products. However, the final GST rate would be decided by the GST Council,

The share price of ITC slid the most — 6.57 per cent to Rs 313.55, followed by Godfrey Phillips (down 4.90 per cent to Rs 1,490.25), VST Industries (down 2.85 per cent to Rs 1,643.10) and Golden Tobacco (down 0.56 per cent to Rs 44.35). **Stock impact:** Positive for Hindustan Unilever, Emami, Godrej Consumer. Negative for Titan, Bata, ITC.

LOGISTICS: Passage of GST will lead to elimination of central sales tax and inter-state value-added tax arbitrage possibilities. This will lead to consolidation of warehouses and increased efficiencies in the logistics chain.

Stock impact: Positive for Container Corporation of India, Adani SEZ, Gujarat Pipav Port (longer term)

INFRASTRUCTURE: Clarity on works contract taxation is the key benefit for the sector. This could reduce litigation, as it eliminates the difference between sales and services.

Stock impact: Positive for Larsen & Toubro (L&T)

Consumer Durables: Consumer durables will benefit from improved logistics. Direct benefits up to 200-300 bps in cost savings may accrue. A significant portion of direct benefits will be passed on to end consumers because of a highly competitive market.

Stock impact: Positive for Voltas, Havells, Crompton Greaves

OIL & GAS

Key petroleum products like crude, natural gas, high speed diesel and ATF have been kept out of GST. Clarity is awaited for others. Compliance costs are likely to rise because of dual indirect tax mechanism.

Stock impact: Neutral. Do not foresee any meaningful change on oil & gas companies

CEMENT

Overall tax incidence on the sector could decline. The sector will also benefit from expected decline in logistic costs. Firms can be expected to pass on the benefits, given that demand and plant utilisation levels are picking up.

Stock impact: Positive for most companies

WIND POWER

GST will be negative for wind, turbine generator manufactures like Suzlon and

InoxWind, as pressure on developer margins and internal rates of return could eventually force reduction in prices and realisations, up to 10-13 per cent. However, if components are included in the exemption list, the impact of GST will be nullified.

Stock impact: Negative for Suzlon, Inox Wind

UTILITIES

Exclusion of "sale of electricity" from GST could potentially raise the cost of coal-fired and renewable energy for Discoms. Profitability of independent power producers selling via medium/long-term PPAs is unlikely to be dented as cost escalation would likely be passed on.

Stock impact: Positive for CESC, negative for JSW Energy **Pharmaceuticals:** GST could be negative for the sector, as it is likely to increase indirect tax. Analysts say indirect taxes paid by pharma companies could increase by 60 per cent and MRP by four per cent.

Stock impact: Negative for Alkem, GlaxoPharma.

Conclusion:

After Implementation of GST, what really happens to the prices, is GST brings down the prices? That needs to be looked. How companies will end up, with a lower tax burden or a higher tax burden, from a point of view of the removal of cascading how much of the removal of efficiency cascading enhance efficiency is offset by rates is something that will have to be seen. In the past, countries, which opted for GST, were faced with a scenario of high inflation and slowdown in consumption initially. Whether that history will be repeated in India, GST bill is seems to be in the last stages of clearing the RajyaSabha hurdle. Most analysts suggest that from a macro-economic perspective, while the short-term impact of GST could be mixed, the long-term impact will be positive.

References

1. Australian Bureau of Statistics (2004), Consumer Price Index, cat. 6401.0, ABS,Canberra.
2. Australian Competition and Consumer Commission (2003), GST Final Report: ACCC
3. Dawkins, P. Johnson, D. (1998), 'The Interaction of Tax and Social Security:
4. Johnson, D.T, Freebairn, J. and Scutella, R. (1999), Evaluation of the Government'sTax Package, Melbourne Institute of Applied Economic and Social Research,University of Melbourne, Melbourne.
5. Queensland Treasury (2001), CPI Exclusive of GST Effects: June Quarter 2001 (abriefing note), Office of Economic and Statistical Research, Queensland Treasury,Brisbane.
6. Valadkhani, A. Layton, A.P. (2004), 'Quantifying the Effect of GST on Inflation inAustralia's Capital Cities: An Intervention Analysis', Australian Economic Review,37(2), 125-3
7. GST worries for cigarette companies: www.business-standard.com
8. TC drops nearly 6% after panel suggests 40% GST rate on tobacco products; www.livemint.com

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Performance of Iron and Steel Industry in Present Scenario

Sreeram Daida & K Naveen Kumar, Associate Professors of Commerce
Badruka College of Commerce & Arts Kachiguda, Hyderabad

Abstract : *Indian Iron and Steel Industry has made rapid progress in the past few years. Indian Iron and Steel Industry forms the backbone of our country as many Industries are dependent on Iron and steel for developing other finished products. In India the Iron and Steel Companies in both Public and Private Sectors have performed well in the global market also. They have made their presence felt in other developed countries. India is the third largest producer of raw steel and the largest producer of sponge iron in the world. The industry produced 91.46 million tons of total finished steel and 9.7 million tons of pig iron. Most iron and steel in India is produced from iron ore. The growth in the Indian Iron and Steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the Iron and Steel sector has been a major contributor to India's manufacturing output. This paper studies the performance, challenges and issues related to Iron and Steel Industry.*

Key words*: Iron and Steel Industry, production, consumption, growth.*

Introduction:

Iron and Steel is crucial to the development of any country and is considered to be the backbone of the economy. It is a product of a large and technologically complex industry having strong forward and backward linkages in terms of material flows and income generation. All major industrial economies are characterized by the existence of a strong iron and steel industry and the growth of many of these economies has been largely shaped by the strength of their iron and steel industries in their initial stages of development. Iron and Steel industry was in the vanguard in the liberalization of the industrial Sector and has made rapid strides since then. The new Greenfield plants represent the latest in technology. Output has increased, the industry has moved up in the value chain and exports have raised consequent to a greater integration with the global economy. The new plants have also brought about a greater regional dispersion easing the domestic supply position notably in the western region. At the same time, the domestic steel industry faces new challenges. Some of these relate to the trade barriers in developed markets and certain structural problems of the domestic industry notably due to the high cost of commissioning of new projects. The domestic demand too has not improved to significant levels. The litmus test of the steel industry will be to surmount these difficulties and remain globally competitive.

Objectives of the present study:

1. To present the global scenario of iron and steel industry as well as the production, consumption and growth of iron and steel industry in India.

2. To study the performance of Iron and Steel Industry in India

3. To highlights the challenges and opportunities of Indian steel industry.

Source of the study:

The study is based on the data collected from secondary source which is gathered from the Annual Reports of different iron and steel sectors, published materials in the form of books, articles from journals, websites and reports are relevant to the study. The study of steel industry in India covers a period of 05-years, commencing from 31st March, 2011 to 2016.

History of iron and steel industry in india:

Iron and steel industry in the country has experienced a sustainable growth since the independence of the country. The finished steel production in India has grown from a mere 1.1 million tonnes in 1951 to 23.372 million tonnes in 1997-98. During the first two decades of planned economic development, i.e. 1950-60 and 1960-70 the average annual growth rate of steel production exceeded 8%. However, this growth rate could not be maintained in the decades to follow. During 1970-80, the growth rate in steel production came down to 5.7% per annum and picked up marginally to 6.4% per annum during 1980-90.Though India started steel production in 1911, steel exports from India began only in 1964. Exports in the first five years were mainly due to recession in the domestic iron and steel market. Once domestic demand revived, exports declined. India once again started exporting steel only in 1975 touching a figure of 1 million tonne of pig iron export and 1.4 million tonnes of steel export in 1976-77. Thereafter, exports again fell rapidly to meet rising domestic demand. Only after liberalisation of the steel sector the exports of iron and steel have once again started increasing. Though the country's production of iron and steel is sufficient to meet the domestic demand, however, some quantity of steel is always needed to be imported especially those grades and qualities which are required in small quantities, and therefore do not justify setting up of production capacities.

Steel industry: global scenario:

The current global steel industry is in its best position in comparing to last decades. The price has been rising continuously. The demand expectations for steel products are rapidly growing for coming years. The shares of steel industries are also in a high pace. The steel industry is enjoying its 6th consecutive years of growth in supply and demand. And there is many more merger and acquisitions which overall buoyed the industry and showed some good results. The supreme crisis has lead to the recession in economy of different countries, which may lead to have a negative effect on whole steel industry in coming years. However steel production and consumption will be supported by continuous economic growth.

Table-01: World Crude Steel Production In 2015

Rank	Country	Production (million tonne)
1	China	803
2	Japan	105
3	India	89
4	USA	78
5	South Korea	69
6	Germany	42
7	Brazil	33

Source: World Steel Association; Annual Reports 2015.

Global crude steel production reached 1599 million tonne in calendar year 2015. China was the largest crude steel producer in the world with production reaching 803 million tonne. India emerged as the 3rd largest producer in 2015.

Production, consumption and growth of steel industry in India:

The rapid pace of growth of the industry and the observed market trends called for certain guidelines and framework. Thus was born the concept of the National Steel Policy, with the aim to provide a roadmap of growth and development for the Indian steel industry. India is one of the few countries where the steel industry is poised for rapid growth. India's share in world production of crude steel increased from 1.5% in 1981 to around 5.5 % in 2015. While plant closures and privatization are rare in India, the private sector is considered to be the engine of growth in the steel industry and technological changes and modernization are taking place in both the public and the private sector integrated steel plants in India.

Table-02 explains about the production, consumption and growth of steel industry in India. The Production of steel in India is a constant growth every year since 2010-11. The maximum import of the steel from the foreign countries has been during the year 2014-15 and it can be found that the maximum exports are during the year 2013-14. While the consumption pattern of steel in India is a constant demand for every year.

Table-02: total finished steel (alloy + non-alloy)

('000 tonne)

Year	Production for sale	Import	Export	Consumption
2010-11	68.62	6.66	3.64	66.42
2011-12	75.70	6.86	4.59	71.02
2012-13	81.68	7.93	5.37	73.48
2013-14	87.67	5.45	5.98	74.09
2014-15	92.16	9.32	5.59	76.99

Source: Joint Plant Committee Annual Reports 2015

Production of sponge iron:

India is producer also a leading of sponge iron with a large number of coal based units, located in the mineral-rich States of the country. Over the years, the coal based route has emerged as a key contributor and accounted for 90% of total sponge iron production in the country in 2014-15 as well as during April-December 2015-16 (prov.). Capacity in the sponge iron industry has also increased over the years and stood at 46.23 million tonnes in 2014-15. India has been the world's largest sponge iron producer every year since 2003. The table below shows the total production of sponge iron in the country, indicating the break-up of the share of coal and gas based route of production for the last five years and April-December 2015-16.

Table-03: Production of Sponge Iron (million tonnes)

	2010-11	2011-12	2012-13	2013-14	2014-15
Coal Based	19.27	19.80	19.07	20.19	21.89
Gas Based	6.07	5.17	3.94	2.68	2.35
Total	25.34	24.97	23.01	22.87	24.24

Source: Joint Plant Committee (JPC), Annual Reports 2015.

Production of pig iron:

India is also an important producer of pig iron. Post-liberalisation, with setting up several units in the private sector, not only imports have drastically reduced but also India has turned out to be a net exporter of pig iron. The private sector accounted for 91 per cent of total production for sale of pig iron in the country in 2014-15. The domestic availability situation of pig iron is given in the table below for the last five years and April-December 2015-16:

Table-04: Pig Iron Domestic Availability Scenario ('000 Tonne)

	2010-11	2011-12	2012-13	2013-14	2014-15
Production	5683	5371	6870	7950	9694
Import	9	8	21	34	23
Export	358	491	414	943	540
Consumption	5296	4975	6501	7110	9057

Source: JPC, Annual Reports 2015.

Trends in production of crude steel in private/public sector:

World crude steel production stood at 1622.8 million tonnes during 2015, a decrease of 2.8% over 2014 based on provisional data released by World Steel Association (WSA). During 2015, Chinese crude steel production reached 804 million tonnes, registering a decline of 2.3% over the previous year. China remained the largest crude steel producer in the world, accounting for 73% of Asian and 50% of world crude steel production during 2015. India was the 3rd largest crude steel producer during 2015 and recorded a growth of 2.6% over 2014.

It is observed from the table-05 that in public sector the trend per cent in production of crude steel in India was a constant growth during the year 2011 to 2015. The private sector of the Steel Industry is currently playing an important role in production and growth of steel industry in India. There is a constant growth rate every year in production of since 2010-11. It can be concluded that the trend percentage of public sector crude steel is in decline stage when compare with private sector. The percentage of share of Public sector has declined from 24% to 19% from 2010-11 till 2014-15.

Table-05: Trends in Production of Crude Steel

(million tonnes)

	2010-11	2011-12	2012-13	2013-14	2014-15
Public Sector	16.99	16.48	16.48	16.77	17.21
Private Sector	53.68	57.81	61.94	64.92	71.77
Total Production	70.67	74.29	78.42	81.69	88.98

Source: JPC; Annual Reports 2015.

Capacity utilization in India:

Crude steel production has shown a sustained rise since 2010-11 along with capacity. Data on crude steel production, capacity and capacity utilization during the last five years and April-December 2015-16 is given in the table below:

Table-06: Crude Steel Capacity (Million Tonnes)

	2010-11	2011-12	2012-13	2013-14	2014-15
Capacity	80.36	90.87	97.02	102.26	109.85
Production	70.67	74.29	78.42	81.69	88.98
Capacity Utilization (%)	88	82	81	80	81

Source: Joint Plant Committee Annual Reports 2015

Crude steel production grew at a cumulative average growth rate (CAGR) of 6.2 % during the last five completed years ending 2014-15. This growth in production was driven by capacity expansion from 80.36 million tonnes in 2010-11 to 109.85 million tonnes in 2014-15, a growth of 8 per cent (on a CAGR basis).

Challenges in iron and steel industry:

Compared to the global average per capita consumption of 150kgs, India's per capita consumption of steel is still a mere 39 kgs. per head. Even by Asian standards, India have a long way to go in the consumption of steel. Technologically, the main hurdles before Indian steel industry are the cost of power and non availability of metallurgical coke.

1. Competition from China: The steel import from China increased by 70% in 2014-2015 as it is cheaper than Indian steel. The Chinese steel is cheaper because of the following reasons:

a. China Wage rate is 16% less than India

b. China does not provide workman's compensation insurance to its workers. Therefore when workers are hurt on the job, they don't receive any compensation when they are injured to the point that they are disabled.

c. China undervalues their currency by an estimated 30%-40%

d. The costs of compliance to health and safety regulation and environmental regulations in China are less when compared to India.

e. China has only Value added Tax which is again refundable in Export case

d. Finally, China has a national strategy of what is called "dumping." "Dumping" is one of the strategies China uses as a neomercantilist country. Neomercantilism is a term used to describe a policy which encourages exports, discourages imports, controls capital movement and centralizes currency decisions in the hands of a central government. The objective

of neo-mercantilist policies is to increase the level of foreign reserves held by the government, allowing more effective monetary and fiscal policy.

2. Un-remunerative prices: Stagnating demand, domestic oversupply and falling prices in the last four years have hit Indian steel makers. Barring the sporadic rise in demand in the recent months, it has suffered from un-remunerative prices to the extent that companies have been finding it difficult to maintain capital costs.

3. Endemic deficiencies: These are inherent in the quality and availability of some of the essential raw materials available in India, e.g. high ash content of indigenous coking coal adversely affecting the productive efficiency of iron-making and is generally imported. Advantage of high Fe content of indigenous ore is often neutralized by high basic index. Besides, certain key ingredients of steel making, e.g., nickel, ferromolybdenum are also unavailable indigenously.

4. Systemic deficiencies: However, most of the weaknesses of the Indian steel industry can be classified as systemic deficiencies. Some of these are described here:

a. High cost of capital: Steel is a capital intensive industry; steel companies in India are charged an interest rate of around 14% on capital as compared to 2.4% in Japan and 6.4% in USA.

b. Low labour productivity: In India, the advantages of cheap labour gets offset by low labour productivity; eg, at comparable capacities labour productivity of SAIL and TISCO is 75 t/man year and 100 t/man year, for POSCO, Korea and NIPPON, Japan the values are 1345 t/man year and 980 t/man year.

c. High cost of basic inputs and services: The cost of electricity is 3 cents in the USA as compared to 10 cents in India; and freight cost from Jamshedpur to Mumbai is $50/tonne compared to only $34 from Rotterdam to Mumbai. Added to this are poor quality and ever increasing prices of coking and non-coking coal.

d. Other systemic deficiencies include:

i. Poor quality of basic infrastructure like road, port etc

ii. Lack of expenditure in research and development.

iii. Delay in absorption in technology by existing units.

iv. Low quality of steel and steel products.

v. Lack of facilities to produce various shapes and qualities of finished steel on-demand such as steel for automobile sector, parallel flange light weight beams, coated sheets etc.

vi. Limited access of domestic producers to good quality iron ores which are normally earmarked for exports, and

vii. High level taxation.

Besides these Indian steel makers also lacked in international competitiveness on determinants like product quality, product design, on-time delivery, post sales service, distribution network, managerial initiatives, research and development, information technology and labour productivity etc. the weaknesses

gets reflected in India's poor standing in the global competitiveness as measured in terms of indicated parameters.

Opportunities in iron and steel industry:

1. Enormous scope for increasing consumption of steel: The biggest opportunity before Indian steel sector is that there is enormous scope for increasing consumption of steel in almost all sectors in India. Even to reach the comparable developing and lately developed economies like China and other Europe, a quantum jump in steel consumption will be required.

2. Abundance of Mineral Resources: India has rich mineral resources. It has abundance of iron ore, coal and many other raw materials required for iron and steel making. It has the fourth largest iron ore reserves (10.3 billion tonnes) after Russia, Brazil, and Australia. Therefore, many raw materials are available at comparatively lower costs. It has the third largest pool of technical manpower, next to United States and the Russia, capable of understanding and assimilating new technologies. Considering quality of workforce, Indian steel industry has low unit labour cost, commensurate with skill. This gets reflected in the lower production cost of steel in India compared to many advanced countries.

3. Unexplored rural market: The Indian rural sector remains fairly unexposed to their multi-faceted use of steel. The rural market was identified as a potential area of significant steel consumption way back in the year 1976 itself. However, forceful steps were not taken to penetrate this segment. Enhancing applications in rural areas assumes a much greater significance now for increasing per capital consumption of steel. The usage of steel in cost effective manner is possible in the area of housing, fencing, structures and other possible applications where steel can substitute other materials which not only could bring about advantages to users but is also desirable for conservation of forest resources.

4. Other sectors: Excellent potential exist for enhancing steel consumption in other sectors such as automobiles, packaging, engineering industries, irrigation and water supply in India. New steel products developed to improve performance simplify manufacturing/installation and reliability is needed to enhance steel consumption in these sectors Main objective here have to be improvement of quality for value addition in use, requirement of less material by reducing the weight and thickness and finally reduction in overall cost for the end user.

Latest technology must be adopted by Indian steel manufacturers for production of superior quality of steel for these applications. For example, pre-coated sheets can be used in manufacture of appliances, furnishings, electric goods and public transport vehicles. Production and supply of superior grades of steel in desired shapes and sizes will definitely increase the steel consumption as this will reduce fabrication need, thereby reduce cost of using steel.

5. Export market penetration: It is estimated that world steel consumption will double in next 25 years. Quality improvement of Indian steel combined with its low cost advantages will definitely help in substantial gain in export market.

Conclusion:

The Indian steel industry is among the upcoming industries of the world. It has a number of iron ores, which means that it has plenty of resources from which to draw its raw material. The rate of production of steel in India has been going up at a steady rate in the last few years. In the recent times Orissa and Jharkhand have been identified as the potential steel destinations of India - the ones that would provide the Indian steel industry with its necessary raw material. There are also a number of steel companies in India like Tata and Arcelor Mittal that have established themselves as prominent forces in the world steel scenario. Besides achieving the rank of the 3rd largest global crude steel producer in 2015 (provisional), India has also made a mark globally in the production of sponge iron/direct reduced iron (DRI). Courtesy a mushrooming growth of coal-based sponge iron units in key mineral-rich pockets of the country, domestic production of sponge iron increased rapidly, enabling the country to achieve and maintain the number one position in the global market. With a series of mega projects, either being implemented or at the proposal stage, which once operational will re-write the structure of the steel industry and its dynamics; and a domestic economy carrying forward the reform process further, the future of the Indian steel industry is definitely optimistic.

References:

1. Annual Report, 2015-16, Ministry Of Steel, www.steel.gov.in/ararchive.htm
2. Report Of the Working Group on Steel Industry for the Twelfth Five Year Plan (2012-2017), http://planningcommission.gov.in/aboutus/committee/wrkgrp12/wg_steel2212.pdf
3. Press Information Bureau, Government Of India, Ministry of Steel, March, 2015, http://pib.nic.in/newsite/PrintRelease.aspx?relid=116808
4. A Weekly Report, Joint Plant Committee, April 2-8, 2016, http://jpcindiansteel.nic.in/writereaddata/files/English%20News%202-8%20April,%202016.pdf
5. Jayanta Bagchi, “Development of Steel Industry In India”, IK International Pvt Ltd, New Delhi, 2005
6. www.**worldaffairsjournal.org/article/china**’s-**currency**-manipulation-policy

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Public Expenditure Pattern on Indian Education

Dr. K. Srivani, Assistant Professor, Department of Economics, Satavahana University, Karimngar-TS

Abstract: *Expenditure on recurring items as salary of teachers, administrative staff, etc, comes under the revenue account, whereas that on non-recurring items as school building, libraries, equipment, etc constitutes the capital account. The positive externalities associated with education make education partly a public good and therefore, it needs to be supplied by the State as markets may not be able to provide it for the desired social optimum. Public expenditure on education is very crucial especially for the poor and the vulnerable in the society.*

Key words: *Investment in education, human resources, positive externalities*

Introduction

Knowledge is the driving force in the rapidly changing globalised economy and society. Quantity and quality of highly specialized human resources determine their competence in the global market. It is universally recognized that education contributes to economic growth and social transformation. Investment in education is considered as the most valuable of all investments that yields high returns to both the individuals and the society. The positive externalities associated with education make education partly a public good and therefore, it needs to be supplied by the State as markets may not be able to provide it for the desired social optimum. Public expenditure on education is very crucial especially for the poor and the vulnerable in the society. Hence, Role of education in nation building is not merely a question of social equity and equipping persons for securing employment, it is much more than that, and this is universally recognized. The human resources development revolution has also placed investment in education on the priority list of Government across the nations.

1. Objectives of the Study

The objectives of the study are as follows:

1. To analyse the trends and pattern of public expenditure on education in India.
2. To examines economic reforms and change in educational policies.
3. To understand as the public expenditure pattern on Indian education in the reform period vis-a-vis the post-reform period.

1. Methodology

1.1. Data collection

The study purely based on the secondary sources of the data which are books, journals, educational reports, educational statistics, News papers, research studies and Sarva Shiksha Abhiyan reports etc.

1.2. Limitations of the Study

The study has the following limitations.

1. The study confined the period of 1951 to 2013.
2. The study focused only the national level education and its expenditure.
3. The study confined to the public expenditure pattern.

1.3. Review of Related Literature

The research studies have been carried out on related to economic reforms and its impact on education.

An outstanding work with regard to rate of returns of expenditure on education was carried out by **Panchamukhi P.R. (1965)** on educational expenditure in India. His study revealed that the total cost of university and professional education from 1950-51 to 1959-60 was about Rs 700 crore; of this the major share was taken over by the private cost consisting mainly the earnings forgone by the students.

As pointed out by **Tilak (1995)**, if the state income is low, then very low amount of spending on education will also give the impression that higher proportion of GSDP has been spent on education. States with a higher proportion of population belonging to SC, ST and with higher female to male ratio are any case found to incur significantly lower expenditure on education.

The study by **Govinda and Biswal(2006)** pointed out that from 1999-2002, the share of expenditure on elementary education increased by a little more than four per cent, taking the Centre and the States together. Several Centrally Sponsored Schemes (CSS) were launched as a follow-up of the NPE in the area of elementary education throughout the country. But the initiative for utilizing the resources was with the state governments.

The study examine by **Chakrabarti and Joglekar (2006)** examines patterns and changes in the allocation of government funds for education, particularly higher education, over a span of two decades, before and after the introduction of the new economic policies. The study concluded that state real per capita income, is found to significantly enhance educational expenditure at the aggregate, elementary, secondary and higher levels. Moreover, contrary to general perceptions, education expenditure at all levels has been significantly lower after liberalization in comparison with the pre-economic reform era.

The study of **Mukherjee (2007)** provides a comprehensive assessment of the allocations made by the Government of India through its budgetary provision in the education sector over the 9th Plan period. The study concluded that India is unique among other developing countries in its use of earmarked taxes for financing public expenditure on education. It is extremely important, therefore, to see whether this increase in expenditure by the union government is 'crowding in' or 'crowding out' expenditure by the states or the private sector.

Though the researchers have established a relationship between increase in educational expenditure and economic development, fears have been expressed about an exact causal relationship between the two.

2. Economic Reforms and its impact on Indian education

Globalization has a multidimensional impact on the system of education in India. It has underlined the need for reforms in the educational system with particular reference to the wider utilization of information technology, giving productivity dimension to education and emphasis on its research and development activities because education is an important investment in building human capital. The higher education system in India suffers from acute paucity of funds, lack of autonomy, burden of affiliation. On the other hand the effect of globalization on education brings rapid developments in technology, communication and knowledge economy.

India is no exception to this global phenomenon. As part of globalisation, the economic reform packages were introduced in India in the beginning of 1991. These reforms packages imposed a heavy compression on the public budgets on education sector, more specifically so on higher education. Following the introduction of structural adjustment policies, that include macroeconomic stabilization and adjustment, a fiscal squeeze is experienced in all social sector investments in many developing countries, including in India. This has trickled down to public expenditure on education in general, and higher education in particular. With economic reforms, cuts in public budgets for higher education have been very steep , severely impairing the growth of higher education. Paradoxically, under the reforming economic conditions, integration of the Indian economy with world economy presupposes efficiency and competitiveness in the domestic front as well as in the international arena. In a federal polity like India, education being concurrent subject since 1976, the commitment of the centre equally at all levels of education is important. Given the spillover benefits of higher education, it becomes mandatory for the center to finance an increasing share of expenditure on higher education. But, this has been declining in the recent years. Even in secondary education, center's share of expenditure is minimal ranging around 5 per cent. However, federal role in elementary education is on the rise since the middle of 1980s. Indeed, the momentum of interest in universalising elementary education began in the country in 1987 with a centrally sponsored scheme namely, Operation Blackboard to improve the educational infrastructure in primary schools all over the country. Around the same time another two important nationwide schemes have been initiated – on teacher education and non-formal education.

Hence, the resources from higher education are being diverted to the development of primary education. But it is stressed that while it is mandatory that the nation achieves universal elementary education and total literacy, it cannot at the same time afford to relegate to a neglected position to achieve global standards in higher education (UGC,1993).

2.1. Change in Educational Policies and Economic Reforms

The government of India launched a series of economic reform measures in July 1991. These policies had serious implications for social sector, as it led to drastic reduction in public subsidies and development expenditure,

particularly on social services. The central government as well as state government expenditure on social sector as a percentage of GDP declined in 1990s.

As envisaged in the National Policy on Education-1986 (revised in 1992), development of education is pursued as a 'meaningful partnership between the Centre and the States'. State Governments also plan and implement programmes of education development keeping in view their specific situations and needs. The goal of Education for All has been high on the agenda of the Government of India since the commencement of development planning since 1951. However substantial progress towards the Education for All goals has been made during the past few years. Before 1976, education was the exclusive responsibility of the States While the role and responsibility of the States in education remained largely unchanged, the Union Government accepted a larger responsibility of strengthening the national and integrated character of education. In order to achieve Universalisation of Elementary Education, the Government of India has initiated a number of programmes and projects. It can be noticed that after economic reform, there is prominent change in the policy frame work of the Indian government, specially since 2001 when Sarva Siksha Abhiayan has been initiated:

Before reform

Year	Policy Framework towards Educational Development
1950	India's constitution is signed; includes part IX, article 45, which guarantees free and compulsory education for all children (regardless of ability level) between the ages of 6-14
1951-68	Constitution Expansion of the formal schooling system. Indian governments shoulder the responsibility for primary education
1968-86	National Policy on Education1976, GOI and state governments equal responsibility for promoting and managing education.
1986	National Policy on Education 1986 (NPE 1986) adopted.
1987	Several large centrally-assisted schemes/programmes such as 'Operation Blackboard' and the 'scheme for restructuring and reorganization of teacher education' launched
1988	National literacy Mission (NLM) launched

After reform

Year	Policy Framework towards Educational Development
1992	National Policy on Education 1986 revised
1994	District Primary Education Programme (DPEP) launched to universalize

primary education.

1995 Centrally-assisted National Programme of Nutritional Support to Primary Education, Mid-Day Meal Scheme (MDMS) launched.

1999 A separate Department of School Education and Literacy created within the Ministry of Human Resource Development, Government of India.

2001 (i) Sarva Shiksha Abhiyan, the flagship programme for universalisation of elementary education, launched;(ii) Adoption of the National Policy on Empowerment of Women.

2002 The Constitution (Eighty-sixth Amendment) Act, 2002 inserted Article 21-A in the Constitution of India to provide free and compulsory education for all children in the age group of six to fourteen years as a Fundamental Right;

2003 National Youth Policy, 2003 formulated.

2004 (i) Education Cess introduced for raising financial resources to universalize elementary education; (ii) EDUSAT, a satellite exclusively dedicated to education launched

2005 National Curriculum Framework (NCF-2005) for school education formulated

2009 (i) The Right of Children to Free and Compulsory Education Act, 2009 enacted. The Act makes it incumbent on Governments to provide for free and compulsory education to all children of the age of six to fourteen years. (ii) The National Literacy Mission (NLM) recast with a special focus on female literacy and the "Sakshar Bharat" (Literate India) programme launched as the national adult education programme on 8 September 2009; (iii) The revised National Curriculum Framework for teacher Education formulated; (iv) The Rashtriya Madhyamik Shiksha Abhiyan (RMSA) launched in March 2009, with the vision of making secondary education of good quality available, accessible and affordable to all young persons in the age group 15-16 years; (v) Revised Centrally-sponsored Scheme of Inclusive Education for the Disabled at Secondary Stage approved;

2010 (i) The Right of Children to Free and Compulsory Education (RTE) Act 2009 came into force from 1 April 2010; (ii) The Sarva Shiksha Abhiyan (SSA) Framework aligned to RTE Act; (iv) Revised Centrally- Sponsored Scheme of ICT@ Schools approved

2011 The revised Centrally-Sponsored Scheme "Vocationalisation of Higher Secondary Education" approved.

2013 (i) National Early Childhood Care and Education (ECCE) Policy adopted; (ii) The Integrated Child Development Services, the flagship programme of Government of India for ECCE restructured and strengthened

2014	National Youth Policy, 2014 adopted

Source: Report on Education for All -Towards Quality with Equity, 2014, MHRD

3. Public Expenditure Pattern on Education

Expenditure on recurring items as salary of teachers, administrative staff, etc, comes under the revenue account, whereas that on non-recurring items as school building, libraries, equipment, etc constitutes the capital account. Revenue expenditure constitutes major part, around 99 per cent, of total expenditure from 1980- 81. On the other hand, the capital account forms negligible portion of total spending. India's education budget (Center and States) has more than doubled in the last five years increasing from 83,564 crores in 2004-05 to 1, 91,946 crores in 2009-10.

In the central government and state government revenue expenditure on education are moving upwards, showing increasing trend. The sluggish growth in both lines also can be seen in the period of 2000-01 to 2005-06.The diagram clearly depicts that the pace of movement of growth of expenditure in the present decade was much faster than in the 1980s and 1990s, particularly after 2008-09.It can be explained that changing policies regarding education as - The Right of Children to Free and Compulsory Education Act, 2009, Rashtriya Madhyamik Shiksha Abhiyan and Sakshar Bharat mission etc., incorporated huge amount of expenditure on education since 2009 by central government as well as state government. It may be seen here that total expenditure on education as percentage of GDP was highest (4.14%) in 2000-01 but this level could not be sustained in the following year and comes down to 3.26% in the year 2004-05. After that it again started increasing but at a very slow rate. If we look at the percentage for Centre and States separately, we found that centre's share showing an increasing trend over the years and gone up from 0.51% in 2000-01 to 1.16% in 2012-13, while state's share has declined from 3.63% in the year 2000-01 to 3.13% in 2012-13.

3.1. Educational Finance Before and After 1991

In spite of India's commitment toward "Education of All" being an important national goal from the time of independence, the realization of this goal has always been a distant target. India intermittently reaffirmed the Kothari Commission (1968) suggestion that we should spend at least 6% of our GDP on education, without any concrete action plan toward achieving that goal. The period of the 1990s, after the initiation of economic liberalization program, posed a severe financial crisis for the states in India as the transfer of funds from the union government underwent a structural change during this period. The social sector expenditure has always been a soft target under such crisis. The fiscal policies of the union government have forced many states to reconsider their priorities in spending and forced them toward decreasing their social sector expenditures after 1990 (Jha et al., 2008; 146). The main reason attributed for the increase in union government's expenditure on elementary education during the 1990s was the sanctioned and institutionalized external borrowing after the government started adopting the policy of economic liberalization in 1991.

Table-1

Public Expenditure on Education and Gross Domestic Product (GDP)

Year	GDP at Current price (at Factor cost) (Rs. crore)	Total Expenditure on Education by Education & other Departments (Rs. crore)	Expenditure on Education by Education & other Departments as % of GDP
1951-52	10080	64.46	0.64
1960-61	16220	239.56	1.48
1970-71	42222	892.36	2.11
1980-81	130178	3884.2	2.98
1990-91	510964	19615.85	3.84
2000-01	1925017	82486.48	4.28
2005-06	3390503	113228.71	3.34
2006-07	3953276	137383.99	3.48
2007-08	4582086	155797.27	3.40
2008-09	5303567	189068.84	3.56
2009-10	6108903	241256.01	3.95
2010-11	7248860	293478.23	4.05
2011-12(RE)	8391691	351145.78	4.18
2012-13(BE)	9388876	403236.51	4.29

RE: Revised Estimate, BE: Budget Estimate

Data Source: Analysis of Budgeted Expenditure

Table 2: Expenditure on Education– As Ratio to Aggregate Expenditure (%)

State	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Andhra Pradesh	10.8	9	9	10	12.5	14	13.6
Bihar	**19.7**	**17.6**	**18.5**	**18.1**	**16.3**	**16.6**	**19.5**
Chhattisgarh	12.9	13.5	14.4	15.6	18.6	19	17.8

Goa	13.7	13.3	13.3	14.1	15.4	16.6	15.4
Gujarat	12.7	13.4	11.7	13.8	15.9	16.1	13.4
Haryana	11.9	12.9	15	16.3	17.3	16.6	18.3
Jharkhand	15.2	15.1	18.6	15.4	15.8	17	17
Karnataka	13.1	14.4	16.1	14	15.6	15.5	14.8
Kerala	17.1	15.9	16.7	16.8	17	17.6	17
Madhya Pradesh	12.4	11.1	12.8	13	14.2	13.3	14.8
Maharashtra	16.4	17.2	17	19.1	20.8	19.9	19.8
Odisha	12.8	14.3	16.9	18.2	18.3	16.9	15.7
Punjab	8.9	10.3	11.3	12.2	11.7	15.6	14.2
Rajasthan	15.6	14.6	17.9	19	19.1	18	18.5
Tamil Nadu	12.2	12.7	13.1	15.2	15.2	14.5	15
Uttar Pradesh	14.7	14.1	13.2	13.8	16.1	17.4	17.6
West Bengal	15.2	15.2	13.1	17.7	19.7	19.4	17.8
Arunachal Pradesh	10.7	10.8	11.4	12.2	10.8	9.1	8.3
Assam	20.4	20.1	18.8	16.4	22	18.7	21.1
Himachal Pradesh	14.1	15.4	16.2	16.3	17.9	18.8	17.5
Jammu and Kashmir	10	9.2	10	11.3	12.6	13.4	13
Manipur	11.9	14.2	12	11.9	10.7	11.3	9.9
Meghalaya	14.1	15.5	12.8	14.8	16.1	17	16.5
Mizoram	13.8	13.2	14.1	14.9	14.9	15.7	14.5
Nagaland	12.3	11.4	11.2	11.3	13.4	12	12
Sikkim	10.5	9.2	10.6	17.3	17.3	12.1	12.5
Tripura	15.9	15.1	14.4	17.2	17.2	17.2	13.8
Uttarakhand	18.1	17.6	18.2	23.5	23.5	18.2	20.8
All States	**14**	**13.8**	**14.3**	**16.6**	**16.6**	**16.6**	**16.5**

Source: Analysis of budget expenditure, 2014 MHRD

The share of expenditure on GDP is one of the important indicators showing the priority of government in showing considerable improvement in

educational development of its population. On the recommendation of Education Commission (GOI, 1966), the GOI quantitatively fixed a target of investing 6% of the national income in education. But looking at the expenditures on education over the years, in spite of big improvement from 0.64% of GDP in 1950-1951 to 3.93% of GDP in 1989-1990, the trend did not continue positively after 1990. By 2010-2011, we are still hovering around 4% of GDP only. According to Human Development Report 2001, India ranked 104th in share of public expenditure in national income, among the 143 countries for which such data are available. There are a large number of countries that spend more than 8% of national income on education. Some of the countries, which are poorer than India, spend more than 4% of national income on education.

3.2. Financing Education: An Inter State Analysis

This study has explored government financing of education in India over a period of 2006 to 2013 across the states of the country. Economic reform has certainly affected public expenditure State governments have proposed a number of education related measures in their 2012-13 budgets, across India. These comprise setting up new schools, colleges and universities; providing free laptops to students and scholarships. It is quite notable that expenditure on education Odisha government reducing continuously in the last 3 years. The table indicates the State-wise budget expenditure on education in terms of the Gross State Domestic Product of the respective states as below and above the expenditure of central government as percent of GDP for the year 2012-13. It is observed from the graph that the percentage of expenditure on education is below for the major states such as Delhi, Haryana, Gujarat, Punjab, West Bengal, Maharashtra, Andhra Pradesh, Odisha, Karnataka, Kerala, Tamil Nadu, Jharkhand, Rajasthan , Madhya Pradesh. while Some North–East states, Himachal Pradesh and Bihar spend more than central government expenditure.

Suggestions

Though enormous economic growth and development has been made during the past decades, the education system in India still faces several challenges as it seeks to further enhance access to and quality of education at all levels of education. Despite of manifold increase in the expenditure of central and state government, relatively higher dropout rates, the slow progress in dropping the number of non literates and unsatisfactory student learning levels continue to cause concern. Gender and regional disparities in literacy rate also continue to persist. The ability to address the challenges facing the education sector and fully implement the planned programmes will depend heavily on resource availability. A key challenge relates to the need for maintaining a level of financial, material and human resources that are required to support both expansion and qualitative improvement of education at all levels and the utilization of the existing/available financial and human resources more efficiently. In the knowledge economy, education provisioning is a fairly capital intensive process which creates potential human development to the society. Therefore, the government should spend more money on the educational sector because it is a social infrastructure which enables

to provide the skilled people with sociological prospective it lead to the sustainable development. We should encourage the universities with funding to do research and its implications in the society for policy making.

Conclusion

The public spending on education increased rapidly during the past few years. The salary costs represent between 80-90 percent of non-capital spending on education and increases sharply due to raising salary expenditure. The remainder of the budget is spent on a variety of schemes such as free textbooks, uniforms, and special schemes for disadvantaged groups. Amongst states that have a high education budget, Uttar Pradesh, Bihar and Andhra Pradesh saw largest increases in allocation. Interestingly, Uttar Pradesh, which did not have a substantial increase in SSA budgets, had the largest increase in state education expenditure. In order with Wagner's law of increasing state government activity total public expenditure has registered a positive CAGR (%) of 29.8 % over the period of 20 years. Though, education expenditure has increased in nominal terms, in real terms expenditure on education has decreased. On the whole, it can be concluded that while the reforms have some positive implication for education in nominal terms, the overall picture does not seem to be favourable for education if computed at constant prices (2004-05).

References

1. J.B.G. Tilak (1993), 'Economic Reforms and Investment Policies in Education', *Perspectives in Education* 9(2).
2. Chakrabarti, Anindita and Rama Joglekar (2006), **'**Determinants of Expenditure on Education: An Empirical Analysis',„ *Economic and Political Weekly* 41(14) 1465 -1472
3. GOI (Various Years): *Analysis of Budgeted Expenditure on Education*, Ministry of Human Resource Development.
4. GOI (2014) Report on Education for All -Towards Quality with Equity, 2014, MHRD
5. Govinda, R and K Biswal: Elementary Education in the Tenth Plan: promise, Performance and Prospects, UNDP, New Delhi 2006
6. Mukherjee, Anit.(2007) 'Implications for Education', *Economic and Political Weekly*, 42(14): 1273–76.
7. N.V. Varghese and J.B.G. Tilak (1991), Financing of Education in India, IIEP, Paris.
8. M. Woodhall (ed.) (1989), *Financial Support for Students: Grants, Loans or Graduate Tax*, Kogan Page, University of London.
9. World Bank (1986), Financing Education in Developing Countries, Washington D.C.
10. World Bank (1994), Higher Education: Lessons of Experience, Washington D.C.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

An overview of current trends and contemporary developments in India tourism industry – a study

Dr. G. Vijay, Associate Professor of Tourism Management, Dept. of Business Management, Chaitanya P.G. College (Autonomous), Hanamkonda, Warangal - Telangana State

Abstract: *Tourism is one of the fastest growing industries in the world. Tourism is the most exciting activity and multi-billion industry in India. Travel and Tourism in India is an integral part of Indian tradition and culture. Tourism is the right vehicle for a developing country like India which is on the path of modern economic growth through structural transformation of the economy. Today this industry is the second largest foreign exchange earner in India. Tourism industry is highlighted for its immense business opportunities. Tourism plays a major role in creating the huge employment opportunities with its potentials. Tourism is also a key contributor to the national integration process of the country and encourages preservation of natural as well as cultural environments. To reap the optimal benefit of tourism Indian Governments has made various efforts with integrative approach. The proactive Policies of the Government of India are encouraging tourism in India. The Ministry of Tourism is also playing an important role in the development of the industry, by initiating various innovative initiatives, campaigns and schemes. This research paper deals with the significance of tourism industry in the country. It outlines the recent efforts made by the Ministry of Tourism to strengthen the tourism promotional activities in the country. This research paper highlights the scenario of present ongoing trends and contemporary developments in tourism industry. This study ends by some constructive suggestions for the growth of tourism industry.*

Keywords: *Tourism Industry, Tradition and Culture, Potential, Foreign Exchange.*

Introduction:

As tourism is the fastest growing industry in the world, it has become one among the world's most competitive industries. Globalization has created more awareness of the world and of its possibilities, making people more curious about different cultures and languages and keen to experience them. Modern modes of transportation allow more people and products to move around the world at a faster pace. As per the latest UNWTO official Tourism Highlights, 2016 statement, the total export value from international tourism amounted to US$ 1.5 trillion. Income generated by international tourists on accommodation, food and drink, entertainment, shopping and other services an estimated US$ 211 billion. Considering the tremendous image of tourism, the United Nations General Assembly declared 2017 as the **International Year of Sustainable Tourism for Development.**

Tourism in India is expanding the fastest and is perhaps the most rewarding industry in the country. India with its rich cultural heritage, ancient monuments, world famous temples, architectural masterpieces, wild life

sanctuaries and scenic sports, holds a great attraction for the tourists. There are a number of beautiful tourist spots in India which attract not only people across the country but also around the world. This is a key industry in terms of its contribution to the Gross Domestic Product (GDP) and Foreign Exchange Earnings, as well as for providing employment to millions. According to an industry research, the sector in fact is expected to generate around 13.45 million employment opportunities across the sub-segments such as Restaurants (10.49 million), Hotels (2.3 million) and Travel Agencies/Tour Operators (0.66 million) by 2018.

Tourism in India is witnessing widespread growth on the back of increasing inbound tourism by the burgeoning Indian middle class, rising inflow of foreign tourists and successful government campaigns for promoting 'Incredible India'. Infrastructure development holds the key to India's sustained growth in the Tourism sector. Further the government has also allowed 100 per cent foreign investment under the automatic route in the Hotel and Tourism related industry. Significantly, the country has the potential to become a major global tourist destination, with the Tourism sector expected to contribute around INR 3,414.8 billion (US$ 77.0 billion) by 2021. India is currently ranked 11th in the Asia and the Pacific region and 40th rank in world tourist arrivals, according to the Indian Tourism Statistics 2015 report. This research paper showcases the image of Indian tourism industry and as well as highlights the current trends, and contemporary developments which are playing the vital role in the tourism promotion.

Objectives:

The present paper is outlined with following objectives.

- To know the vast potentiality of India Tourism industry.
- To assess the contribution of Ministry of Tourism in the development of India Tourism.
- To highlight the current trends of Indian Tourism industry.
- To focus on contemporary India Tourism developments.

Research methodology:

This research paper mainly involves the study of secondary data. Publications in journals have been studied to gain insight into the trends of the tourism industry. The research approach takes the paper through empirical literature review which follows Government Publications/Records in State Central Library, Initiated Scheme Reports, Statistical Reports, Periodicals which are covered by *Hindu, Time, India Today, Yojana, Travel Trends Today and Trav Talk* magazines.

Tourism industry in India:

The Indian civilization is one of the oldest civilizations of the world and it has a very renowned cultural and historical heritage & tradition and India has abundance of showcases including varied flora and fauna wealth located in its different parts. Tourism is not a new phenomenon in case of India and it has been observed right from the ages of Gupta and Mauriyas empires and hence, tourism was experienced by several historians, philosophers, religious, and political thinkers at that time. Many famous and well known foreign travellers

like *Fahiyan, Hieyun-Tsang and Megasthanis* visited India to attain the knowledge and to study the social-economic status of ancient Indian empire. Apart from these foreign travellers there are lot of other historians and travellers who visited India so many times and they have given various new couplets and statements regarding the rich tourism potential of India.

Tourism sector has the potential to stimulate other economic sectors through its backward and forward linkages and cross-sectional synergies with sectors like *agriculture, horticulture, poultry, handicrafts, construction, Hotels, Hospitals, Aviation and Shipping* etc. Tourism in India has registered significant growth in the recent years. Tourist arrivals into India are 8.03 million and their growths have been increased by 4.5 per cent in 2015 over 2014. India's foreign exchange earnings from tourism during 2015 stood at Rs. 1, 35, 193 crore and its annual growth rate registered at 9.6 per cent. The below first and second tables indicates the latest India Tourism statistical figures of foreign tourist arrivals and foreign exchange earnings.

Table – 1: Foreign Tourist Arrivals (FTA's) in India, 2010 - 2015

Year	FTAs in India (in millions)	Percentage (%)Change over the previous year
2010	5.78	--
2011	6.31	9.2
2012	6.58	4.3
2013	6.97	5.9
2014	7.68	10.2
2015	8.03	4.5

Source: ministry of tourism annual report, 2015.

Table – 2: Foreign Exchange Earnings (FEE) (in Rs. Crore) from Tourism in India, 2010 - 2015

Year	FEE from Tourism in India (in Rs. Crore)	Percentage (%)Change over the previous year
2010	64889	--
2011	77591	19.6
2012	94487	21.8
2013	107671	14.0
2014	123320	14.5
2015	135193	9.6

Source: ministry of tourism annual report, 2015.

The Government of India as well as the concerned State Governments in the changing economic global scenario have understood the importance and significance of tourism industry. The Ministry of tourism headed by the 'Union Minister for Tourism' is the nodal agency for the formation of national policies and programs related to tourism. It also coordinates all the activities of the central government agencies, state government undertakings and the private sector for the development and promotion of tourism.

Tourism has always been an integral part of the country's five year plans, with it being accorded priority sector status in the Twelfth Five year plan. Apart from marketing and promotion, the Central Government has been developing infrastructure focusing on both domestic and foreign tourists. Apart from the Ministry of Tourism, the Ministry of Civil Aviation and Ministry of Railways have contributed their part by ensuring the right infrastructure is in place to connect the various destinations. The respective budget allocation to three ministries in the year 2015-16 is as below. Ministry of Tourism is working in synergy with other Ministries, State Governments, Union Territory Administrations and the private sector stake holders to bring about this transformation in a big way.

Table – 3: Budget Allocation by the three Ministries in 2015-16

SL.	Ministry	Annual Budget Allocation
1	Ministry of Tourism	INR 1,573 crore
2	Ministry of Civil Aviation	INR 5,360 crore
3	Ministry of Railway	INR 1,00,011 crore

Source: FICCI, 2015 Report of Tourism Infrastructure – The Role States Play

While providing financial assistance to State Governments and Union Territory Administration for infrastructure augmentation projects, care is being taken to ensure that the development is in conformity with the local ambience and vernacular architecture and eco-friendly practices are followed as far as possible. The endeavour is to have a holistic and integrated development of tourist destinations through convergence of resources available at central, state and local administration level.

Current trends of India tourism industry:

India represents one the most potential tourism markets in the world. It has expanded rapidly in the past few years and underpinned by the Government support, rising income level and various international sports events, the Indian tourism industry will continue to grow at the fastest pace in the coming years. The following are the current key trends which have been playing the vital role in the development of tourism in the country.

1. Swadesh Darshan – Positioning Tourism as an Engine of Growth:

The Ministry of Tourism introduced **Swadesh Darshan**, a Central Sector scheme for Integrated Development of Theme-Based Tourist Circuits. A Tourist Circuit is a route on which at least three major tourist destinations are located such that none of them are in the same town, village or city, while a tourist circuit with a consistent theme such as religion, culture, ethnicity and niche is known as Theme Based Tourist Circuit. These circuits would be identified by the Ministry of Tourism based on factors such as current tourist traffic, connectivity, potential and significance attached to sites and holistic tourist experience. The allocated budget for the scheme is Rs.600.00 crore for 2015-16 and components eligible for financing are infrastructure development; capacity development, skill development and knowledge development; and online presence. The following table statement contains the financial assistance of Ministry of Tourism to various state Governments under this scheme towards the infrastructure development in country.

Table-4: List of Projects Sanctioned Under Swadesh Darshan Scheme, 2015-16

SL. No	Name of Theme	State/UT	Name of Project	Sanction Amount (Rs. crore)
1	North East Circuit	Manipur	Development of Tourist Circuit in Manipur: Impahl-Imphal-Moirang-Khongjom-Moreh	89.66
2	Tribal Circuit	Nagaland	Development of Tribal Circuit Peren-Kohima-Wokha	97.36
3	Eco Circuit	Telangana	Integrated Development of Eco-Tourism Circuit in Mahaboobnagar District	91.62
4	Desert Circuit	Rajasthan	Development of Sambar Lake Town and Other Destinations Jaipur District	63.96
5	Coastal Circuit	Andhra Pradesh	Development of Coastal Tourism Circuit in Sri Potti Sriramulu Nellore District	97.14

Source: Ministry of Tourism Annual Report, 2015-16.

2. Pilgrimage Rejuvenation and Spirituality Augmentation Drive (PRASAD):

Religion and spirituality are common motivations for travel, with major tourist destinations having developed largely as a result of their connections to sacred places, persons and events in India. To tap these potentials the ministry of Tourism was initiated this scheme to promote the Religious Tourism in the country. To strengthen the mechanism for bridging the infrastructural gaps at

identified pilgrimage destinations and develop a monitoring mechanism for timely implementation of the projects in collaboration with States/UTs and other stakeholders is one of the key visions of this scheme. According to the mission statement of this scheme is to identify and develop pilgrimage tourist destinations on the principles of high visits, competitiveness and sustainability in an integrated manner by synergizing efforts to focus on needs and concerns of all stakeholders to enrich religious/spiritual tourist experience and enhance employment opportunities. The following table statement contains the Ministry of Tourism sanctioned financial assistance to various state Governments under this scheme during 2015-16.

Table – 5: List of Projects Sanctioned Under PRASAD Scheme, 2015-16

SL. No	State	Name of the Project	Sanctioned Amount (Rs. crore)
1	Punjab	Development of Karuna Sagar Valmiki Sthal at Amritsar	6.45
2	Rajasthan	Integrated Development of Pushkar and Ajmir	40.44
3	Andhra Pradesh	Development of Amaravati Town, Guntur District as tourist destination	28.36
4	Assam	Development of Kamakhya Temple and Pilgrimage destination in and around Guwahati	33.98
5	Bihar	Development of Patna Sahib	41.54

Source: Ministry of Tourism Annual Report, 2015-16.

3. E-Tourist Visa:

Since November 2014, the Indian government has been on a spree extending its "visa on arrival" scheme – now called electronic tourist visas – to a growing number of countries around the world. The figure of overseas tourists using this facility was in single digit initially. They could pay the fee online and would be required to arrive at the designated airport with a printout of the e-tourist visa authorisation generated online. The visa would have a validity of 30 days from the date of arrival. Biometric details of the applicant would be captured on arrival. This facility could be availed by overseas tourists twice in a calendar year. The India e-Tourist visa allows for visa on arrival issuance only for arrival and departure from the airports in Ahmedabad, Amritsar, Bengaluru (Bangalore), Chennai, Cochin, Delhi, Gaya, Goa, Hyderabad, Jaipur, Kolkata, Lucknow, Mumbai, Tiruchirapalli, Trivandrum & Varanasi. At present, e-Tourist Visa facility is available for citizens of 113 countries.

Table-6: Top 05 Countries Availed E-Tourist Visas During 2015

SL. No	Nationality	2015
1	United States of America	103092
2	United Kingdom	60663
3	Russia	34763
4	Germany	32430
5	Australia	30323

Source: The Hindu News Paper

4. 24x7 toll free Tourist Info line in 12 International Languages:

The ministry has launched the "24x7 Toll Free Tourist Info line in 12 International Languages including Hindi and English" available on the existing Toll Free Number **1800111363** or on a short code **1363**. This project is being implemented by the Ministry of Tourism, Government of India through M/s. TATA BSS who have been associated with the work after open bidding process. The languages handled by the contact centers include ten International languages besides *English and Hindi,* namely, *Arabic, French, German, Italian, Japanese, Korean, Chinese, Portuguese, Russian and Spanish.* The launching of this Multilingual Info line has marked the fulfilment of the promise made to the people by the present Government for according priority for safety and security of tourists.

5. Swachch Paryatan APP:

Ministry of Tourism was recently launched a mobile app, which will enable travelers to send pictures of dirty spots at tourist places to the authorities for "immediate action" as part of Clean India Mission. This project is being implemented by the Ministry of Tourism, Government of India through DGS and NIC. This Mobile App is available on Google Search Engine as **'Swachh Paryatan'** and initially it is available on Android Phones and very soon it will be available on Apple and Microsoft also. This mobile app shall be monitored by the Project Monitoring Unit of Swachh Bharat Mission in Ministry of Tourism. Tourists have many suggestions for improving the places they visit but they do not know how to put it across to the officials, now they can share the suggestions with us through the App. The following are the 25 identified heritage monuments under this App.

Table – 7

S.NO.	List of 25 monuments covered under swachh paryatan mobile app		
1.	Leh Palace, Leh, J&K	14.	Jageshwar Temples, Uttarakhand
2.	Humayun's Tomb, New Delhi	15.	Sravasti, Uttar Pradesh
3.	Qutub Minar Complex, New Delhi	16.	Sarnath, Uttar Pradesh
4.	Red Fort, Delhi	17.	Vaishali-Kolhua, Bihar
5.	Hazardwari Palace, Murshidabad, West Bengal	18.	Khajuraho Western Gropu Complex, Madhya Pradesh
6.	Shore Temple, Mahabalipuram, Tamil Nadu	19.	Jahaz Mahal Parisar,Mandu, Madhya Pradesh
7.	Elephanta Caves, Mumbai, Maharastra	20.	Martand Temple, Kashmir
8.	Taj Mahal, Agra, UP	21.	Thanjuar-Brihadeshwar Temple, Tamil Nadu
9.	Kumbhalgarh Fort, Rajasthan	22.	Group of Temples, Pattadakal, Karnataka
10.	Rani-ki-Vav, Gujarat	23.	Masrur Rock-cut Temple, Himachal Pradesh
11.	Fatehpur Sikri, Agra, Uttar Pradesh	24.	Rang Ghar, Sibsagar, Assam
12.	Hampi, Karnataka	25.	Konark Temple, Odisha
13.	Daulatabad Fort, Maharashtra		

Source: website, pib.nic.in

Contemporary developments of India tourism industry:

The following are the contemporary issues and developments during the previous year in India tourism industry.

1. Incredible India Tourism Investors Summit (IITIS):

Ministry of Tourism organized 3- day long **"Incredible India Tourism Investor's Summit (IITIS)-2016"** in association with **Tourism Finance Corporation of India (TFCI)** and Confederation of Indian Industry (CII) from 21st to 23rd September, 2016 at Vigyan Bhawan, New Delhi. The main objective of the Summit was to help promotion of investment in tourism sector in order to boost tourism in India at international level. Over 1800 delegates from the industry were participated. The states like *Gujarat, Rajasthan, Karnataka, Uttarakhand, and Chhattisgarh* exchanged 86 MoUs during the session and many more are in the pipeline, aggregating close to Rs 15,000 Crores investment in tourism sector.

2. 5th International Buddhist Conclave:

Ministry of Tourism, Government of India, in collaboration with the State Government of Uttar Pradesh and Bihar organized the **05th International Buddhist Conclave – 2016** in **Delhi, Varanasi, Sarnath and Bodhgaya** from 02nd to 06th October, 2016. The overall theme for the 05th International Buddhist Conclave was '*India, the Land*

of Buddha'. More than 250 delegates from around 39 countries, consisting of Tour Operators, Travel Agents, Journalists, Travel Writers, Bloggers, Buddhist Scholars, Monks and Opinion Makers attended the Conclave. *The State Govt's of Gujarat, Madhya Pradesh and Telangana* offered Post Conclave familiarization tours to showcase and promote their Buddhist sights to the International delegates attending the Conclave.

3. 5th International Tourism Mart:

The Ministry of Tourism organized the **"5th International Tourism Mart-2016"** at Imphal, Manipur from 23rd to 25th November, 2016 in association with the *North Eastern States and West Bengal*. Buyer and Media delegates from around the world and from different regions of the country participated in the Mart and engaged in one-to-one meetings with sellers from the North East Region. The Mart provided the opportunity to the tourism product suppliers from the region to reach out to international and domestic buyers, with the objective of promoting tourism in the region.

4. MOUs/Agreements Signed In The Field Of Tourism Cooperation:

 The Government of the Republic of India and the Government of the Republic of Maldives signed a MoU for strengthening cooperation in the field of tourism on **10th April, 2016** during the visit of Honourable President of Maldives to India.

 The Government of the Republic of India and the Government of the State of Qatar signed a MoU for strengthening cooperation in the field of tourism on **5th June, 2016** during the visit of Honourable Prime Minister of India to Qatar.

 The Government of the Republic of India and the Government of the Republic of South Africa signed a MoU for strengthening cooperation in the field of tourism on **8th July, 2016** in Pretoria, South Africa 2016 during the visit of the Honourable Prime Minister of India visit to South Africa.

 The Government of the Republic of India and the Government of the Kyrgyz Republic signed a MoU for strengthening cooperation in the field of tourism on **20th December, 2016** in New Delhi during the Honourable President of the Kyrgyz Republic visit to India.

5. Setting Up of Task Force on Adventure Tourism:

The Ministry of Tourism set up a task force on Adventure Tourism in October, 2016 under the Chairmanship of Secretary (Tourism) for resolving issues related to development and promotion of adventure tourism in the country. Various stakeholders including Adventure Tour Operators, Government Ministries and Central Agencies as well as State Governments are members of the task force.

Suggestions

The following are the important suggestions for the development of tourism sector in India and it will enhance the economic growth.

• Support tourism organizations capacity building.

• Encourage new private sector tourism investment attraction.

• The Luxury tax should be limited to 4%.

• The Government understands the requirement to create better infrastructure. However, assessment of infrastructure needs would require more objectively.

• Organise as many as Road Shows on potentiality of Indian Tourism in different cities and towns of the country to bring the realistic awareness on India tourism industry.

• The Union Government has to design a compulsory system of student education tours.

Conclusion

The tourism industry in India is substantial and vibrant, and the country is fast becoming a major global destination. India's travel and tourism industry is one of them most profitable industries in the country, and also credited with contributing a substantial amount of foreign exchange. Tourism industry has contributed enormously in the flourishing graph of India's economy by attracting a huge number of both foreign and domestic tourists travelling for professional as well as holiday purpose. The Tourism Ministry and stakeholder has been playing an important role in the development of the industry, initiating advertising campaigns such as the "Incredible India" which is promoting India's culture and tourist attractions in a fresh and memorable way. The trends and contemporary developments of India Tourism helped create a colourful image of India in the minds of consumers all over the world, and have directly led to an increase in the interest among tourists.

It is a composite sector, generating income in a large number of activities as sectors and sub sectors like, hotel and other accommodation units, travel agents and tour operators, transport services, tourist resorts and complexes, shopping facilities including sales outlets for curious, handicrafts, souvenirs, and so on. The tourism sector is often criticized for providing only low-wage, seasonal employment, but it has to be obvious that if there were no tourism many workers in India would be unemployed.

References

1. ***Arundesh Pande. H,*** (2000), India a Travel Guide, Crest Publishing House, New Delhi.

2. ***Arun Kumar Serkar & Prenath Dhar,*** (1998), Indian Tourism, Kanishka Publications, New Delhi,

3. ***Bezbaruah, M.P,*** (1999), Indian Tourism beyond Millennium, Gyan Publication, New Delhi.

4. ***Batra G.S,*** (2000), Tourism in 21st Century, APH Publishing Corporation, New Delhi.

5. ***Burkarte, A.J, & Medlik,*** (2001), Tourism-Past & Future, Madrid Book House, Madrid.

6. ***Bhatia, A.K,*** (1998), Tourism Development: Principles & Practices, Sterling Publishers, New Delhi.

7. ***Chib, S.N,*** (1983), Perspective on Tourism in India, Govt. of India, New Delhi.

8. ***Devesh Chaturvedi***, Tourism in India: Ensuring Buoyancy and Sustainability, published Paper, Yojana monthly magazine, Vol.54, May, 2010

9. ***Gill, P.S,*** (1996), Dynamics of Tourism, Anmol Publications, New Delhi.

10. ***India Tourism Statistics at a Glance-2014,*** Ministry of Tourism, Govt. of India, New Delhi.

11. ***Jayapalan. N,*** (2001), An Introduction to Tourism, Atlantic Publishers and Distributers, New Delhi.

12. ***Praveen Sethi,*** (1999), Tourism the Next Generation, Anmol Publications, New Delhi.

13. ***P.C. Sinha,*** (2002), Tourism: Issues & Strategies, Sterling Publications (P), Ltd, New Delhi.

14. ***Ratandeep Singh,*** (1998), Infrastructure of Tourism in India, Kanishka Publishers, New Delhi.

15***. Ranga & Mukesh*** (2003), Tourism Potential in India, Abhijeet Publications, New Delhi.

16. ***Satish Babu. A,*** (2008), Tourism Development in India, APH Publishing Corp., New Delhi.

17. ***Sati. V.P,*** (2001), Tourism Development in India, Pointer Publications, Jaipur.

18. ***V. Mohan Rao,*** India – Tourists Delight, published article, Kurukshetra monthly magazine, Vol.55, June, 2007.

19. **Websites:** www.Indiatourism.org, www.safariplus.com, www.incredibleindia.org,

www.expresstravelworld.com
www.tourismindia.travel

20. India Tourism Press Coverage, Hindu Daily News Paper, 17th February, 2016.

21. India Tourism Press Coverage, Hindu Daily News Paper, 30th March, 2016.

22. India Tourism Press Coverage in Eenadu Daily News Paper, 25th January, 2015.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Educational status of scheduled caste women – a micro level study

Dr. D. Swarupa Rani, Assistant Professor, Department of Economics, Kakatiya University, Warangal, Telangana

Abstract: *Education is a significant indicator of social status and social mobility and is thereby a better index of human development. In India majority of Scheduled Caste women are illiterate. Scheduled Caste women at the national level are marked by lowest participation in the higher education and highest unemployment rate in comparison to other social groups. The dropout rate of the Scheduled Caste women is also very high. The present paper discusses the educational status of Scheduled Caste women. Education in fact, brought about remarkable changes among the scheduled castes in the rural village settings. Ammapuram village in Warangal district of Telangana State has been selected for the present study. The main objective of the present paper, while exploring the educational status of the Scheduled Caste women has also tried to find out the various factors responsible for the low educational status of Scheduled Caste women.*

Keywords: *Illiteracy, Dropouts, Education, Development, etc.*

Introduction: Education has been identified as one of the basic requirements for attaining qualitative change in the life of any individual. Education results in the enhancement of self-esteem and expected to raise the self-confidence of an individual. It improves analytical ability of an individual. Education is a basic human right. A.K.Sen views it as a significant source of widening social opportunities. No society can move forward without literate population. Literacy is one of the three dimensions of human development index. India is committed towards the goal of universal and free basic education since independence with the Indian Constitution stating, the state shall endeavour to provide, within a period of ten years from the commencement of this constitution, for free and compulsory education for all children until they complete the age of 14years irrespective of the gender. Despite this, gender discrimination can be seen in literacy and education. Further, United Nation's Millennium Development Goals state the elimination of gender disparity in primary and secondary schooling is necessary to promote gender equality and empower women.

Despite all this, India has one of the lowest 'female literacy' rates in Asia. The UNDP's Human Development Report, 2005 states that female literacy rate of 15 years and above is only 47.8 per cent and its share as a percentage to male rate is 65 per cent. Thus, a gender disparity in literacy has still been a serious problem. Owing to prevalence of gender inequalities, Scheduled Caste women's position is last when compared to Scheduled Caste men in the socio-economic structures of our country. The progress of literacy among Scheduled Caste women still presents a dismal picture. The education is the means of realizing the life desires which help to develop the personality and qualities in improving the status of person in all

respect and which directly relates to the socio-economic and political status of women. As high as 99 per cent of Scheduled Caste women are illiterate. It is very common that the Scheduled Caste girls who are going to school discontinue their education and enter into paid work. In addition, they have to assist their mothers in domestic work.

Review of Literature: According to P.H.Sethu Madhava Rao, in India, the main obstacle for empowerment has been dismal educational level among women. In some States, the female literacy has been very low and the effect of literacy is the greatest casuality for both women and men. This becomes a stumbling block towards empowerment. Education of the girl child is the best remedy to correct the imbalance and any cost in this regard is not too high to achieve it. Many small states are already providing free education to girls at different levels. In fact, good education needs to be provided to all girls living in both rural and urban areas. Unfortunately, for a variety of reasons, some of the girl students are not able to attend the schools regularly either because they have to work with their mothers at residence or they are not motivated to get the desired education. By literacy, we mean that they should not only be in a position to read and write but also understand the various issues of the country and get themselves acquainted with the problems and also help in problem solving exercises.

Durkheim (1956) defined the prime function of education as developing physical, intellectual and moral qualities among younger generation so that he can participate in political and social life both. Parsons (1968) defining, function of education in terms of school Parsons highlighted schools as 'focal socializing agency', a bridge between family and society as a whole. Bourdieu and Passeron (1977) argued that education includes pedagogic action exerted by all the educated members of a social formation. Further, institutionalized education is characterized not only by the form of the setting where education is imparted, but also by the fact that it carries a social or governmental mandate and, in consequence, recognition of the individual's completion of designated stages of education, and hence possible claim to employment or other kinds of engagement as part of what demographers call 'the economically active population' (Bhattacharya, 2002).

However, women cannot be treated as a homogeneous group owing to strong and sharp rural-urban as well as class, caste divide. Therefore, the rural poor Scheduled Caste women are the most disadvantaged and deprived sections of the society. They are subjected to the effects of structures of patriarchy as well as class, caste and regional barriers. They are at the bottom of the hierarchical socio-economic structures.

Objectives of the Study: The main objective of the present inquiry is to examine the educational status of Scheduled Caste women. Further, the study aims to

i) review the policy of government towards the achievement of women's literacy;

ii) examine the socio-economic profile of the selected respondents;

iii) assess the gender disparity in literacy among Scheduled Castes; and

iv) suggest measures to improve women's literacy in general and Scheduled Caste women in particular on the basis of the findings of the study.

Methodology: The present study is based both primary as well as secondary sources of data. The secondary data in the form of Human Development Reports, Census Reports and NSS rounds have been studied. To elicit detailed information as to Scheduled Caste women's literacy, a structured questionnaire has been prepared and administered. Further, participation and observation methods are also adopted to collect real information about their lives.

Sample Design: Ammapuram village has been taken up from Warangal district of Telangana State. Further, 110 Scheduled Caste women are selected for the present study from the total 538 Scheduled Caste families.

Gender Disparity in Literacy Rates in India: Female literacy assumes significance in view of its positive role in social development. The assessment with regard to gender disparity in literacy is one of the three dimensions of Gender related Development Index (GDI) developed by UNDP's Human Development Report. The achievement of 100 per cent female literacy by 2015 is one of the Millennium Development Goals of UNO to move towards the creation of more humane society. In this context, it is necessary to examine the gender disparity in literacy in India. The information in regard to gender wise and caste wise variation of literacy rates in India has been presented in Table-1.

Table – 1 Literacy Rates in India From 1991-2011

Census Year	General Total	SC Total	General Men	SC Men	General Women	SC Women
1991	52.02	37.41	64.01	49.91	39.03	23.76
2001	64.08	54.69	75.03	66.64	53.07	41.90
2011	74.04	65.85	82.14	75.20	65.46	56.50

Source: Census of India

Table – 1 illustrates that the literacy rates among Scheduled Castes never exceed 56.50 in 2011. Further, their position is last when compared to total men and women as well as Scheduled Caste men. It is noticed that the total women literacy is low when compared to total men literacy rate and the same gender disparity can be observed even among Scheduled Castes.

Gender Disparity in Literacy Rates in Telangana: The Scheduled Caste women's literacy rate in Telangana is 49.90 as per 2011 census. The information in regard to the district-wise Scheduled Castes literacy rates has been shown in Table – 2.

It is to be observed in Table – 2 that Hyderabad district occupies first place in Scheduled caste male as well as Scheduled caste female literacy rates in Telangana state as per 2011 census. The selected Warangal district occupies fourth place in Telangana state. The gap between Scheduled caste male and female is 8.90 per cent. The highest Scheduled

caste female literacy rate can be seen in Hyderabad district where it is 71.07 and the lowest position is occupied by Mahaboob nagar district where it is 37.65 per cent. The data clearly indicates that all the districts of Telangana state, the Scheduled Caste female literacy rate is low when compared to Scheduled caste male literacy rate.

Table – 2 Scheduled Castes Literacy Rates in Telangana State as per 2011 Census

Name of the District	Literacy Rate		
	SC Male	SC Female	Total
Mahaboobnagar	57.77	37.65	47.72
RangaReddy	72.81	56.56	64.72
Hyderabad	83.49	71.07	77.28
Medak	62.75	44.32	53.42
Nizamabad	63.09	43.52	52.88
Adilabad	68.31	48.80	58.46
Karimnagar	67.59	50.27	58.84
Warangal	70.77	52.89	61.79
Khammam	70.85	55.08	62.90
Nalgonda	71.10	50.49	60.75
Total	68.04	49.90	58.90

Source: Directorate of Census Operations, Hyderabad.

Selected Mandal: Thorrur is a Mandal and belongs to Warangal district. It is located on the main road between Warangal and Khammam. It is at about a distance of 50 km from Warangal and 70 km from Khammam. The town has a population of about 44,000. It is a rapidly growing town due to its locational advantages. The information in regard to the Total population, Scheduled Caste population and literacy rates has been presented in Table - 3.

Table – 3 Population and Literacy rate of Thorrur Mandal

Particulars	Persons	Men	Women
Total Population	68336 (100.0)	34552 (50.67)	33784 (43.93)
Scheduled Caste Population	14583 (21.34)	7334 (10.73)	7249 (10.60)
Total Literacy Rate	55.0	67.0	43.0
Scheduled Caste Literacy Rate	44.37	57.35	31.41

Source: Mandal Records

It can be seen from Table - 3 that in Thorrur mandal, including its villages have a total population of 68,336 of which 50.67 are men and 43.93 are women as per 2011 census. The percentage share of Scheduled Caste population to total mandal population is 21.34 per cent where the Scheduled Castes men is 10.73 and women is 10.60. The overall literacy percentage is around 55 per cent of which

men is 67 per cent and women is 43 per cent while the Scheduled Castes literacy rate is 44.37 while Scheduled Caste men and women literacy rate is 57.35 and 31.41 respectively. It is to be noticed that the Scheduled Caste women's literacy rate is low when compared to total men, total women and Scheduled Caste men.

Selected Village: Ammapuram village belongs to Thorrur mandal of Warangal district. It is located 70 kms away from the district headquarters and 5 kms away from the mandal headquarters. The village is connected to district as well as mandal headquarters with a good road facility. The RTC bus facility is available twice in a day on this route. The information in regard to the number of households and other details of the Ammapuram village has been shown in Table - 4

Table – 4 Number Of Households in the Selected Village

Category	No. of Families
Scheduled Castes	538 (45.36)
Scheduled Tribes	142 (11.97)
Backward Classes	426 (35.91)
Forward Castes	80 (06.74)
Total	**1186 (100.00)**

Source: Village Records

Table - 4 illustrates that the total number of families in the selected village are 1186 where the Scheduled Caste families are 538, the Backward Classes are 426 families, scheduled tribe families are 142 and Forward caste families are 80. The village has a village panchayat. It is having one primary and one ZPS School in which education is available from 1st to 10th class. The village is having post-office facility. However, it is unfortunate to notice that the Primary Health Centre which is identified as an important source of medical facilities especially for rural poor is not there in the village but two RMP male doctors are available. Depending upon the seriousness of the problem, if other socio-economic factors are favorable, under compulsory conditions, the villagers will go to the govt. hospital in the district headquarters.

It is important to note that women education is an essential tool for individual family and national development, this is because educated women help to boost the living standard of the family and health of the family members, a good education for a woman aims at physical, intellectual moral development of the woman, thus women should seize all the a venues open to them to go to school so as to increase The Intuition their social and political power in the society, this is a strong reason why governments around the world should assume the responsibility to provide and finance education especially basic education for women. The education details of the selected respondents in the

selected village have been presented in Table – 5.

It is to be observed in Table – 5 that 90 out of 110 of the selected respondents are illiterates. It indicates their low educational status of the selected Scheduled Caste women. Further, 5.45 per cent of the selected respondents could stop their study at primary level and 2.27 per cent of the selected respondents studied at secondary level. No one can see at degree and above levels. Moreover, in all the levels, the selected women respondents are low position in education compare to selected male respondents. This shows us the disparity among the Scheduled Castes not only in the selected village but also all over the country. In this condition, we have to observe the children's education details of the selected respondents. The relevant information is presented in Table – 6.

Table – 5 Education particulars of the Selected Respondents

Particulars	Male	Female	Total
Illiterate	65 (29.54)	90 (40.91)	155 (70.45)
Primary	20 (9.09)	12 (5.45)	32 (14.54)
Secondary	12 (5.45)	5 (2.27)	17 (7.73)
Intermediate	8 (3.63)	3 (1.36)	11 (5.0)
Degree & Above	5 (2.27)	0 (0.00)	5 (2.27)
Total	110 (50.00)	110 (50.00)	220 (100.00)

Source: Field Study

Note: Figures in parentheses indicate percentage to total.

Table – 6 Children's Education details of the Selected Respondents

Particulars	Boys	Girls	Total
Illiterates	12 (5.71)	16 (7.62)	28 (13.33)
In study	76 (36.20)	58 (27.61)	134 (63.81)
Dropouts	19 (9.04)	29 (13.81)	48 (22.85)
Total	107 (50.95)	103 (49.05)	210 (100.00)

Source: Field Study

Note: Figures in parentheses indicate percentage to total.

It can be seen from Table – 6 that 28 out of 210 of the total children are illiterates. Moreover, 22.85 per cent of the children are dropouts. Even in 21st Century we can see the illiterates and dropouts in the Scheduled Caste families. Educationally schedule caste girls are slowly in the process of development. In most of the cases, the dropout rates of girls in primary and secondary education is more in this community.

Results: The following are the Results for the low level of educational status of Scheduled Caste women as well as the dropout rates of Scheduled Caste girls.

1. Resistance from the family to send girls to schools.

2. Fear of insecurity in villages.

3. Lack of physical facilities like accommodation, school, transport and medical facilities.

4. Girls were forced to do domestic chores which prevent from attending school.

5. Working to earn for the family prevent the girls from attending school.

6. Working with parents to earn their livelihood in unorganized sector like agriculture as labour made them illiterate.

7. Because of the sick and unemployed parents girls were forced to work.

8. Many were forced to get married at young age, which stop schooling.

9. Distance of schools from home.

10. Fear of alienation of girls from their environment as a result of education is some of the other factors for low literacy level among schedule caste girls. Even if the education improved the marriage prospects of the girls, the minus point is the increase in dowry. Therefore many parents wish to withdraw the girls from schools.

Conclusion: Despite the global pressures from UNESCO and Indian government's commitment towards the attainment of 'Education for All'; gender discriminations are still prevalent in literacy rates. In fact, literacy is a pre-condition for attaining improvement in the status of women. The analysis made in the present inquiry clearly revealed that the most vulnerable and marginalized section among women is Scheduled Caste women. The data in regard to their literacy rates, dropout rates indicate that the Scheduled Caste women are most deprived section among women. Further, rural Scheduled Caste women are at the bottom of the socio-economic structures of the society. The problems of Scheduled Caste women in general, rural Scheduled Caste women in particular are different from the problems of upper class and upper caste women. In view of this intra-group variation and heterogeneous character of female population owing to caste, class and cultural divide, in depth studies are needed to understand specific problems of each group and policies should be formulated accordingly. The unequal representation of Scheduled Castes students in higher education brings exclusive growth of the nation. We need highly skilled educated people to move forward the nation. The higher education system should focus on the inclusive development of Scheduled Castes students. The nation wants growth with social justice. The development without some groups is not an inclusive growth of the country. Higher education plays an important role in social change. It also brings radical transformation in socio-

economic outlook. The low enrolment of Scheduled Castes students in higher education make our development exclusive one. Now the government should modernize our educational system in an inclusive way. This process will make us to move forward to attain the goal of 100 per cent literacy for women in general and Scheduled Caste women in particular.

References:

1. Jean Dreze, Amartya Sen (1997); India – Economic Development and Social Opportunity, Oxford University Press, New Delhi.
2. Mira Seth (2001); "Women and Development - The Indian Experience", Sage Publications Pvt. Ltd., New Delhi.
3. R. Govinda (2002); India Education Report, NIEPA, Oxford University Press, New Delhi.
4. Meena Anand (2005); Dalit Women Fear and Discrimination, ISHA Books, Delhi.
5. Samanta R.K. (2005); Empowering Rural Women – Issues, Opportunities and Approaches, the Women Press, Delhi.
6. Thota Jyothi Rani (2005); Work, Income and Status of Rural Women, Serials Publications, New Delhi.
7. Jyothi Rani T (2006); Deprivation of Education to Scheduled Caste Women – A Study, Kakatiya University Journal of Social Sciences, Vol.1, No.2, Jan-June, 2006.
8. Lalneihzovi (2007); Women's Development in India, Mittal Publications, New Delhi.
9. Various Human Development Reports.
10. P.H. Sethu Madhava Rao (2001), Education for Women's Empowerment an article published in Empowering the Indian Women, Publications Division, ministry of Information and Broadcasting, Government of India, Patiala House, New Delhi, p. 126.
11. Bhattacharya, Sabyasachi. 2002. Education and the Disprivileged: Nineteenth and Twentieth Century India (ed.). New Delhi: Orient Longman Private limited.
12. Bourdieu, Pierre and Jean - Claude Passeron.1977. Reproduction in education, society and Culture. London: Sage Publication
13. Durkheim, Emile. 1956. Education and Sociology. New York: The Free Press.
14. Parsons, Talcott. 1968. The School Class as a Social System: Some of its Function in American Society' The Sociology of Education: Homewood: The Dorsey. (pp. 199-218).

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Analysing Districts wise Performance and Suitability of Growing Crops in Karnataka: Evidence from Major Crops

Dr. Balaji, UGC-PDF Economics, School of Economics, University of Hyderabad, Hyderabad

Abstract : *The study attempts to understand the cropping pattern and performance of different districts in growing different crops and its inter-district disparity in the state of Karnataka. The study makes use of secondary data for the period 1975- 2014 from different published sources. The study applied location quotient, crop versatility index, and district versatility index to analyze the secondary data. The study has revealed that the specialization of rice in Uttara Kannada, Coorg (kodgu), Dakshina Kannada, Shivmogga, Chikamangluru, and Mandya, and pulses in Bidar, Mandya, Hasana, Kolar, Tumkur Mysure, Bengaluru and Kalburgi were the highest during period under study with the value of location quotients to be more than two. The increase in value of versatility indices for majority of districts during 1995-96 to 2004-05 and 2005-06 to 2014-15 as compared to 1975-76 to 1984-1985 and 1986-87 to 1994-95 implies the move towards specialization. It is established that rice, maize pluses, sugarcane and cotton are highly localized crops.*

Key words: *food grains, regional imbalances, agro-climatic zones*

Introduction

Agriculture is integral to the state economy of Karnataka. It provides employment opportunities to more than 65 per cent of the state population and more than 70 per cent of the population depends on it directly or indirectly (Economic Survey of Karnataka, 2015-16). Though its share in State Gross Domestic Product (SGDP) has come down to less than 12 per cent (as per update Advanced) though its share gross domestic production has comes down less 15 per cent, but through forward and backward linkages with other sectors comes much larger. It constrains a great deal of demand for industrial products and also influence service sector. Its total influence through forward and backward linkages with other sectors is much larger. Agriculture in Karnataka is mostly dependent on rainfall. Monsoon and seasonal condition play a major role in the agriculture production. The proportion of area under agriculture is 33.33 the gross irrigated area is 23.8 % of gross area sown in the state. Karnataka is one of the top ten states producing food grains in India. It has ten agro-climatic zones suitable for growing a variety of food grains ground throughout the t year. The state has gross suitable cultivated area of 12.35 million ha. Rice, sorghum maize and wheat are the major cereals grown in the state. Total area under cereal crops has increased from 5.4 million ha in 1990-91 to 5.6 million ha in 2001. The production of cereal crops has gone up from 7.1 million ha in 1990-91 to 9.9 based on triennium 1998-99 to 2000-01.

An earlier study by Vani and Vinod (1996) concluded on that the inter-district variation was found to be higher

after green revolution implying uneven adoption of green revolution across districts. Basavaraj (2007) found that post harvest losses for the two major food grains-rice wheat were around 75 per cent at farm level and 25 per cent market level. Karnataka's cropping pattern varies from region to region and vast changes are continues- as new crops are being introduced and the primary crops are on the decline (Vivekanad, M and Satyapriay 2004) Cropping pattern in the state made significant changes from one crop to another since 2001-02 (Balaji and Dibakr 2016).

The main aim of the study is to gain insight into the magnitude of efforts needed to achieve balanced agricultural growth in Karnataka. The specific objectives of my study are: (i) to measure the specialization of different crops in various districts (ii) to study the suitability of the different districts for growing various crops.

Data and Methodology

The present study is based on time-series secondary data. The huge data on gross cropped area and area under various crops at state and district levels are obtained from, International Crops Research Institute for the Semi-Arid Tropic (ICRISAT), Statistical Abstract of Karnataka, Karnataka Economics survey and Karnataka at a glance. We consider 09 main crops grown in Karnataka, namely rice, maize, sorgram, Pulses, ground nut, oilseed, sunflower, cotton (both American and Desi) and sugarcane. The crops included in the study account for 80 percent of total cropped area in the state in 2014-15. Presently the state has 30 districts. Because of non-availability of data for newly created districts, we grouped these into 19 composite districts. The sample period is from 1975-76 to 2014-15 such a selections period enables to undertake a more disaggregated analysis of the data that is annual. The data are analyzed for four different periods, viz. Period-I (1975-76 to 1984-1985), Period-II (1986-87 to 1994-95) Period-III (1995-96 to 2004-05) and period IV (2005-06 to 2014-15)

Location Quotient

Location Quotient is simple and most widely measured (e.g., Peters, 1987; Thakur and Jagalan, 2005; Guimaraes *et al*., 2009; Ardeshna and Shiyani, 2011 Ramphul 2012) of regional specialisation. It is defined as the ratio of the share of acreage under a particular crop in the district to the share of that crop in the state's total cropped acreage. This metric considers the relative positions of crop in districts with that of the state. The results revel the degree of regional specialization in each crop. It is calculated as

The concentration of a crop in an area largely depends on its terrain, temperature, moisture, price and income, social factors, government policy, type of soils and many others. The most commonly used method to study crop concentration is the Location Quotient (LQ) method. The procedure involved in measuring the LQ is as follows.

$$LQ_{ij} = \frac{A_{ij}/A_j}{A_i/A} \qquad (1)$$

Where,

L_Q = Location quotinet of i^{th} crop in j^{th} district

A_{ij} = Acreage of i^{th} crop in j^{th} distrcit

A_j = Gross cropped acreage in j^{th} district

A_i = Acreage of i^{th} crop in j^{th} distrcit

A = Gross cropped acreage in the state

When the value of LQ is equal to unity (LQij = 1) it indicates that the state and district proportions of a crop are equal, whereas a value below unity (LQij < 1) means that the district is less specialized than the state. A value of quotient in excess of unity (LQij > 1) indicates that the crop studied is more important or specialized in the district in relation of its importance at the state level. Larger the value of quotient indicate higher the specialization of the district in the concerned crop. Also, observing LQ over time show if a crop is becoming more or less specialized in the district. It is possible to increase the quotient even when the acreage under the crop in the district has shrunk and vice-versa.

Crop Versatility Index

Crop versatility is one of the important characters which can be derived from the information on the cropping pattern prevailing in the state. It is helpful identify the crop with respect to its spatial coverage in quantitative terms. The versatility index of a crop is inversely proportional to coefficient of variation among the district-wise acreages of the corresponding crop. A more versatility crop is one which grows in more number of districts. The crop versatility index is as follows

$$CV_i = \frac{\sigma A_{si}}{XA_{si}} \times 100 \qquad (2)$$

Where,

CV_i = Coefficient of variation of i^{th} crop

σAs_i = Standard deviation of the district wise acreage share of i^{th} crop

XAs_i = Mean of the district – wise acreage share of i^{th} crop

A crop is considered to be more versatile if the coefficient of variation is less and conversely, the crop is considered to be more region-specific if the coefficient of variation is more number of districts.

District Versatility Index

It reflects the suitability of a given district for growing more number of crops. The most versatile district is one in which more number of crops are grown with same percentage allocation of area of gross cropped area. It is estimated as

$$CV_i = \frac{\sigma A_{sj}}{\bar{x} A_{si}} \times 100 \qquad (3)$$

Where,

CV_j = Coefficient of variation of j^{th} district

σAs_j = Standard deviation of the district wise acreage share in gross cropped area in j^{th} crop

XAs_j = Mean of the crop − wise acreage share in gross cropped area in j^{th} district

A district with smaller coefficient may be regarded as more versatile in the sense of agro-climatic conditions permitting a variety of crops being grown in the district.

Results and Discussion

The LQ is the ratio of the share of area of a particular crop in the district to the share of a particular crop in the state. It considers the relative position of a crop in a district with that at the state level. It is possible to increase the quotient even when the area under the crop in the district has reduced and vice-versa. A quotient more than unity indicates that the crop is more important or specialized in the district in relation its importance at the state level larger the quotient, higher the importance. In other words, higher the specialization of the crop in the district concerned. The district wise location quotients of different crops are presented in table 1 to 3.

The district wise location quotients of rice, maize and jowar are presented in Table 1. It is observed from the table that rice remained specialized in the districts of Uttar kannada, Coorg (Kodagu), Dakshina Kannada, Shivamogga, Chikkamagluru, Mandya, Ballari, Hassan, Kolar, Tumakuru and Chitradurga throughout the entire period under study . The highest specialization of the crop is observed in the district Uttar Kannada with the quotient value of 68.13 during Period-III implying that the share of rice crop in gross cropped area of the district is more than six eight times than the share of the crop in gross cropped area of the state. The maize crop remains specialized in districts of Shivamogga and Ballari through the period are under reference. The highest specialization of the crop occurred in Shivmogga, Ballari and Chitrdurga district during Period-IV (11.64) (3.65) and (3.57) while the Hassan (3.22) district showed highest specialization during Period- IV. Looking at the specialization of Jowar, Bidar and Ballarri districts remain specialized throughout the whole period. Mysure district has acquired specialization during Period- I, II and III. The specialization of Chikkamangluru district in Jowar is observed during Period-II only. The highest specialization is observed in Bidar district during Period-I (5.15) while during Period-II (5.4), the position was captured by Bidar district. During Period-I (2.93), and (2.62) Ballari districts share the status of highest specialization in jowar.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Table 1 Location Quotient of Rice Maize and Jowar in Different Districts

DISTRICT	RICE				MAIZE				JOWAR			
	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV
Uttara Kannada	67.51	62.6	68.13	64.00	0.21	0.08	0.21	2.88	0.29	0.34	0.14	0.05
Coorg (Kodagu)	25.01	23.13	21.36	14.2	0.16	0.56	1.05	1.31	0.14	NA	NA	NA
Dakshina Kannada	23.36	20.45	18.82	18.61	NA	NA	NA	0.01	0.03	0.02	NA	NA
Shivamogga	16.79	14.00	24.71	24.06	0.11	0.68	4.74	11.36	2.24	1.76	0.47	0.07
Chikkamagluru	8.55	6.21	5.9	5.18	0.04	0.04	0.08	1.42	2.85	1.85	0.69	0.28
Mandya	7.48	8.53	10.85	12.38	0.03	0.02	0.21	0.66	0.68	0.79	0.39	0.03
Bakkari	4.81	6.14	12.25	20.76	0.49	0.59	2.06	3.65	2.62	2.13	1.81	1.23
Hassan	4.19	3.79	3.95	3.00	0.42	0.33	0.85	3.22	0.01	0.67	0.16	0.16
Mysure	2.15	2.72	3.26	2.96	0.28	0.47	0.82	1.36	2.93	2.12	1.06	0.71
Kolar	2.87	2.54	1.5	1.2	1.19	0.72	1.52	3.6	0.8	0.92	NA	NA
Tumkur	1.73	1.16	1.08	1.09	0.11	0.14	0.29	0.7	0.53	0.33	0.13	0.07
Chitradurga	1.86	1.24	1.65	1.95	0.33	0.72	1.95	3.57	2.13	1.12	0.7	0.42
Bangalore	1.95	1.7	1.42	1.15	0.82	0.49	0.52	1.31	0.01	0.00	0.00	0.00
Dharwad	0.67	0.66	0.57	0.44	0.06	0.21	0.67	1.33	1.29	0.91	0.36	0.16
Belagavi	0.71	0.76	0.82	0.78	0.66	0.85	1.25	1.68	NA	NA	NA	NA
Vijyapur	0.02	0.01	NA	NA	0.13	0.24	0.34	0.7	0.03	0.01	0.01	0.00
Bidar	0.69	0.99	0.57	0.44	0.02	0.02	0.02	0.08	5.15	5.4	4.28	4.12
Raichur	0.63	1.08	1.83	2.35	0.03	0.07	0.13	0.4	0.93	0.79	0.31	0.13
Kalburgi	0.09	0.11	0.21	0.54	0.00	0.01	0.01	0.04	0.24	0.12	0.06	0.03

NA: Data Not Available.

Table 2 Location Quotient of Pulses, Groundnut and Sunflower in Different Districts

DISTRICT	PULSES				GROUNDNUT				SUNFLOWER			
	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV
Bidar	8.59	10.43	13.11	14.87	0.97	0.55	0.18	0.08	0.32	1.4	0.8	0.71
Mandya	8.62	8.05	6.49	6.44	0.53	1.48	0.97	0.27	0.01	0.07	0.01	0.00
Hasan	4.60	4.13	3.54	2.02	0.25	0.34	0.24	0.07	0.12	0.85	0.55	0.62
Kolar	3.69	3.3	3.07	2.75	5.29	7.03	5.68	4.03	0.00	0.15	0.29	0.25
Tumkur	3.91	2.59	2.21	2.19	2.48	5.35	4.91	4.02	0.01	0.13	0.28	0.27
Mysore	3.95	3.39	3.53	3.43	1.07	1.14	0.77	0.49	0.11	0.69	0.28	0.31
Bangalore	3.61	3.93	3.24	3.18	1.23	1.61	1.34	0.75	0.01	0.04	0.03	0.02
Uttar Kannada	3.33	4.76	4.02	1.82	1.94	4.14	2.89	2.38	0.01	0.01	0.01	0.01
Shivmoga	1.65	1.87	1.31	0.59	1.00	1.54	0.88	0.28	0.03	0.47	0.25	0.27
Chikmanglore	0.59	3.83	3.29	2.87	0.98	0.95	0.68	0.55	0.01	1.76	1.56	1.17
Chitradurga	2.35	1.41	0.9	0.75	0.91	3.16	2.99	2.06	0.19	1.54	1.03	0.62
Bellary	1.50	1.21	1.51	2.29	1.59	1.96	2.94	2.73	0.35	2.37	2.8	2.48
Dharwad	0.98	1.22	1.17	1.46	1.46	1.18	0.95	0.58	0.03	0.43	0.46	0.46
Belagavi	1.32	1.08	1.06	1.24	1.00	0.59	0.84	0.6	0.02	0.21	0.31	0.34
Vijyapur	0.77	0.87	1.02	1.75	0.61	0.59	0.52	0.45	0.15	1.41	1.65	1.04
Kalburgi	2.12	2.65	3.62	4.38	0.61	0.83	0.6	0.3	0.04	0.93	0.79	0.58
Dakshina Kannada	2.01	2.67	2.13	1.76	0.15	0.37	0.37	0.34	NA	NA	NA	NA
Raichur	1.15	1.05	1.12	1.67	1.09	1.29	1.06	0.82	0.09	1.46	1.79	1.87
Coorg (Kodagu)	1.07	0.62	0.28	0.28	0.13	0.16	0.01	0.01	NA	NA	NA	NA

NA: Data Not Available.

Pulses crop remains specialized throughout the entire period in Bidar, Mandya, Hasan, Kolar, Tumakuru, Mysure, Bengaluru and Uttar Kannad districts. The district of Mandya and Bidar both having irrigated cropped areas, equally enjoy the status of highest specialization during Period-I (8.62) while Bidar continues at the top during Period II (10.43) Period-III (13.11) and Period –IV (14.87) as well. As Pulses planting continued and diversified during the 1995-04 and 2005-14, the value of LQ for majority of districts has fallen steadily during the later period. Although the value of LQ has declined since 1995-96, northern region retains a significant concentration of pulses. The districts of Kolar, Tumkur, Uttar Kannada and Bellari remain specialized in groundnut throughout the entire period. Besides Bangaluru, Myosre, Dharwad Belegavi and Manday during period-I and II Bangaluru and Raichur during period-III, remain specialized in groundnut crop. The best position in the crop is attained only by Kolar and Tumakur throughout the entire period with the highest value of quotient ranging from 7.23 to 5.35. The districts of Kolar and Tumakur represent extreme arid to semi-arid climate, slight sloping to undulating plains and substantial rainfed cropland. These conditions necessitate for devoting higher acreages to low water consuming crops like groundnut, Pulses, jowar and maize. The value of LQ of groundnut for Tumakar district increased from 2.48 during Period-I to 5.35 during Period-II mainly due to introduction of bore-well irrigation system. The LQ of sugarcane oil seed and cotton is presented in tables 3. The results reveal that sugarcane not only specialized in Manday, but also remains at the top with quotient values of 2.79 3.53 3.83, and 5.28 during Period-I II III and IV respectively. This

This may partially be because of increases in irrigation facilities, availability of large operational holdings plain land and existence of numerous sugar mills at manday. Other districts having specialization in sugarcane crops include Belegavi Bidar , Shivmooga, Uttarr Kannada . Bidar remains specialization in sugarcane during Period-IV (2.15).All districts expect Dakshina Kannara and Coorg (Kodagu) remain specialized in oil seed crop throughout the entire period. Among districts Kolar remains at the top during period-II (7.34) and period-III (6.19) while Bellary remains at the top during period-IV in specialization of oilseed.

Table 3 Location Quotient of Oilseed, Sugarcane and Cotton in Different Districts

Districts	OILSEED				SUGARCANE				COTTON			
	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV	P-I	P-II	P-III	P-IV
Kolar	5.32	7.84	6.19	4.69	0.48	0.31	0.22	0.08	0.01	0.00	0.00	0.01
Bidar	4.31	4.53	3.08	4.43	0.75	1.25	1.48	2.15	0.56	0.18	0.15	0.08
Tumkur	3.30	5.81	5.49	5.14	0.18	0.07	0.05	0.07	0.03	0.02	0.03	0.03
Chickmagalur	2.42	3.55	3.06	3.18	0.30	0.20	0.21	0.16	0.18	0.20	0.24	0.15
Chitradurga	2.21	5.81	4.20	3.20	0.26	0.13	0.21	0.09	0.97	0.75	0.45	0.40
Bellari	2.76	4.86	6.23	6.54	0.33	0.18	0.23	0.13	2.80	2.28	1.96	1.28
Uttara Kannara	2.55	4.38	3.08	2.70	1.52	1.43	1.18	1.02	0.00	0.00	0.00	0.00
Bangluru	1.84	2.39	2.06	1.86	0.29	0.14	0.12	0.11	0.00	0.00	0.00	0.00
Mysure	1.74	2.28	1.42	1.28	0.22	0.40	0.63	0.44	0.19	0.98	1.72	1.02
Mandya	1.34	2.74	2.21	1.50	2.79	3.53	3.83	5.28	0.00	0.00	0.00	0.00
Hassan	1.14	1.92	1.62	1.51	0.23	0.32	0.35	0.30	0.43	0.32	0.26	0.04
Shimogga	1.36	2.28	1.22	0.69	0.80	1.19	1.65	1.33	0.69	2.52	2.14	0.63
Dharwad	1.42	1.88	1.50	1.60	0.02	0.04	0.05	0.04	1.88	1.45	1.37	1.35
Belagavi	1.74	1.87	2.11	2.09	0.58	1.05	1.62	1.94	0.75	0.84	0.62	0.35
Vijapura	1.24	2.46	2.39	1.91	0.06	0.18	0.39	0.58	1.09	0.28	0.13	0.05
Raichur	1.75	3.32	3.31	3.73	0.08	0.02	0.02	0.01	2.51	0.78	0.70	0.41
Kalburigi	1.61	2.59	1.78	1.30	0.02	0.03	0.04	0.08	0.81	0.14	0.11	0.30
Dakshina Kannada	0.45	0.55	0.49	0.46	0.27	0.42	0.19	0.01	NA	NA	NA	NA
Coorg (Kodagu)	0.10	0.26	0.00	0.04	NA	NA	NA	NA	NA	NA	NA	NA

The districts of Belllari (2.88) and Dharwad(1.88) are specializes in cotton throughout the period. The quotient value of other districts is less than unities for cotton crop implying region specific characteristics of the crop in specific area.

A glance at Column II of Table-3 makes it clear that out of the total 19 districts in the state,Only two acquire specialization in rice and three in oilseed and Pulses each. From our foregoing analysis it may be concluded that irrigation has led to specialization in fine cereals whereas urbanization and proximity to city encourages acreage towards high value crops like vegetables and fruits. Table 4 contains the versatility indices (Eq. 2) for major crops grown in Karnataka. It is observed from the Table that rice (289.46) is more versatile followed by Pulses (318.47) and sugarcane (348.14) crops during Period-I.

Groundnut (415.89) and oilseed (473.48) are less versatile and grown in the specific parts of the state. More versatility of pulses (321.24) during Period-II implies that the crop has been grown in wider area of the state. Oilseed crop is also more region-specific which is reflected by its higher versatility index during Period-II (333.23). It is clear that the crops such as rice, pulses and sugarcane are more versatile than sunflower, maize, jowar, groundnut, oilseed and

Table 4 Specializations of Districts in Different Crops, 1975-76 To 2014-15

Districts	Crop in descending order of magnitude of location (LQ>1)
Banglore	Rice, Pulses ,Ground nut, oilseed
Kolar	Rice, Maize, Groundnut, oilseed
Tumkur	Rice, Pulses, Groundnut, oil seed
Mysore	Rice, Maize,Sorgram, Pulses Ground nut, oil seed
Mandya	Rice, Pulses, oilseed
Hassan	Rice, Pulses, oilseed
Shimoga	Rice, Maize,Sorgram oilseed
Chickmagalur	Rice, Sunflore oilseed
Chitradurga	Rice, Maize,Sorgram, Sunflore
Bellari	Rice, sorgram Ground nut, sunfolre, Cotton
Dharwad	Maize, Sorgram, Ground nut, sunflore, oilseed, Cotton
Belgavi	Maize, Pulses sunflore oilseed
Vijypura	Sunflore, oilseed sunflore
Bidar	Maize, Sorgram, Pulses, oilseed, Sugarcane
Raichur	Pulses, Ground nut, Sunflore
Kalburgi	pluses, oilseed
Dakshina Kannada	Rice, Pulses
Uttara Kannada	Rice, Pulses, sugarcane

Table 5 Crop Versatility during Different period

Crop	P I	P II	P III	P IV
Rice	289.46	373.86	442.10	170.13
Maize	794.25	778.08	854.00	464.37
Jowar	713.81	858.91	861.66	569.35
Pulses	318.47	321.96	421.79	218.55
Groundnut	415.89	424.54	525.40	402.54
oilseed	460.34	333.54	577.13	220.85
sunflower	995.51	861.08	890.56	1244.99
sugarcane	348.14	590.67	664.46	579.70
cotton	473.48	1035.27	541.37	106.58

sugarcane etc.

Table-6 District Versatility during Different Periods

Districts	P I	P II	P III	P IV
Banglure	85.2	232.37	203.92	190.38
Kolar	257.9	434.15	403.84	301.2
Tumkur	339.89	310.14	297.79	276.19
Mysure	230.48	185.97	243.91	102.56
Mandya	219.43	470.01	448.6	184.86
Hassan	221.94	379.06	419.95	323.37
Shimogga	212.19	265.52	491.34	285.14
Chickmagalur	176.13	232.42	294.26	252.38
Chitradurga	274.22	272.05	254.88	234.32
Bellari	290.43	218.47	195.84	170.99
Dharwad	279.22	212.8	210.53	164.6
Belgavi	226.39	137.18	177.16	142.38
Vijypur	289.74	310.75	291.5	268.96
Bidar	292.91	262.93	272.31	233.44
Raichur	262.58	237.66	243.55	252.17
Kalburigi	226.16	377.41	326.74	244.23
Dakshina Kannada	98.17	80.5	129.76	72.79
Uttara Kannada	244.83	279.91	306.8	228.28
Coorg (Kodagu)	331.66	391.85	104.53	118.71

Similar to the crop versatility, estimates are made for district versatility (Eq. 3) and results are presented in Table 6. A scrutiny of data presented in Column two of Table 6 reveals that Dakshina Kannada district (72.79) is more versatile amongst all the districts which imply that more number of crops grown in the district while Hassan (323.33) is less versatile district implying fewer numbers of crops grown in the district during entire period under analysis.

Summary, Main Findings and Policy Implications

The cropping pattern and performance of different districts in growing different crops and its inter-district disparity in

the state of Karnataka are assessed using three standards measures, namely) (i) location quotient, (ii) crop versatility index, and (iii) district versatility index over the period 1975-76 to 2014-15. The specialization of rice in Uttara Kannada, Coorg (kodgu) Dakshina Kannada, Shivmogga, Chikamangluru, and Mandya, is highest during the study period with the value of LQs to be more than two. The specialization of maize in Shivmogga, jowar in Bidar and Bellary, pulses in Bidar, Manday Hasana Kolar Tumkur mysore, Bangluru and kalburgi are the highest during the study period with the value of LQ to be more than two. Groundnut in Tumkur and Mysure, oilseed in Kolar and Bidar, sugarcane in Mandya, cotton in Bellari and Dharwad. The increase in value of versatility indices for majority of districts during 1995-96 to 2004-05 and 2005-06 to 2014-15 as compared to 1975-76 to 1984-1985 and 1986-87 to 1994-95 implies the move towards specialization. It is established that rice, maize pluses, sugarcane and cotton are highly localized crops. The policy implications of our findings are: (i) the knowledge of crop LQ provide useful information to policy makers and planner's biological scientists establish research projects for various crops and to prepare location and crop specific projects for specialized districts having more value of location quotient for particular crop and thereby improving the efficiency of use of resources. (ii) The estimates of districts specialization are useful for decision makers, agricultural technology management agencies, district planning committees and researchers to focus on crop improvement and production management within the potential region for each crop.

Reference

Ardeshna, N. J. and Shiyani, R. L. (2011). District-wise Performance and Suitability of Growing Crops in Gujarat, Agricultural Situation in India, July, 173-181.

Balaji and Dibakr Sahoo (2016) Determinants of Changing Cropping Pattern in Karnataka: Post reform period, *Journal of the Indian Economic Association* (Special issues)

Basawaraj, H. Mahajanashetti S.B and Udagatti, N.C(2007) Economic analysis of post-Harvest losses in food grains in India: A case study of Karnataka, *Agricultural Economics Research Review,* Vol.20, pp 117-126.

Government of Karnataka (2014) Statistical Abstract of Karnataka, Department of Economic and Statistical Analysis, Bangalore

ICRISAT: International Crops Research Institute for the Semi-Arid Tropics, Hyderabad

Ohlan R (2012) Performance and suitability of Growing crops in Haryana: Districts- Level Analysis, Agricultural *Situation in India*

Vani, B P and Vyasulu Vinod (1996) Growth, Variability, and Instability of Three Major Cereal Crops in Karnataka-A District Level Analysis from 1955-56 to 1989-90 *Economic and Political Weekly* Vol - XXXI No. 26 Pp A74 to A83.

Vivekanad, M and Satyapriay (1994) Karnataka changing cropping pattern, *Agricultural Situation in India* Vol. XLIX No. 06

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Migration and migrants- A study of post economic reforms in India

Dr.B.V.Ragavender, Faculty Member, Department of Economics, Palamuru University, Mahabubnagar , Telangana-

Abstract: *India has experienced remarkable economic growth during last two-three decades. Economic growth and development of country is possible by people's involvement in the economic activities. This paper is concentrated movements of migrants in within the country and aboard. Migrants are moving one place to another for various economic, social and political reasons. For a large country like India the study of movement of population in different parts of the country helps in understanding the dynamics of the society better. At this junction in the economic development, in the country, especially, particularly in areas, such as, manufacturing, information technology or service sectors, data on migration profile of population has become more important. The main objective of the paper is to analyze the position of migration and migrants in India from post economic reforms. The study is based on secondary data, which is collected and compelled from census of India from 1991 to 2011.*

Key words: *international migration, bewildering, Zachariah*

Introduction

Migration is ubiquitous phenomena which leads people from one place to another for searching for employment and better living conditions. In India has been collecting information on migration since 1872. Upto 1962, it was confined to seeking data only on place of birth. The scope of migration data was enlarged by collecting and including the rural or urban place of birth and duration or residence at the place of residence in 1961, since the 1971 census, data is being collected on the basis of place of last residence in addition to the question on birth place. Reason for migration is also included since 1981. One of the prime aspects of study on population is the study of migration Migration scenario, in Indian situation is somewhat cumbersome. Indian emigration has been occurring since centuries, but during 19th and 20th centuries India has witnessed such a huge and massive movements of people to other parts of the world is somewhat bewildering, as such, has had never before in history. Although, perfect and exact estimates are not available on international migration from India, it has been quite small relative to the India's billion plus population. The population of Indian Diaspora is estimated to be around 20 million by the High Level Committee on the Indian Diaspora. In the same report submitted to the Ministry of External Affairs (2001), the committee has given the approximate number of Indians settled throughout the world in 133 countries is around 1609 million, of which 51 per cent belong to the people of Indian origin.

Review of Literature:

Migration study is an essential situation for existence of human life and it is an

important ubiquitous phenomena and covered all aspects of the life like; economical,social, political, cultural, hygiene and health. In this sense, several studies have been made and vast literatures existed in this area. According *Zachariah, K.C. et. A l*(2003) are conducted an extensive study on different aspects of internal and international migration in India, as well as return emigration in to India; the major impact factor is economic and examined the relationship between economic factor and unemployment. *Irudayarajan* (2004) study was analyzed and found that migration has affected economic trends in India, the study on out migrants due to economic factors of higher wages, reduction of unemployment and poverty. Further the study analyses that escalation of wages, increase of educational standards, as well as improvement in the standard of living. The study of *Zachariah* was observed that emigration to UAE is in the nature of contract migration: the wages and economic factors are equal to UAE government. The economic policies of the UAE are not so favorable to Indians, especially to the unskilled workers. *The Francis Thonippara* (2005) discussed that better employment and educational opportunities as well as health care facilities are the factors which are most dominated. *Joseph, C.C. (2005)* is also of the opinion that industrialization, rise of computer and software companies as well as educational opportunities are the pulling factors that attracted people to migrate cities. Next the study analyses that economic reforms are mostly generated employment opportunities in India. Jancy George (2005) in that study stated that the economic concerns and better prospects were the motivating factor that led to the migration of people in urban areas and therefore they maintain deep contact with nativity.

Objectives of the Study are:

- To study the status of migration and migrants in India.
- To examine the emigration in India from 1991to 2011.
- To study the various causes for migration in India.

Hypotheses:

H1 = Migration relation to economic development

H2 = Post economic reforms lead to emigration from India.

Methods of the Study:

This study describes and discusses various means for tracking the position of migration and migrants. For this study descriptive research method was adopted and collection of data from various census in India. The statistical information of the study is based on census of 1991, 2001 and 2011 and compelled in the suitable tabulation. The quantitative study, inductive approach was adopted and drawn the perceptions. The relationship between economic reforms and migration as well as migrants' position is observed. Finally, the study examines the reasons and status of migration, migrants has been correlated.

Results and Discussion:

There are 22 countries wherein above one lac Indians live. Among these 22 countries, the largest number of Indians live in Myanmar (29.02 lacs) and the least

are in Kenya (1.02 lacs).

Table -1 Countries with estimated Indians above 100,000, 2001

Country	People of Indian Origin	Indian Citizens	Stateless	Total
Australia	160,000	30,000	0	190,000
Bahrain	0	130,000	0	130,000
Canada	700,000	150,000	1,000	851,000
Fiji	336,579	250	0	336,829
Guyana	395,250	100	0	395,350
Kenya	85,000	15,000	2,500	102,500
Malaysia	1,600,000	15,000	50,000	1,665,000
Mauritius	704,640	11,116	0	715,756
Myanmar	2,500,000	2,000	400,000	2,902,000
Netherlands	200,000	15,000	2,000	217,000
Oman	1,000	311,000	0	312,000
Qatar	1,000	130,000	0	131,000
Reunion Islands	220,000	55	0	220,055
Saudi Arabia	0	1,500,000	0	1,500,000
Singapore	217,000	90,000	0	307,000
South Africa	0	0	0	1,000,000
Suriname	150,306	150	0	150,456
Trinidad and Tobago	500,000	600	0	500,600
UAE	50,000	900,000	0	950,000
United Kingdom	0	0	0	1,200,000
United States of America	0	0	0	1,678,765
Yemen	100,000	900	0	100,900

Source: Ministry of External Affairs, 2001.

As per the category wise calculations the largest number of people of Indian origin are there in Myanmar itself (25 lacs) and the least number of them in three countries (Kuwait, Oman and Qatar – 1,000 in each). The Indian Citizens or Non-resident Indians living in Saudi Arabia are the highest (15 lacs) and the least in the Reunion Islands (55 persons only). The Indians who are reported as stateless Indians are in Myanmar (4 lacs) and the least in Canada (1,000 only).

Migration:

Migration of labourers/workers from India to other countries of both developed and developing countries is an obvious phenomenon. Government of India, Ministry of Labour maintains records of individuals who obtain emigration clearance to work in alien nations. Earlier, the destination of Indian labour emigration was mainly to the United States of America, the United Kingdom, Canada and other developing countries. Indian migration to Gulf countries has a history of several centuries but it received a fillip only with the discovery of oil fields and the commencement of oil drilling on a commercial basis in this region. The oil price hike in October 1973 marked a major watershed in the international migration process. The massive demand for labourers was accumulated by the sudden growth in construction industry as the Gulf Countries, which became immensely wealthy overnight, embarked on a frenzy of building a new infrastructure of roads, ports and airports, as well as schools, colleges, administrative blocks, symbols of the new wealth. For the additional labour required they turned to more distant, non-Arab countries, such as India.

Table-2: Trends in workers emigrated from India, 1991 to 2011

Year	1991	2001	2011
In million	0.20	0.28	0.44*

Source: Ministry of External Affairs.*projected

Table-2 presents the number of labourers/ workers emigrated from India as workers in the contractual employment abroad over the last several years. The number is very small compared to the total emigrants reported earlier because many emigrants do not require emigration clearance from the Government of India. As per the Emigration Act 1983, 17 categories of persons have been exempted from emigration clearance and have been placed under 'Emigration Clearance not required'.

The trends in emigration flow from India shows fluctuating. The initial flow of contractual labour from India started with a low profile of just 0.16 million in 1985 and reached to peak stage accounting for 0.44 million in 1993 and gradually has got declined standing at 0.43 million in 1997, a drastic decline with 0.37 million in 1998 and 0.20 million

in 1999. From 2000 onwards there has been a gradual increase and has reached to 0.37 million by 2002. These migration outflows may be divided into four phases. The first phase covers the period between 1985 and 1991 which witnessed the annual volume of emigration ranging from 0.11 million to 0.20 million. The first half of 1990s (1992-1997), when the annual outflow of labour was more than 0.40 million, is the second phase. The third phase which has started from 1998 has witnessed a heavy decline in the annual outflow of the labour. The fourth phase is the beginning of the 21st century, where the annual outflow of labour migration stream is on the increasing trend and it has reached very near to 5 million in 2011.

Table-3 Labour outflows from India by Destination 1991-2011

Year	Bahrain	Kuwait	Omam	Saudi Arabia	United Arab Emirates (UAE)	Others	Total Oil Rich Countries	Total
1991	8,630	7,044	22,333	130,928	15,446	7,121	1,84,381	191,502
2001	16,382	39,751	30,985	78,048	53,673	59,825	2,18,839	278,664
2011	23578	45682	39511	110245	2,45781	11687	3,10857	787341

Source: Compiled from various annual reports of the Ministry of Labour, Government of India.

Table-3 presents the labour out-flows from India by destination from 1991 to 2011. The data in the table indicates the labour outflows from India to five oil rich middle east countries individually and to other countries as a whole separately. The five middle east countries are- Bahrain, Kuwait, Omen, Saudi Arabia and the U.A.E. The labour outflow from India to Bahrain in 1988 was 8,219 and reached to 16,458 in 1992 with a decrease in 1990. From 1993 the trend got fluctuated upto 2001 (15,622 in 1993 and 16,382 in 2001). In 2002 it reached to 20,807. The flow to Kuwait also indicates fluctuation trend from 1988 to 2001. There was a high increasing trend in 1992 (19,782) than that of in 1991 (7,044). The highest position of massive labour outflow took place in the Indian emigration to Saudi Arabia. The labour outflow was 85,289 persons in 1988, reaching to peak level with 2, 69,639 persons in 1993, a slight decline year by year upto 1998 (1,05,239) a drastic decline in 1999 (27,160) and again a gradual increasing trend, with 99,453 persons in 2002. In the case of United Arab Emirates the labour outflow was interesting with 34,029 persons, gradually decreasing to 15,446 in 1991 and then reached to 60,493 in 1992, gradually increased and reached to its peak. In 1997 with 1,34,740 persons. A sudden decline occurred in 1999 (79,269) leading to gradual decrease and again increased to 95,034 persons. The labour outflows from India by destination to other countries in world are in increased decade by decade since 1991 to 2011.

Table-4: Workers granted Emigration Clearances by Major States, 1991-2011

State	1991	2001	2011
Andhra Pradesh	35,578	37,331	38,417
Karnataka	34,380	10,095	14,061
Kerala	155,208	61,548	81,950
Maharashtra	35,248	22,713	25,477
Punjab	14,212	12,422	19,638
Rajasthan	25,243	14,993	23,254
Tamil Nadu	70,313	61,649	79,165
Others	68,156	57,913	85,701
Total	438,338	278,664	367,663

Source: Compiled from various annual reports of the Ministry of Labour, Government of India.

The emigrants will be informed about the essential requirement of emigration clearance for various reasons and purposes. Hence, the Government of India, Ministry of Labour issues clearances to the labour emigrants from time to time after obtaining required documents from the labourers. Of course, there is exemption to certain categories of workers. And there are certain cases of suspended migration clearances. In view of its responsibility for the safety and security of the Indian citizen in alien countries, Government of India takes some precautionary actions for the benefit of the migrants.

Table-4 displays the total number of workers from major states in India, who have been granted emigration clearances. The largest number of workers (4,38,338) were granted emigration clearances in 1993. Gradually it has decreased and declined to 1, 99,552 workers in 1999 and in 2011 the number of workers granted clearance is 3, 67,663. As per the data displayed in table 4. The biggest massive labour outflows occurs from Kerala state followed by Tamilnadu and Andhra Pradesh. Some other states-Karnataka, Maharashtra, Panjab and Rajasthan have considerable extent of labour migration streams. The analysis indicates that there has been a continuous decline in the migration flow of labourers in almost all the states mentioned in the table, until 1999 and after there has been a slow increase. One of the reasons for the registration of low level of labour migration is that certain categories of persons, such as graduates are exempted from emigration clearance.

There are no data available on state-wise level of exemption of emigration clearances, but at an all-India level, which is the only data available is given in table No. 4.

Table-5: Trends in remittances to India,

Year	Remittances (in billion US dollars)	Gross National Product (GNP)	Percentage of Remittances to GNP
1991	3.42	247.43	138
2001	11.59	470.48	2.46
2011	18.07	610.21	2.90

Source: World Bank, Annual publications of Global development Finance.

The money that migrants send home is very essentially required to their families in their mother lands. Besides that remittance is important to their nation's balance of payments. In many developing countries remittances represent a significant proportion of their gross domestic product as well as foreign exchange earning. The above table 4.16 gives the information regarding the trends in remittances to India from 1970 to 2000. The remittances to India made by emigrants have indicated increasing trend from 1970 to 1989, with a slow decline in 1990. Again there has been increasing trend up till 1997 and there has occurred a slow decline in 1998 and again the trend has got increased. According to the data depicted in table-6 the total population recorded in 2001 census is 1,028.6 million. Out of this total population the total migrants constitute 30.0 per cent. Of the total migrants, male migrants constitute 29.4 per cent and female migrants account for 70.6 per cent.

Table-6: Decadal Variation of Migrants by Place of Birth

(In millions)

Migrants by place of birth	2001 Census (including J&K)	1991 Census (excluding J&K)	Variation (per cent) (1991-2001)
Total Population	1,028.6	838.5	21.5
Total Migrants			
Persons	307.1	229.8	32.9
Males	90.4	-	-
Females	216.7	-	-
• Intra-district	181.7	136.2	32.6
• Inter-district	76.8	59.1	29.5
• Inter-state	42.3	27.2	54.5
• From abroad	6.1	6.9	-11.6

Note: While computing variation, J & K has been excluded in 2001 Census

They were reported as migrants born outside the village or town of their enumeration. The largest portion of migration was occupied by female migrants, mostly due to change of residence after their marriage. The population shifted to the place of enumeration from within the district and the state were 181.7 and 76.8 millions constituting 59.2 per cent and 25.0 per cent respectively to the total migrant population. The inter-state migrants constitute 13.8 per cent of the total migrants and there were 6.1 million persons constituting 1.98 per cent of the total migrants, have migrated from other countries. Still there are 421 persons who have been unclassified.

Table-7: Migrants by last Residence in India (excluding J&K) In 1991 and 2001 Census-(All duration)

Place of last residence	**2001 (Excl J&K)**	**1991 (Excl J&K)**	**Variation (per cent) 1991-2001**
Total Migrants	312,735,593	232,112,973	34.7
Migrants within the state of enumeration	266,594,252	199,198,251	33.8
Migrants from within the district	192,265,527	140,357,053	37.0
Migrants from other districts of the state	74,328,725	58,841,198	26.3
Migrants from other states in India	41,008,262	26,689,595	53.6
Migrants from other countries	5,132,679	5,927,882	-13.4

Source: Table D-2, Census of India 2001

Table -7 shows the percentage of variation in migration trend or growth rate of migration from 1991 census to that of 2001 census. The total number of migrants by place of last residence has increased to 312,735,593 persons in 2001 from 232,112,973 persons in 1991 with a growth of 34.7 per cent. Similarly, the migrants from within the state of enumeration has also increased from 199,198,251 persons in 1991, with a growth of 33.8 per cent to 266,594,252 persons in 2001. An appreciable increase of growth rate has taken place in migration by last residence within the district. The total number of migrants from other states in the country has tremendously increased with a growth rate of 53.6 per cent, accounting for 41,008,262 persons in 2001 from that of 26,689,595 persons in 1991. The extent of increased mobility might have taken place due to migration for work/ employment and education in other states. But, it is to be noted that the number of migrants from outside the

country has fallen by 13.4 per cent during 1991-2001.

Table-8: Number of Intra-state and Inter-state Migrants in the country with Duration of Residence 0-9 years by Rural Urban status of Place of Last Residence and Place of enumeration – INDIA 2001 Census

Rural Urban Status of place of last residence	Rural Urban Status of place of enumeration		
	Total	Rural	Urban
Total	97,560,320	61,428,374	36,131,946
Rural	73,949,607	53,354,376	20,595,231
Urban	20,655,277	6,266,503	14,388,774
Unclassified	2,955,436	1,807,495	1,147,941

Source: Table D-2, Census of India 2001

Attractive economic and employment opportunities affording higher labour wages and education facilities have been the pull factors for migration from rural to urban areas and from smaller towns and cities to larger urban areas. There is also some migration in opposite direction due to various reasons exercised by push factors. The migration during the last decade, based on migrants with duration of residence of 0-9 years at the place of enumeration, by various migration streams are summarized in table No. 9.

As it is indicated in the total number of internal migrants in the country, account for 97,560,320 persons.

Table-9: Migrants by Place of Last Residence indicating Migration Streams (duration 0-9 years) India 2001

Migration Stream	2001		
	Persons	Male	Female
Total Migrants	98,301,342	32,896,986	65,404,356
Intra state migrants			
Total	80,733,441	23,998,283	56,735,158
Rural to Rural	48,880,074	9,985,581	38,894,493
Rural to Urban	14,222,276	6,503,461	7,718,815
Urban to Rural	5,213,151	2,057,789	3,155,362
Urban to Urban	9,898,294	4,387,563	5,510,731
Unclassified	2,519,646	1,063,889	1,455,757

Source: Table D-2. Census of India 2001

The total migrants account for 98,301,342 persons in the country based on last residence during last ten years 6 per cent (14,222,276 persons) and those who move from urban to rural areas are in least number (5,213,151 persons) constituting just 6.5 per cent. Those who reside in urban areas usually migrate to another urban area and such urban to urban stream accounts for 12.3 per cent

(9,898,294 persons) of the total intra-state migrants. Out of these total migrants, 80,733,441 persons are those who have migrated from one part of the state or district to another within the same state. Out of these 80 million intra-state, 60.5 per cent (48,880,074 person) of persons have migrated from one rural area to another rural area. Majority of these rural-rural migrants are women who have moved out from their natal residence after marriage. Rural to urban migration stream constitutes 18 per cent. Details on different migration streams among intra-state migrants by last residence with duration of residence for 0-9 years (Census of India-2001) are shown in table 10.

Table-10: Migrants by Place of Last Residence indicating Migration Streams (duration 0-9 years) India 2001

Inter State migrants	2001		
	Persons	Males	Females
Total	16,826,879	8,512,161	8,314,718
Rural to Rural	4,474,302	1,759,523	2,714,779
Rural to Urban	6,372,955	3,803,737	2,569,218
Urban to Rural	1,053,352	522,916	530,436
Urban to Urban	4,490,480	2,201,882	2,288,598
Unclassified	435,790	224,103	211,687

Source: Table -2 Census of India-2001

Table-11: Migrants by Place of Last Residence indicating Migration Streams (duration 0-9 years) India 2001

International migrants	2001		
	Persons	Males	Females
Total	740,867	386,461	354,406
To Rural areas	392,807	188,518	204,289
To urban areas	348,060	197,943	150,117

Source: Table D-2. Census of India 2001

Out of the total 98 million migrants, inter-national migration accounts for 740,867 persons who constitute 53.0 per cent (392,807 persons) of them 48.8 per cent are male and 57.6 are female who have migrated to rural destinations and remaining 47.0 per cent (348,060) have reached to urban destinations. Of them 51.2 per cent are male and 42.4 per cent are female migrants.

Table-12: reasons for migration of migrants by last residence with duration (0-9 years) India 2001

Reason for migration	Number of migrants		
	Persons	Males	Females
Total Migrants	98,301,342	32,896,986	65,404,356
Reason for Migration			
Work/Employment	14,446,224	12,373,333	2,072,891
Business	1,136,372	950,245	186,127
Education	2,915,189	2,038,675	876,514
Marriage	43,100,911	679,852	42,421,059
Mover after birth	6,577,380	3,428,673	3,148,707
Mover with households	20,608,105	8,262,143	12,345,962
Other	9,517,161	5,164,065	4,353,096

Source : D-Series, Census – 2001

Census of India 2001, gives informative details regarding the reasons for migration in case of migrants by last residence with a duration of last residence for a period of 0-9 years. The details on reasons for migration provided in the table -12, indicate that majority of the migrants are female, i.e., spouses who have got married to persons, live elsewhere other than their native places and have gone away along with their husbands. These women migrants constitute 43.8 per cent of the total migrants (43,100,911 persons). The migrants migrated on the reasons other than marriage in total account for 55,200,431 persons; (56.2 per cent of the total migrants). Out of these total migrants, the migrants who have moved out with their household constitute the highest per cent (37.3 per cent). Among the remaining migrants the largest numbers of migrants are those who have moved out on the reason to secure work or employment (26.2 per cent). The next migrants, constituting 11.9 per cent are who have migrated after birth. Another important reason is education on which 5.3 per cent have migrated. On business purpose 2.1 per cent have moved. There are also certain persons who have moved on the reasons other than the above mentioned. They constitute 17.2 per cent.

Conclusion:

According to the report of NSSO, migrants are facing discrimination as outsiders' who excluded them from access to legal rights, public services and social protection programmes accorded to residents. This is despite the migrants providing cheap labour and typically doing the dirtiest, dangerous and degrading jobs the locals do not want do so. Many numbers of factors responsible for the continuing state of affairs that have contributed in out migration from different states of India have already been mentioned. Proper and perfect

implementation of programmes regarding poverty eradication should be made. Economic status of the people should immediately be improved by providing them employment and reasonable wage rates besides providing other domestic needs at subsidy rates. Reasonable and sufficient wages should be afforded to both agricultural and casual labourers and for that, measures must be taken up so that per capita income may be increased providing at least minimum living standards. Employment opportunities should be open up to the downtrodden among whom the magnitude of migration is excessively higher so that migration may be mitigated. Moreover, social security should be provided to the women migrants. Equal wages should be paid irrespective of seasons and genders. To reduce unemployment problems cottage industries and small scale industries with improved machines should be introduced. Training should be given to women to run cottage industries by making the raw material availablep at subsidy prices besides providing marketing facilities.

References:

- Dr.B.V.Ragavender, Migration, Causes, consequences and Problems, Abijeet Publication, New Delhi, 2014.
- Census of India, 1961to 2011
- Zachariah K.C, Mathew E.T and Irudya Rajan S, Dynamics of Migration in Kerala: Dimensions, Dzrerentials, and Consequences, Orient Longman Private Limited, New Delhi, 2003.p
- Irudayarajan. S and Zechariah K.C, Gulf Emigration of Women in Kerala. Sarnyuktha Vol. 4, No. 2, July 2004, pp. 41-51. Zachariah. K.C. Prakash. B.A and Irudayarajan S. Indian Workers in U.A.E. Employment, Wages and Working Conditions. Economic And Political Weekly, Vol. XXXIX No. 22 May 29-June 4,2004
- Francis Thonippara, Bangalore City and Malayali Migration: Causes and Consequences, in Mathew K.S, Mahavir Singh and Joy Varkey (Ed)., Migration in South India, Shipra Publications, Delhi, 2005, pp. 55-73.
- Joseph. C.C, Education of Migrants from Kerala to Karnataka: Special Reference to Bangalore, in Mathew K.S, Mahavir Singh and Joy Varkey (Ed)., Migration in South India, Shipra Publications, Delhi, 2005, pp. 74-87
- Jancy George, Vocational *Migration and Cultural Adaptation: The Case of Malayali Employees in Mysore,* in Mathew K.S, Mahavir Singh and Joy Varkey (Ed)., Migration in South India, Shipra Publications. Delhi, 2005, pp. 88-95.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Post reforms challenges in Indian life insurance sector – A case study of role of IRDA

Ms B Chandrakala Naik
Research Scholar, University College of Commerce & Business Management
Kakatiya University, Warangal, Telangana State

Abstract: *Life insurance sector in India is one of the emerging service sectors contributing huge to the individuals and economy of the country. The life insurance sector has emerged during 18th century and witnessed slow growth in the era of British. The post independence has created huge scope for the development of the life insurance business. The life insurance sector further witnessed significant improvement during the period reforms. The post reforms era has witnessed significant impact in the growth of life insurance sector with the entry of private sector. The emergence of various life insurance policies made huge demand in the market. But the growing demand also created rising challenges and the early growth of private life insurance companies are under scanner due to rising concerns on productivity, persistency and lapsation. The present paper is throws light on the emerging issues which have been making challenges to the growth of life insurance sector. The paper further studies the role of IRDA in tackling these challenges. The paper is based on secondary data sources collected from the annual reports of IRDA, life insurance companies operating in India. The paper presents the suggestions for the effective management of life insurance business in India.*

Keywords*: IRDA, lapsation, persistency, productivity, reforms*

1) Introduction

Insurance is the backbone of a country's risk management system. Risk is an inherent part in human's lives. The insurance providers offer a variety of products to businesses and individuals in order to provide protection form risk and to ensure financial security. Insurance, in law and economics, is a form of risk management primarily used to hedge against the risk of a contingent loss. Insurance is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for a premium, and can be thought of a guaranteed small loss to prevent a large, possibly devastating loss. An insurer is a company selling the insurance. The insurance rate is a factor used to determine the amount, called the premium, to be charged for a certain amount of insurance coverage. Risk management, the practice of appraising and controlling risk, has evolved as a discrete field of study and practice.

Life insurance or life assurance is a contract between the policy owner and the insurer, where the insurer agrees to pay a designated beneficiary a sum of money upon the occurrence of the insured individual's or individuals' death or other event, such as terminal illness or critical illness. In return, the policy owner agrees to pay a stipulated amount at regular intervals or in lump sums. There may be designs in some countries where bills and death expenses plus catering for after funeral expenses should

be included in Policy Premium. In the United States, the predominant form simply specifies a lump sum to be paid on the insured's demise.

Objectives of the Study

The study investigates the following objectives.

1) To study the significant achievements made in the life insurance sector during post reforms era.

2) To analyze the challenges and the scenario of life insurance companies on select dimensions.

3) To present the role of IRDA towards life insurance companies with special focus on the challenges that the sector has been facing.

4) To present the suggestions on the basis of the results obtained for each dimension considered for the study.

Methodology

The study is based on the secondary data sources. The required data is collected from the annual reports of IRDA, journals, annual reports of life insurance companies, newspaper and internet sources.

Results

The detailed results obtained from the survey are presented below.

a) Significant Achievements in Post Reforms in Life Insurance Sector

Since, 1991, Indian economy has been going through euphoric financial reforms. Consequent to the implementation of landmark reforms in the financial sector, the insurance sector in India is going to witness sea change. A conceptual issue of economic liberalization entails on modernizing industrial system by removing unproductive controls, encouraging private and foreign investment, and integrating Indian economy with the global economy. The Government of India appointed a committee on reforms in the insurance sector in April, 1993 under the chairmanship of Shri. R.N.Malhotra former finance secretary and R.B.I. Governor. The committee was asked to make the suggestions for the structure of insurance industry for creating an efficient and viable industry that would serve the customers and society as to reach a wider segment of society and also to recommend for changes in the structure of the industry and policy framework. The committee emphasized that in order to improve customer services and increase coverage; the insurance industry should be opened up to competition. At the same time, the committee felt the need to exercise caution as any failure on the part of new players could ruin public confidence in the industry. Hence, it was decided to allow competition in a limited way by stipulating the minimum capital requirement of Rs.100 cr.

The committee felt the need to provide greater autonomy to insurance companies in order to improve their performance and enable them to act as independent companies with economic motives. For this purpose, it had proposed setting up an independent regulatory body.

Hence, as a result, the Insurance Regulatory Development Authority (IRDA) was set up. The Insurance Regulatory and Development Authority(IRDA) is a national agency of the Government of India, based in Hyderabad. It was formed by an act of Indian Parliament known as IRDA Act

1999, which was amended in 2002 to incorporate some emerging requirements. Mission of IRDA as stated in the act is "to protect the interests of the policyholders, to regulate, promote and ensure orderly growth of the insurance industry and for matters connected therewith or incidental thereto."

b) Entry of Private Sector in Life Insurance Business in India

The Insurance Regulatory Development Authority gave new dimension to life insurance business in India. It gave life to many private life insurance companies in India. Now, the Indian insurance is on the threshold of deep and fundamental changes. During the period of pre liberalization and reforms era, the entire life insurance sector is being dominated by the monopoly called Life Insurance Corporation of India. Where as, after liberalizing the insurance sector in India, many new private life insurance companies started its operations by forming joint ventures with foreign companies. The IRDA and its regulations encouraged many private insurance companies to start private life insurance businesses in India.

Within a period of 15 years, 23 new private life insurance companies have emerged in Indian life insurance market. This suggests that, the regulations of IRDA benefited private firms to operate in life insurance market.

The above table also suggests that out of total 17 life insurance companies, 11 companies are joint ventures. It suggests that IRDA' s decision of 26% of FDI in insurance business benefited many Indian companies to start private life insurance business in India.

From this, it is to conclude that before liberalizing the insurance business, LIC is the monopoly in Insurance business in India. But, when the reforms have taken place in insurance, the reforms resulted in the establishment of IRDA. And the IRDA gave life to many private life insurance companies in India. With in a short span of time, IRDA has done a very good job of ensuring a smooth transition from a single player market to a competitive one. It will continue to have a major role to play in the years to come in ensuring that each and every Indian citizen is approached with the right advice to cover the risk to his/her life and protect the family from adverse financial circumstances.

c) Analysis on Number of Life Insurance Companies Registered In India from 2001 to 2011

The following table shows the list of new entries in life insurance business operating in India from the period 2000-01 to 2011-12.The above table shows that, the private life insurance companies started registering in 2000-2001 period. The results are clearly showing that with in a period of 10 years, 23 private life insurance companies were emerged in the life insurance sector. Further, the table also shows that the period from 2000-01 showing maximum number of life insurance companies operating in India.

Table-1

Year Wise List of Number of Life Insurance Companies

S.No.	Year	Public Sector	Private Sector	Total	Cumulative total
1	2000-01	1 (i.e. , LIC registered in 1956)	10	11	11
2	2001-02	0	2	2	13
3	2002-03	0	0	0	13
4	2003-04	0	1	1	14
5	2004-05	0	1	1	15
6	2005-06	0	1	1	16
7	2006-07	0	2	2	18
8	2007-08	0	0	0	18
9	2008-09	0	4	4	22
10	2009-10	0	1	1	23
11	2010-11	0	0	0	23
12	2011-12	0	1	1	24
13	2012-13	0	0	0	24
14	2013-14	0	0	0	24
15	2014-15	0	0	0	24
	TOTAL	0	23	24	24

Source: IRDA Annual reports from 2000-01 to 2010-11

Again in 2008-09 periods, a maximum of 4 private life insurance companies have emerged in India. Further, from the last 4 years, there is no life insurance company entered in the life insurance sector. This shows that the demand has been slightly decreasing in the life insurance sector.

d) Challenges in Life Insurance Sector During Post Reforms Era

Life insurance industry is passing through a difficult phase in our country. There is enormous scope for the industry to grow. Yet, the industry is unable to grow in recent years. There has been de-growth in 2012-13 to the extent of 6.32% in terms of First Premium Income (FPI). The economy is growing and so is the per capita income in all the segments of the economy. But, the life insurance industry finds it difficult to make use of the opportunity. Let us see what prevents this industry from growing. We shall also see the recent trends in the industry in terms of the measures taken by the insurers in meeting challenges.

Insurance intermediaries lost much of their credibility after the ULIPs failed to generate expected returns. A lot of ULIPs were sold on false promises. So, the insurance intermediaries find it difficult now to regain the confidence of people. This is a great challenge. This challenge is greater for those agents who

operate in the rural and semi-urban areas. As agents still contribute 78.69% of total business, their success is critical for the success of the life insurance industry in India.

Table-2: Productivity of tied agents of life insurers

Sl.No.	Name of the Insurer	Average productivity of agents
1	Aegon Religare	4
2	Aviva	3
3	Bajaj Allianz	3
4	Bharti Axa	4
5	Birla Sunlife	3
6	DLF Pramerica	5
7	Edleweiss tokio	12
8	Future Generali	2
9	HDFC Standard	3
10	ICICI Prudential	2
11	IDBI Federal	3
12	India First	5
13	ING Vysya	6
14	Kotak Mahindra	3
15	Max Life	3
16	Metlife	6
17	Reliance	4
18	Sahara	5
19	SBI Life	6
20	Shriram Life	5
21	Star Union Dai-Ichi	12
22	Tata AIA	2
23	LIC	27
	Average	16

Source: Annual reports of IRDA

The productivity of the agents is low not just because of mis-selling of ULIPs but also because the Indian agency force, in general, have not come of age. Barring a small proportion of agents who have got MDRT or similar recognition for the consistency of their performance, a very large number of agents have failed to become true professionals. They are mostly part timers and do not have the inner motivation to grow. If insurance industry has to grow, the skills, competencies and attitudes of all agents have to get a total facelift. Professionalizing a vast sales force is a big challenge of all insurers. Table No 1 given below shows the average number of policies sold by the agents in 2011-12 and it proves that an insurance agent, on an average, has not been able to make a career out of his job. If an agent is not fully devoted in this profession on a regular basis, it is very difficult for him to bring quality business

and also to give proper services to the customers.

Further, the results also prove that except LIC, the public sector life insurance companies, remaining all private companies have performed below the average level of productivity. This proves the evidence that the private life insurance companies in India are losing the momentum and this also show that, the private sector companies need to make certain measures which can lift the spirit of the agents and helps them to recover the growth the private sector companies have achieved in the early part of post reforms era.

e) Persistency in the Post Reforms Era

A life insurance company can survive properly if it can earn enough renewal premiums. In other words, the persistency ratios of the insurers have to be reasonably high. Let's have a look at the persistency ratios of the insurers, as mentioned in the IRDA Annual Report 2011-12 in Table-2. From the above table, it is clear that most of the insurers are having poor persistency ratios beyond 37 months. If we consider 61 month persistency ratios, we find that only four insurers have a more than 60% persistency ratio. That means, more than 40% policies which were issued in 2006-07 have either lapsed or surrendered or resulted into claims. So, the insurers (including some major ones) are unable to keep their customers for a long period of time. This does not augur well for the future health of the insurers. Another big problem for all the insurers is depletion of tied agency force. This is a serious problem even by those insurers who depend heavily on alternate channels. During the last three years, the number of tied agents fell from 26 lakh to 23 lakh. The reason is that, most new agents find the occupation either too tough to handle or not adequately rewarding. There is another reason why the agency force is dwindling in size. New recruits find it difficult to pass the IRDA examination and one cannot get the license to sell insurance unless he clears this examination. Insurers are unable to make the people pass this examination in larger numbers in spite of giving 50 hour mandatory training. The pass rate is below 50% at the moment. The new syllabus requires in depth study and a capacity to apply the concepts in solving practical problems. As the youth with very high IQ do not opt for a career in insurance agency, the persons who come to take up agency career find it somewhat difficult to handle.

Table-3

Persistency ratios of life insurers

Sl.No.	Insurer	Persistency ratios				
		13 month	25 month	37 month	49 month	61 month
1	Aviva	58.00	47.00	25.00	24.00	19.00
2	Bajaj Allianz	5457	85.76	19.03	51.85	43.50
3	Bharti AXA	58.20	51.60	46.80	52.20	39.60
4	Birla Sunlife	82.00	77.00	72.00	62.00	53.00
5	HDFC Standard	75.35	88.11	63.50	66.38	78.40
6	ICICI Prudential	77.00	86.70	31.80	50.60	65.30
7	ING Vysya	65.00	55.00	38.00	36.00	38.00
8	Kotak Mahindra	70.00	61.00	50.00	40.00	40.00
9	Max Life	75.00	62.00	42.00	39.00	31.00
10	Metlife	63.56	56.84	50.32	47.44	44.82
11	Reliance	55.0	78.10	29.10	70.30	76.70
12	Sahara	73.73	65.14	43.04	39.92	41.74
13	SBI Life	71.77	60.52	20.54	16.27	23.35
14	Shriram	51.40	82.30	39.10	80.30	84.70
15	Tata AIGA	44.71	18.10	17.32	16.13	14.03
16	LIC	67.00	61.00	53.00	46.00	51.00

Source: Annual reports of IRDA

f) Lapsation in Life Insurance Sector

Lapsation of a life insurance policy is a discontinuation of premium payment by the policy holder during the period of operation of the policy, due to any reason other than the death of the policy holder. The length of life of a lapsed policy can be defined as the period between the month when the last premium installment was paid and the month the policy was issued. Lapse is the discontinuance of the policy by non-payment of premiums due. In pure term product (policy), where there is neither surrender benefit nor maturity benefit the lapse will result in a loss to the company if asset share under the policy is negative at the time of lapse. Whereas in the case an endowment product the asset share is built over the period of time and if the lapse occurs in the initial phase of the policy then this would result to a loss to the company because companies will not be in a position to recover the fixed cost incurred to writing the policy. Especially in India, presently, many private sector companies have less than 4/5 years of their existence and hence lapses would have significant impact on the financial health of the company.

High lapse of life insurance policies is one of the most serious issues in the Indian market place. On average about 20 percent of policies lapse in the first year. In some companies and in some product lines, lapses are much higher. When applied to the large base of policyholders this is a big number. It implies a high degree of financial losses for policyholders and general dissatisfaction with the products they had purchased. When a life insurance contract gets crystallized, the insurer

envisages that the contract would run to its full length which could often go to a few decades. Accordingly, the insurer makes commitments to deploy the funds prudently so that there is a balance between the assets and liabilities. When the inflows of anticipated premiums get adversely affected, it impedes the steady progress of fund management–eventually leading to disarray in the insurer's financial management

Table 3

Lapse ratio in life insurance companies

Sl.No.	Insurers	Lapse Ratio (based on number of policies) in percent					Average
		2008-09	2009-10	2010-11	2011-12	2012-13	
1	Aegon Religare	23.00	24.00	8.66	17.38	28.46	20.3
2	Aviva Life	59.00	24.00	30.99	27.77	21.66	32.684
3	Bajaj Allianz	14.00	17.00	10.68	21.40	18.66	16.348
4	Bharti Axa	46.00	38.00	18.92	36.13	42.65	36.34
5	Birla sun life	9.00	39.00	71.62	51.01	61.26	46.378
6	Canara HSBC	400	0.00	2.68	23.91	21.49	89.616
7	DLF pramerica	2.00	80.00	19.40	30.64	33.64	33.136
8	EdleweissTokio	--	--	NA	0.00	39.85	19.925
9	Future Generali	18.00	37.00	24.65	48.91	29.62	31.636
10	HDFC Standard	6.00	8.00	5.00	4.16	5.64	5.76
11	ICICI Prudential	53.00	81.00	46.45	41.89	34.08	51.284
12	IDBI Federal	0.00	0.00	5.58	10.73	15.90	6.442
13	India First	--	--	0.00	4.37	14.23	6.2
14	ING Vysya	16.00	19.00	13.94	12.27	13.36	14.914
15	Kotak Mahindra	19.00	14.00	11.64	15.97	14.63	15.048
16	Max Life	19.00	23.00	13.35	12.64	10.88	15.774
17	Met Life	18.00	25.71	30.00	29.76	19.76	24.646
18	Reliance	40.00	31.00	15.72	38.78	25.76	30.252
19	Shriram	41.00	41.00	15.46	8.61	27.67	26.748
20	Star union Daichi	1.00	4.00	17.93	23.36	29.02	15.062
21	Tata AIG	26.00	42.00	33.41	28.29	18.73	29.686
22	Sahara	22.00	21.00	15.48	13.84	16.92	17.848
23	SBI Life	9.00	7.00	6.63	9.35	12.30	8.856
24	LIC	4.00	4.41	4.87	4.99	5.58	4.77

Source: IRDA Statistical Hand Book 2012-13

From the results, it is very clear that, the lapse ratio on an average is least for LIC and highest is been found for the private life insurance companies. Further, it is also shown that, except LIC, all the life insurance companies have been shown lapse ratio of more than 6 which show that the private life insurance companies

have been facing the problem of lapse ratio which in turn will have significant impact on the profitability of the companies.

g) Role of Insurance Regulatory Development Authority in tackling challenges

The Insurance Regulatory Development Authority(IRDA) have made new regulations for life insurance agents in order to overcome from the problem of lapsation. The important norms for life insurance agents are given below.

i. The number of new life insurance policies made by the life insurance agents who were registered under IRDA tied up with all life insurance companies are taken into consideration.

ii. The performance of the life insurance agents are studied in terms of number of policies made in every 3 years. the number of sold policies are measured with the number of lapsed policies out of the sold policies once in every 3 years.

iii. If the number of lapsed policies reaches 50% of the sold policies, then the license of the life insurance agents are not renewed and the source of non-operating income also been restricted.

iv. The IRDA through its norms imposed to maintain persistency(the percentage of policies that remain in force on a particular date and is calculated in percentage) of 75% of remaining policies, notifications were issued to the chiefs of the life insurance companies from IRDA.

h) IRDA Regulations towards Surrender of Policies

IRDA has made special regulations to tackle the various aspects of surrender of policies. These regulations are been referred as IRDA (Surrender Value) regulations, 2015. It has made the following regulations.

i) shall provide surrender value in accordance with Insurance Regulatory and Development Authority (Linked Insurance products) Regulations, 2013, as amended from time

to time. (ii) shall comply with all the provisions related to surrender or discontinuance of the Insurance Regulatory and Development Authority (Linked Insurance products) Regulations, 2013 ,as amended from time to time. Every policy offered by life insurer under a non-linked platform (i) shall provide surrender value in accordance with Insurance Regulatory and Development Authority (Non Linked Insurance products) Regulations, 2013, as amended from time to time (ii) shall comply with all the provisions related to surrender and discontinuance of the Insurance Regulatory and Development Authority (non Linked Insurance products) Regulations, 2013, as amended from time to time by way of circulars or otherwise (iii) which has acquired a surrender value shall not lapse by reason of nonpayment of further premiums but shall be kept in force to the extent of paid up sum assured, calculated by means of a formula as approved by the Authority, and contained in the terms and conditions of the policy, and the reversionary bonuses or the guaranteed additions, if any, that

have already been attached to the policy. (iv) the paid up sum assured under regulation.

In 2011, the Insurance Regulatory and Development Authority (Irda), under the then chairman J. Hari Narayan, did the unthinkable. It put in place a minimum standard of performance for agents to renew their agency license . According to the 2011 rules, life insurance agents needed to maintain a persistency rate of at least 50% for life insurance policies sold by them in order to be eligible for a renewal of their agency licence—the agency licence needs to get renewed every three years. According to the guidelines issued in February 2011, agents had to maintain a minimum average persistency rate of 50% for three years i.e. FY12, FY13 and FY14 and from FY15 the persistency rate had to increase to 75%. This meant each year at least 75% of the policies sold by agents should come back for renewal.

6) Conclusion

From the study it is been observed that, the reforms has made significant impact in the life insurance sector by giving life to many private players. The year wise growth has shown that, the companies entered in the life insurance business have shown high in the first half of post reforms era. In order to reduce lapses, IRDA must discourage lapse-supported products. Insurers need to have their products approved by the regulator prior to launch. The Authority must take a hard look at products where profitability increases with an increase in lapses. Currently, the absolute amount of renewal compensation is low and many agents or intermediaries do not focus on this aspect. By adopting these measures, the IRDA can ensure that the life insurance companies cope up with the challenges and tune according to the requirements thus helps to grow in the life insurance industry.

References:

1. Annual reports of IRDA from 2001-02 to 2014-15
2. B.B.Tandon & A.K. Vashisht(2002), “Financial sector reforms”, Deep & Deep publications pvt.ltd., New Delhi, pp:259-264.
3. Bharati V.Pathak(2011), “The Indian Financial System: Markets, Institutions and services”, “Derling Kindersley India Pvt.Ltd., Noida, UP, pp:632-635.
4. Committee report of IRDA: “Lapsation and its impact on Indian Life insurance industry (2002-07), Occassional paper:1/2008 , November, 2008.
5. Data retrieved from www.wikipedia.org, search word: insurance
6. Dr. Anand Bansal : “Insurance Sector : Is Privatization on the right Track”, Management Accountant, vol.40, No.12,p.931
7. Dr.P.K. Gupta(2008), “Insurance and Risk Management”, Himalaya Publishing House, First Edition reprint, pp:31-32

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Foreign Direct Investment in India

K.Gunasekhar, Research Scholar, Department of Commerce, SVU College of CM&CS, S.V. University, Tirupati.

Dr. K.Ramakrishnaiah, Professor & Dean, College Development Council (CDC), S.V. University, Tirupati.

Abstract: *India is considered as one of the fastest growing economies like ours savings are at low rate and at the same time investment requirements are more. In such an economy Foreign Direct Investment (FDI) fill a gap between domestic savings and investment requirements. Since the domestic savings available in India are inadequate for the overall development of the economy. It has already marked its presence as one of the fastest growing economies of the world. India has been ranked among the top 10 attractive destinations for inbound investments. Since 1991, the regulatory environment in terms of foreign investment has been consistently eased to make it investor friendly. The measures taken by the government of India are directed to open new sectors for FDI, increase the sectoral limit of existing sectors and simplifying other conditions of the FDI policy. FDI policy reforms are meant to provide ease of doing business and accelerate the pace of foreign investment in the country. Capital markets are opened for foreign investors. Foreign investors try to infuse their capital and technology into the business of developing host countries. With the rear of foreign capital and technology the structured economic risks are mitigated and uniformed. This is the type of capital from which major sectors are enormously benefited from FDI. In this paper the researcher made an attempt to analyze the FDI inflows to India.*

Keywords: *Foreign Direct Investment, Foreign Investors, Capital Markets, Host Countries*

Introduction

India is considered as one of the fastest growing economies like ours savings are at low rate and at the same time investment requirements are more. In such an economy Foreign Direct Investment (FDI) fill a gap between domestic savings and investment requirements. Since the domestic savings available in India are inadequate for the overall development of the economy. FDI have gained importance globally as an instrument of international economic integration. FDI policies along with trade policies have, infact, become the focus of liberalization efforts in almost every country. Liberalized trade regime along with an open door foreign investment policy creates pressure to achieve higher levels of efficiency and flexibility at the firm level. India has already marked its presence as one of the fastest growing economies of the world. India has been ranked among the top 10 attractive destinations for inbound investments. Since 1991, the regulatory environment in terms of foreign investment has been consistently eased to make it investor friendly. The measures taken by the government of India are directed to open new sectors for foreign direct investment, increase the sectoral limit of existing sectors and simplifying other conditions

of the FDI policy. FDI policy reforms are meant to provide ease of doing business and accelerate the pace of foreign investment in the country. India has vigorously opened up its economy in Defence, Railways, Construction, Insurance, Pension funds, Medical devices have been rapidly opened up for FDI. India today is one of the most open economies of the world.

Objectives of the Paper

1. To analyze the Foreign Direct Investment in India.
2. To assess the sector wise Foreign Direct Investment Equity Inflows to India.

Methodology: For the preparation of the research paper secondary data have been collected from various sources. The various sources that were searched for collecting data are annual reports of Reserve Bank of India, Reports of department of Industrial Policy & Promotion, Ministry of Commerce and Industry, books, journals and the like to review the status of Foreign Direct Investment in India.

Table . 1: Foreign Direct Investment (FDI) inflows to India

Year	Foreign Direct Investment in India (FDI)				Total FDI inflows to India
	Equity		Re invested Earnings	Other Capital	
	FIPB Route/RBI's Automatic Route/ Acquisition Route	Equity Capital of Un Corporate Bodies			
2006-07	15585(68.28) (5.76)	896(3.93) (7.87)	5828(25.53) (6.46)	517(2.26) (2.94)	22826(100.00) (5.89)
2007-08	24573(70.52) (9.09)	2291(6.58) (20.13)	7699(22.10) (8.53)	300(0.86) (1.70)	34843(100.00) (8.99)
2008-09	31364(74.90) (11.60)	702(1.68) (6.17)	9030(21.57) (10.00)	777(1.86) (4.41)	41873(100.00) (10.80)
2009-10	25606(67.83) (9.47)	1540(4.08) (13.53)	8668(22.96) (9.60)	1931(5.12) (10.96)	37745(100.00) (9.74)
2010-11	21376(61.34) (7.91)	874(2.27) (7.68)	11939(34.26) (13.23)	658(1.89) (3.74)	34847(100.00) (8.99)
2011-12	34833(74.82) (12.88)	1022(2.19) (8.98)	8206(17.63) (9.09)	2495(5.6) (14.16)	46556(100.00) (12.01)
2012-13	21825(67.57) (8.07)	1059(3.28) (9.31)	9880(30.59) (10.95)	1534(4.74) (8.71)	32298(100.00) (8.33)
2013-14	24299(67.41) (8.99)	975(27.05) (8.57)	8978(24.90) (9.95)	1794(4.98) (10.18)	36046(100.00) (9.30)
2014-15	30933(68.51) (11.44)	978(2.17) (8.59)	9988(22.12) (11.06)	3249(7.20) (18.44)	45148(100.00) (11.65)
2015-16	40001(72.13) (14.79)	1042(1.88) (9.16)	10049(18.12) (11.13)	4365(7.87) (24.77)	55457(100.00) (14.31)
Total	270395(69.75) (100.00)	11379(2.93) (100.00)	90265(23.28) (100.00)	17620(4.55) (100.00)	387639(100.00) (100.00)

Source: Compiled from annual reports of Reserve Bank of India from 2006-07 to 2015-16.

Table 1 depicts the Foreign Direct Investment (FDI) equity inflows from FIPB route/ RBI's automatic route/ acquisition route, Equity capital of in un-corporate bodies, FDI in reinvested earnings, FDI in other capital category

and the total FDI inflows to India over a period of ten years from 2006-07 to 2015-16. It is understood from the table above that total FDI inflows to India was increased from Rs. 22826 crores in 2006-07 to Rs. 41873 crores in 200-09 then it decreased to Rs. 37745 crores in 2009-10 and then the same was increased to Rs. 46556 crores in 2011-12 then slightly decreased to Rs. 32298 crores in 2012-13 and then increased to Rs. 55457 crores in 2015-16. Coming to the total FDI equity inflows to India from FIPB route/ RBI's automatic/ acquisition route was Rs. 270395 crores followed by FDI equity inflows from reinvested earnings was Rs. 90265 crores, FDI equity inflows from other capital category was Rs. 17620 crores and FDI equity inflows from equity capital of un-corporate bodies was Rs. 11379 crores.

From the foregoing analysis one can infer that the total FDI inflows to India was increased in the first three years then the same was fluctuating in the next four years and then increased in the next three Years of the study period. Majority (69.75 percent) of FDI inflows to India from FIBP route/RBI's automatic route/acquisition route. Whereas relatively less (2.93 percent) FDI inflows to India from equity capital of uncorporate bodies.

Table No.2
Sector wise Foreign Direct Investment (FDI) Equity Inflows to India over a Period of Five Years from 2012-13 to 2016-17

(Rs. in Crores)

Year	Service sector	Construction Development	Computer Software & Hardware	Telecommu-nications	Automobile Industry	Drugs & Pharma-ceuticals	Trading	Chemicals	Power	Hotel &Tourism	Total
2012-13	26306(31.91) (22.69)	7248(8.79) (35.27)	1654(2.00) (4.86)	2656(3.22) (4.90)	6011(7.29) (11.73)	8384(10.17) (23.48)	1596(1.94) (2.73)	2923(3.55) (10.70)	788(9.56) (31.49)	17777(2.57) (47.12)	82433(100.00) (17.92)
2013-14	13294(19.11) (11.47)	7508(10.80) (36.54)	7987(11.48) (23.45)	6896(9.92) (12.72)	7191(10.34) (14.02)	9027(12.98) (25.28)	4738(6.81) (8.13)	6519(9.37) (23.86)	3436(4.94) (13.73)	2949(4.24) (7.82)	69545(100.00) (15.12)
2014-15	27369(22.84) (23.61)	4652(3.88) (22.64)	14162(11.82) (41.58)	17372(14.50) (32.03)	16760(13.99) (32.69)	9052(7.55) (25.35)	16755(13.98) (28.75)	4658(3.89) (17.05)	4296(3.59) (17.17)	4740(3.96) (12.56)	119816(100.00) (26.04)
2015-16	45415(35.24) (39.18)	727(0.56) (3.54)	3351(2.60) (9.84)	8637(6.70) (15.93)	16437(12.75) (32.06)	4975(3.86) (13.93)	25244(19.59) (43.42)	9664(7.50) (35.37)	5662(4.39) (22.63)	8761(6.80) (23.22)	128873(100.00) (28.01)
*2016-17	3536(5.95) (3.05)	414(0.70) (2.01)	6903(11.62) (20.27)	18659(31.42) (34.41)	4865(8.33) (9.49)	4270(0.72) (11.96)	9966(16.73) (17.05)	3561(5.99) (13.03)	3744(6.30) (14.97)	3497(5.89) (9.27)	59385(100.00) (12.91)
Total	115920(25.20) (100.00)	20549(4.47) (100.00)	34057(7.40) (100.00)	54220(11.79) (100.00)	51264(11.14) (100.00)	35708(7.76) (100.00)	5269(12.67) (100.00)	27325(5.94) (100.00)	25016(5.44) (100.00)	37724(8.20) (100.00)	460052(100.00) (100.00)

Source: 1. Compiled from Annual Reports of RBI from 2012-13 to 2015-16.
2. Reports on FDI, Department of Industrial Policy & Promotions, Ministry of Commerce and Industry.
Note: * Data Up to September 2016.

Table 2 shows the Foreign Direct Investment (FDI) equity inflows in different sectors of India over a period of five years from 2012-13 to 2016-17. It is understood from the table above that the total FDI equity inflows was fluctuated from year to year over the said study period. The total FDI equity inflows was Rs. 82433 crores in 2012-13 then decreased to Rs. 69545 crores in 2013-14

and it increased to Rs. 128873 crores in 2015-16 then the same was decreased to Rs. 59385 crores in 2016-17. The growth rate of FDI equity inflows to India in its total FDI equity inflows in different sector was 17.92 percent in 2012-13 and it decreased to 15.72 percent in 2013-14 then increased to 28.01 percent in 2015-16 then the same was decreased to 12.91 percent in 2016-17. The total FDI equity inflow to India over the five year study period in absolute terms in different sectors together was Rs. 460052 crores. FDI have invested much of their investment in service sector followed by trading, telecommunication, automobile industry, hotel & tourism, drugs & pharmaceuticals. Computer software & hardware, chemicals, power and construction development respectively. The growth rate of FDI equity inflows in trading sector was increased in the first four years and then decreased in the last year of the study period.

From the foregoing analysis one can infer that majority Rs. 115920 crores (25.20 percent) FDI equity inflows to India from service sector. Whereas FDI equity inflows to India from construction development was Rs. 20549 crores (4.47 percent).

Table.3: Foreign Direct Investment (FDI) Equity Inflows to India from top ten Investing Countries

(Rs. in Crores)

Year	Mauritius	Singapore	United Kingdom	Japan	USA	Nether Lands	Germany	Cyprus	France	UAE	Total
2012-13	51654(48.10) (22.46)	12594(11.75) (5.99)	5797(5.41) (12.23)	12243(11.42) (16.87)	3033(2.83) (5.39)	10054(9.38) (13.73)	2658(2.48) (11.43)	4684(4.37) (23.10)	3487(3.25) (24.26)	987(0.92) (6.94)	107191(100.00) (14.09)
2013-14	29360(22.92) (12.76)	35625(27.81) (16.94)	20426(15.94) (43.12)	10550(8.23) (14.74)	4807(3.75) (8.54)	13920(10.87) (19.02)	3401(2.65) (14.62)	6093(4.76) (30.05)	1842(1.44) (12.82)	2084(1.63) (14.65)	128108(100.00) (16.84)
2014-15	55172(33.07) (23.98)	41350(24.79) (19.66)	8769(5.26) (18.51)	12752(7.64) (17.82)	11150(6.68) (19.80)	20960(12.56) (28.64)	6904(4.14) (29.68)	3634(2.18) (17.92)	3881(2.36) (27.00)	2251(1.35) (15.82)	166823(100.00) (21.92)
2015-16	54706(23.53) (23.78)	89510(38.49) (42.55)	5938(2.55) (12.53)	17275(7.43) (24.14)	27695(11.91) (49.19)	17275(7.43) (23.60)	6361(2.74) (27.35)	3317(1.43) (16.36)	3937(1.69) (27.39)	6528(2.81) (45.89)	232542(100.00) (30.56)
*2016-17	39136 (30.99)	31282(24.77) (14.87)	6436(5.10) (13.59	18745(14.84) (26.19)	9618(7.62) (17.08)	10975(8.69) (15.00)	3936(3.11) (16.92)	2546(2.02) (12.56)	1225(0.97) (8.52)	2375(1.88) (16.69)	126274(100.00) (16.59)
Total	230028(30.23) (100.00)	210361(27.64) (100.00)	47366(6.22) (100.00)	71565(9.07) (100.00)	56303(7.40) (100.00)	73184(9.62) (100.00)	23260(3.06) (100.00)	20274(2.66) (100.00)	14372(1.89) (100.00)	14225(1.87) (100.00)	760938(100.00) (100.00)

Source: 1. Compiled from Annual Reports of RBI from 2012-13 to 2015-16.

2. Reports on FDI, Department of Industrial Policy & Promotions, Ministry of Commerce and Industry.

Note: * Data Up to September 2016.

Table 3 reveals the Foreign Direct Investment (FDI) equity inflows to India from top ten investing countries over period of five years from 2012-13 to 2016-17. It is understood from the table above that total FDI equity inflows to India from top ten investing countries was increased continuously from year to year over the entire study period except in 2016-17. The total FDI equity inflows to India from top ten investing countries was Rs. 107191 crores in 2012-13 then increased to Rs. 232542 crores in 2015-16 and then the same was decreased to Rs. 12674 crores in 2016-17. The growth rate of FDI equity inflows to India from top ten investing countries was 14.09 percent in 2012-13 then increased to 30.56 percent in 2015-16 and then decreased to 16.59 percent in 2016-17. Mauritius have invested much of their FDI in India was Rs. 230028 crores (30.23 percent) followed by Singapore, Nether Lands, Japan, USA, United Kingdom, Germany, Cyprus, France and UAE respectively. The growth rate of FDI equity inflows from Mauritius was fluctuating from year to year. Whereas the growth rate of FDI equity inflows from Singapore was increased in the first four years and then decreased in the last year of the study period. But the growth rate of FDI equity inflows from Cyprus was increased in the first two years and gradually decreased in the next three years of the study period.

From the foregoing analysis one can infer that majority (30.23 percent) FDI equity inflows to India come from Mauritius. Whereas relatively less (1.87 percent) of FDI equity inflows to India come from UAE.

conclusion

India is considered as one of the fastest growing economies like ours

savings are at low rate and at the same time investment requirements are more. In such an economy Foreign Direct Investment (FDI) fill a gap between domestic savings and investment requirements. Since the domestic savings available in India are inadequate for the overall development of the economy. India has already marked its presence as one of the fastest growing economies of the world. India has been ranked among the top 10 attractive destinations for inbound investments. FDI policy reforms are meant to provide ease of doing business and accelerate the pace of foreign investment in the country. Total FDI inflows to India were increased in the first three years then the same was fluctuating in the next four years and then increased in the next three Years of the study period. Majority (69.75 percent) of FDI inflows to India from FIBP route/RBI's automatic route/acquisition route. Whereas relatively less (2.93 percent) FDI inflows to India from equity capital of uncorporate bodies. Majority Rs. 115920 crores (25.20 percent) FDI equity inflows to India from service sector. Whereas FDI equity inflows to India from construction development was Rs. 20549 crores (4.47 percent). Majority (30.23 percent) FDI equity inflows to India come from Mauritius. Whereas relatively less (1.87 percent) of FDI equity inflows to India come from UAE.

References

1. B. Bhattacharayya and Satinder Palaha, "Foreign Direct Investment in India: Facts and Issues", occasional paper No. 2, Indian Institute of Foreign Trade, New Delhi, 1996, pp.1-2.
2. M.S. Khan and Amir Moin Khan, "FDI and Indian Economy: Issues, Challenges & Prospects in India", Indian Journal of Research, Vol. No. 4, Issue No. 12, December, 2015, p.44.
3. Madan Mohan Jana, "An Overview of FDI & Economic Development in India-An Empirical Analysis", the Management Accountant, Vol. No.50, Issue No. 4, April 2015, p.35.
4. Annual Reports of Reserve Bank of India from 2006-07 to 2015-16.
5. Reports on FDI, department of industrial policy & promotions, Ministry of Commerce and industry

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Issues and Problems of Small and Marginal Farmer: A Study in Karimnagar District

Ilaiah Macharla, Research Scholar, Dept of Economics, Kakatiya University, Warangal, Telangana

Dr. B. Suresh Lal, Head, Department of Economics, Kakatiya University, Warangal, Telangana

Abstract: *This paper examines issues and problems of small and marginal farmers in Karimnagar district it covers socio-economic conditions of sources in agriculture growth cost of cultivation pattern participation of small holding agriculture, Indian agriculture is the home of small and marginal farmer (80%) agriculture census data shows that there were about 121 million agricultural holdings in India in 2000-01.Around 99 million were small and marginal farmers. Average size has declined from2.3ha.in 1990-91to1.37ha.in 2010-11.smalland marginal farmer account for more than 80% of total farm hrs. Production performance of small holders, small holders in different policies and institutional support for small holders and, challenges and future options for small holding agriculture including information needs. The study will base on primary and secondary data, primary data will be collected by the method of personal interview coupled with structured questionnaire schedule among the selected farmer households in the study area. In spite of above challenges, there are many technological and institutional innovations which can enable marginal and small farmers to raise agricultural productivity and increase incomes through diversification and high value agriculture. Before going to technological innovations, we discuss below the policy issues under research and extension in agriculture. These are applicable to small and marginal farmers. First finding small holdings play important role in raising agricultural development and poverty reduction and second finding the green revolution also increased the indebtedness among the peasants. It has resulted in environmental problems like over exploitation of ground water resources and consequent decline in its level, loss of soil quality etc.*

Keywords: *Small and marginal farmers, Socio-economic conditions, Cost of cultivation, Cropping pattern*

Introduction

Agriculture plays a pivotal role in the Indian economy. Although its contribution to gross domestic product (GDP) is now around one sixth, it provides employment to 56 per cent of the Indian workforce. Also, the forward and backward linkage effects of agriculture growth increase the incomes in the non-agriculture sector. The growth of some commercial crops has significant potential for promoting exports of agricultural commodities and bringing about faster development of agro-based industries. Thus agriculture not only contributes to overall growth of the economy but also reduces poverty by providing employment and food security to the majority of the population in the country and thus it is the most inclusive growth sectors of the Indian economy.

Agriculture in India has never been smooth sailing, as it is always confronted with one or the other problems. The life of the peasants being largely dependent upon agriculture has never been easy as his livelihood is determined by several social and environmental factors. Exploitation of the peasants by the merchants, middleman, money lenders etc., gamble with monsoon and inadequate irrigation, crop diseases, costly agricultural inputs, fluctuating and unremunerated agricultural inputs, smallholdings, low yield from land are some of the important problems of agriculture. Above all, a dualistic kind of development model, and ineffective implementation of the government policies and Programmes have deepened the miseries of the peasants and widened the gap between rich, middle, small and marginal peasants and landless peasants.

Review of literature

Ashwinikulkarni, Sudha Narayan (2015) this study reports on the survey of 4.881users of more than 4.100 works created under the mahatma Gandhi national Rural Employment Guarantee schemes. VarunGandhi (2013) The working Group on marginal farmer recommended that marginal cultivators could be encouraged to join farmer producer originations (FPOS), such organization can be provide interest subvention on loan for a five year period and exempted from the agricultural produce market committees, procurement from small and marginal farmers should be protested particularly though regulation for multi-brand retail. Thapa and Gaiha (2011) It may noted that agricultural technologies are; scale neutral; but not resource neutral' (singh et al.2002) small holder –oriented research and extension should give importance to cost reduction without reduction in yields. Chand (2011) reveals that the structure of land holdings India is a land of small farmers. According to Agricultural Census 2000-01, there were an estimated 98 million small and marginal holdings out of around 120 million total land households in the country. Swaminathan (2010) the need for adopting the methods of an evergreen revolution has become very urgent now. As Swami Nathan (2010) mentions. Among other things .there are two major pathways to fostering an evergreen revoltion. Ch. Radhika Rani and P. Praveen (2008) the small farmers are at production risk of crops like maize, sunflower, groundnut and red gram is more than the area risk. Whereas the production risk is more in case of oil seed crops like groundnut and castor for medium and large farmers. The financial risk in terms of decrease in marketed surplus is also observed in the case of all crops in their study by Ch. Radhika Rani and P. Praveen. They are of the opinion that land leasing proved to be an important instrument to 23 augment the production base and enhance the income level for the small and medium farmers.

Objectives of the Study:

- To explain the concept evolution and status of small farmers.
- To understand and identify the socio-economic conditions of the selected small farmer in Karimnagar District.
- To explain and find out the issues and challenges of the factors responsible small and marginal farmers in selected study area.

Hypothesis:

- The government policies and scheme are improving living standards of small farmers.
- There is an overall impact in their Institutional credit do to the government economic schemes.

Sampling Design: A sample of 50 has been selected for the study using random sampling method, the research has analyzed data keeping in view of objectives of the study the tools were based to analyze the data like percentage, tabulation and correlation.

Methodology: The study adopted following methodology

The study will base on primary and secondary data, primary data will be collected by the method of personal interview coupled with structured questionnaire schedule among the selected farmer households in the study area. The present study has conducted in Husnabad and Gowravelly villages in Karimnagar District. The research has selected 50 sample respondents and convenient sampling. A structured schedule was administered for collection of data from these respondents. A pre-tested interview schedule was also administered for the purpose of collecting the data. For the usage in the appropriate places, secondary data are also collected from journals, books, reports and various documents and related publications.

Results and Discussion:

Table- 1: Particular of credit sources of sample respondents in the study area

S. No.	Amount of credit	No. of Respondents		Total
		Money lenders	Bank	
1	Below Rs 5000	12 (24.0) (48.0)	10 (20.0) (40.0)	22 (44.0)
2	Rs 5000-10000	7 (14.0) (28.0)	9 (18.0) (36.0)	16 (32.0)
3	Rs 10000-20000	4 (8.0) (16.0)	4 (8.0) (16.0)	8 (16.0)
4	Rs 20000 Above	2 (4.0) (8.0)	2 (4.0) (8.0)	5 (10.0)
	Total	25 (50.0) (100.0)	25 (50.0) (100.0)	50 (100.0)

Source: Field Study (Figures in Parentheses are Percentages) (Rows and columns)

In the table socio economic status of small and marginal farmers the highest number is 12 respondents have taken the loan at money lenders between below 5,000. And 10 respondents have taken loan at bank their percentage is 20. Nearly 14 percent respondents have taken money lenders, 18 percent respondent have taken at bank loan. The lowest number 2 respondents got money lenders their percent is 4, nearly 4

percent respondents have taken bank loan between 20,000 and above.

Overall observation 44 percent small and marginal farmers in the Husnabad mandal. The majority respondents have taken in the loan on the money lenders below 5,000 their percent is 48 out of 20,000 Rs, the lowest number is 2 respondents have taken the loan from money lenders 20,000 above their percent is 8, the overall observation decreased the majority respondents have got loan from bank their percent is 40, the lowest number is 2 respondents have got loan on the from bank their percent is 8, the overall observation decreased.

The majority people liked debt more than below 5,000 why because bank loan no interest from bank. The majority respondents have taken the loan depend on the money lenders, why because there is no economic sources

Table- 2: Cost of Cultivation of Small and Marginal Farmers

S. No.	Inputs	No. of Respondents		Total cost Production
		Explicity cost	Implicity cost	
1	Fertilisers & Pesticides	9 (18.0) (36.0)	12 (24.0) (48.0)	21 (42.0)
2	Seeds	7 (14.0) (28.0)	8 (16.0) (32.0)	15 (30.0)
3	Land preparation	5 (10.0) (20.0)	3 (6.0) (12.0)	8 (16.0)
4	Labour wages	4 (8.0) (16.0)	2 (4.0) (8.0)	6 (12.0)
	Total	**25 (50) (100.0)**	**25 (50.0) (100.0)**	**50 (100.0)**

Source: Field Study (Figures in Parentheses are Percentages)

(Rows and columns percentages)

In the table cost of cultivation the highest number is 9 respondents expenditure on the in explicit of cost their percent is 18, nearly 14 percent respondents cost of seeds and 5 respondents expenditure on the cattle, the lowest number 4 respondents expenditure on the on the labour their percent is 8 on the explicit cost. The highest number is 12 respondents on the expenditure on fertilizer their percent is 24 on the implicit cost, nearly 16 percent respondents expenditure on the seeds, 6 respondents expenditure on the cattle on implicit cost the lowest number is 2 respondents expenditure on labour their percent is 4 on the implicit cost.

Overall the percentage 42 and seeds 30 percent expenditure on the implicit on the explicit. The majority respondents have expenditure on the fertilizers their percent is 36 on the explicit cost of the lowest number is 4 respondents have expenditure labour wages their percent is 16, the overall observation high expenditure on the

fertilizers near 48 percent respondents cost of the fertilizers. The lowest number 2 respondents is have expenditure on the labour wages. Their percent is 8 on the implicit cost the overall observation decreased.

Agriculture plays a pivotal role in the Indian economy. Although its contribution to gross domestic product (GDP) is now around one sixth, it provides employment to 56 per cent of the Indian workforce. Also, the forward and backward linkage effects of agriculture growth increase the incomes in the non-agriculture sector. Nearly 4(8.0) percent of sample respondents are getting 10.000-20.000 rupees as well as bank credit also. It is to know that the opinion of sample respondents awareness on moneylenders credit banks. Majority of the respondents 9(18)percent out of 25acquored the modern inputs from integrated farmer utilizations of seeds, land preparation and labour wages explicitly cost is Avery low study area. Implicitly cost of fertilizers and feticides, seeds, land preparation, labour wages also returns to cultivation.

The role of small farms in development and poverty reduction is well recognized. The global experience of growth and poverty reduction shows that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture. Small holdings play important role in raising agricultural development and poverty reduction.

Exploitation by the middlemen is the reason put forth for not getting the best price for the produce of the agriculturists. The government should promote the plan called *"ulavar santhai"* (Farmers Market), where the farmers can directly sell their products at reasonable price to the consumers. Facilitating national weather risk management system that alerts farmers when there is a danger of extreme weather, would go a long way in reducing losses in agriculture.

Issues of Agriculture

1. Market facility not available
2. Change quality of fertilizers and pesticides
3. Sperious seeds
4. High rate of interest
5. High quality of cultivation

Problems of agriculture:

1. Agriculture is unorganized activity today: Indian agriculture is largely an unorganized sector. No systematic institutional and organizational planning is involved in cultivation, irrigation, harvesting etc. Institutional finances are not adequately available and minimum purchase price fixed by the government do not reach the poorest farmer.

2. Most farms are small and economically unfeasible: The ground reality is that majority of the farmers in India own as little as two acres of land. In many cases, the farmers are not even the owners of the land, which makes profitable cultivation impossible because significant portion of the earnings go towards the payment of lease for the land.

3. Middlemen and economic exploitation of farmers: Exploitation by the middlemen is the reason put forth for not getting the best price for the produce of the agriculturists. The government should promote the plan

called *"ulavar santhai"* (Farmers Market), where the farmers can directly sell their products at reasonable price to the consumers.

4. Government program do not reach small farmers: Government has implemented agricultural debt. waiver and debt. relief scheme in 2008 to benefit over 36 million farmers. Direct agricultural loan to stressed farmers under so called Kisan credit Card were also covered under this scheme. However, most of the subsidies and welfare schemes announced by the Central and State governments do not reach the poor farmers. On the contrary, only big land lords are benefited by those schemes.

5. High indebtedness and exorbitant interest rates: The root cause of farmers taking their lives is the increase in their indebtedness and debt. Exorbitant interest rates have to be declared illegal and the government has to take strict measures against greedy money lenders. Easy access to institutional credits have to reach the small and marginal farmers, without cumbersome procedures.

6. Real estate mafia: We can see even fertile land best suited for agricultural purpose being sold to real estate people, who prepare plots and give attractive advertisements to sell at exorbitant price. There is need to implement strict measures to prevent land grabbing.

Solutions to the problem:

1. Multiple crops: Cultivation of multi crops such as coconut, turmeric, pine apple, banana, apple, papaya, ginger will yield profitable results to the farmers.

2. Special agricultural zone: Just like industrial zone, there is an urgent need to establish special agricultural zones, where only farming and agriculture related activity should be allowed. By introducing farm techniques which guarantee a definite success, an increase in youth participation on agricultural fields is economically possible. This can be attained only by implementing new technologies. Research efforts should continue for the production of crops with higher yield potential and better resistance to pests.

Technological advancement in agriculture should be passed down to the small farmers.

Where the existing crops would not do well under drought and weather conditions, the farmers should be helped to shift to cultivating crops that would be easy and economical to cultivate.

4. Educate the farmers: Many farmers in India are not aware of crop rotation. Though education in urban areas has improved a lot, the government has ignored the same in rural areas in general and in agriculture sector in particular. This is the reason why farmers are not adequately aware of the various schemes provided by the government.

5. Clubbing of small fields may help: Several farmers who own small piece of land can join together and combine all small fields into one large chunk. This may help in variety of ways.

6. Need for meaningful crop insurance policies: Traditional crop insurance depends on the direct measurement of the damage suffered by a farmer to determine his/her payout. However, field loss assessment is often not feasible or expensive, since most of our farmers are small holders. Index

based insurance, on the other hand, responds to defined parameter. Index based insurance has the advantages that it is transparent and all the insurers within the defined geographical area are treated equally. It has low operational and transnational costs, while also ensuring quick payouts.

7. Need for better water management:

Irrigation facilities that are currently available do not cover the entire cultivable land. Apart from the areas where perennial rivers flow, most of the agricultural fields do not have irrigation facility. In most cases, it is not the lack of water but the lack of proper water management that causes water shortage. Improved modern methods of rain water harvesting should be developed. Water management can be made more effective through interstate co-operation on water resources, where surplus water from perennial rivers can be diverted to the needy areas. Connecting the rivers throughout the country will solve this problem. Construction of National Waterways will improve the irrigation facility, which in turn can save the farmers, if the monsoon would fail.

8. Alternate source of income for farmers: Small farmers should be encouraged to develop alternative sources of income and the government should take up the responsibility for providing training to the farmers to acquire new skills. In drought affected areas, the government should start alternative employment generation programs to reduce the dependence on agriculture as the sole source of income. Such programs should be standardized. Farmers should be enabled to divide their activities into three parts. One for regular crop production, one for animal husbandry or fisheries and another for timber production. These activities complement each other and also alternate sources of income of farmers can be ensured.

9. Need for national weather risk management system/disease alert system: Facilitating national weather risk management system that alerts farmers when there is a danger of extreme weather, would go a long way in reducing losses in agriculture.

Conclusion and Suggestions:

Majority of the respondents 12 (24) percent depending on moneylenders and 10 (20) percent respondents bank credit in the study area. All the respondents of the study area moneylenders is decreasing and bank credit also decreasing. Only 2 (4.0) percent respondents depending on moneylenders as well as bank credit 2 (4.0) percent depending banks .The respondents were below 5,000 rupees out 20,000 and majority of respondents below 5,000 rupees 12 (48.0) percent in the first row for going on 10 (40) percent respondent also credit banks. Nearly 7out of 25 sample respondents depending Rs.5,000-10,000 and bank credit is (18.0) percent in study area.

Main findings of responds depending on money lenders because remarkable to responding, Majority of the sample respondents depending on fertilizers and pesticides. majority of the respondents 9(18)percent out of 25acquored the modern inputs from integrated farmer utilizations of seeds, land preparation and labour wages explicitly cost is Avery low study area. Implicitly cost of fertilizers and feticides, seeds, land preparation, labour wages

also returns to cultivation. After independence govt. has introduced several policies and programmes to deal with agricultural problems in particular and rural backwardness in general. However, the defective and lopsided policies (policies formulated without diagnosing rural problems) of the government have created adverse conditions to the rural populace. The government programmes like land reforms, green revolution, community development programmes, IRDP etc have failed to yield the expected results.

Suggestions:

1. Educated to sample respondents are to be improve in the rural areas,

2. The rural areas people develop in the social awareness.

3. Agriculture is to be given a new thrust in the rural areas people in their activity,

4. developed the institutional facilities in the rural areas,

5. The government encourages to multi-crops, irrigation, facilities in their agriculture activities,

6. Government should be provide crop insurance policies,

References:

1. Lal B. Suresh, (2013); Globalization-Agricultural Development of Tribes: Issues and Challenges, LAP LAMBERT Academic Publishing, Germany

2. Lipto, M. (2006), "Can Small Farmers Survive, Prosper, or be the Key Channel to cut Mass Poverty". *Journal of Agricultural and Development Economics*, Vol 3, No. ,2006,pp58-85

3. NECUS (2008), "A Special Programme for Marginal and Small Farmers", A Report prepared by the National Commission for Enterprises in the Unorganized Sector, NECUs, New Delhi

4. Rao, NC and Dev. S. Mahendra (2010). Biotechnology in Indian Agriculture; Potential, performance and Concerns, Academic Foundation, New Delhi

5. Chand, R., PA Lakshmi Prasanna and Aruna Singh (2011) " Farm size and productivity; Understanding the strengths of smallholders and improving their", Economic and Political Weekly, Vol.46, Nos. 26 and 27.

6. Thapa. G. and R. Gaiha (2011). " Smallholder farming in Asia and the Pacific; Challenges and Opportunities', paper presented at the Conference on new directions for small holder agriculture,. 24-25 January 2011, rome, IFAD

7. Paper presented at "Emerging Economies Research Dialogue' Beijing , China, 14-15 November 2011 organized by ICRIER.

8. On returns to farming, see Sarthak and Mishra (2011).

9. www.newsgram http//

10. *Economic and Political Weekly*, Vol, 50. ISSUE NO, 13.28 march 2015, Ashwinikulkarni, Sudha Narayan an,

11. *JANUARY* , 13, 2015, The Hindu paper, froze Varun Gandhi,

12. The *ICFAI journal of agricultural economics*, January, 2015, vol.5.no.1pp.35-37.

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1 (2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

A Note on Agricultural Credit- Field Experience in Warangal District

Ms. A. Kavitha, Research Scholar, Department of Economics, Kaktiya University Warangal, Telangana, India

Dr. B.Venkateshvar Rao, Reader in Economics, CKM Arts & Science College, Warnagal, Telangana, India.

Abstract: *This paper focuses on few concerns in agricultural credit and field experiences from selected villages in rural area. It has been reported that Agricultural credit is an important prerequisite for agricultural growth. Agricultural policies have been reviewed from time to time to provide adequate and timely availability of finance to public sector. The rural credit systems have under gone several changes during the last decade. In this study, the field experiences reveal that there has been an increasing trend towards rural credit. At the same time farmers have difficulties on utilizing the credit system and repayments due to polices taken by the policy makers in the public sector.*

Key words: *Rural credit, human civilization, different climates, cultures*

Introduction:

Agriculture also called farming or husbandry is the rearing of animals and cultivation of land to produce food, bio fuel and other different climates, cultures, and technologies products etc. used to sustain life. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that nurtured the development of civilization. The study of agriculture is known as agricultural science. The history of agriculture dates back thousands of years, and its development has been driven and defined by greatly different climates, cultures, and technologies. We can plainly speak that the Agriculture credit is an important prerequisite for agricultural growth. Agricultural policies have been reviewed from time to time to provide adequate and timely availability of finance to this sector. Rural credit system assumes importance because for most of the Indian rural families, savings are inadequate to finance farming and other economic activities. In India a multi-agency approach comprising co-operative banks, scheduled commercial banks and regional rural banks (RRBs) has been followed to allow credit to agricultural sector. Now a day's Agriculture has remained traditionally the vital economic activity in our country. That a majority of the rural households are directly or indirectly dependent on agriculture is an established fact. It is also fairly well acknowledged that the agricultural sector has gone through some crisis in the past one decade. While the crisis may be isolated to a few crops and regions, the sector can no longer do with policy apathy. The increased number of farmer suicides highlights the fact that there is something fundamentally wrong with the

way agriculture was dealt with, particularly after the economic reform process was rolled out. If we examine the immediate reason for distress that leads farmers to commit suicide, it is clearly that of indebtedness. Naturally most of the significant policy measures that were taken by the state in the recent past are aimed at the issue of supply of credit, the cost of credit, and the resultant use of credit in agriculture. In a way, this is an immediate relief measure that was required from the State. This paper argues that some long term measures need to be taken to ensure that agriculture as a livelihood opportunity becomes attractive to farmers and not a desperate occupation that needs constant doses of State support even for survival.

Materials and Methods

The present study is completely about field experiences and it is based on both primary and secondary data. Primearydata is collected from the structured questionnaire and the secondary data is extracted from various related books, reputed international journals and websites. The sampling frame for this study consists of farmers from two selected villages in rural area, which were administered on the 50 rural farmers selected for the study to access the impact of agricultural credit on their productivity. A total of 48 sets of questionnaires were used to interview rural farmers of two villages namely Jubli Nagar, Regonda from Regonda Mondal Warangal District total of 48 questionnaires were correctly completed. This questionnaire retrieved and analyzed by descriptive statistics, simple percentages, ratios and proportions were used for data presentation and analysis.

Objectives of the study:

The main objectives of rural co-operative banks are as follows.

1. To study the demographic profile such as gender, caste, age and literacy etc. of farmers
2. To know the awareness about agriculture credit in rural areas.
3. To examine the Agriculture credit and its causes

Data Tabulation, Results and Discussions:

The table below is a collection of the results obtained from the questionnaires administered and retrieved for analysis.

Table 1: Demographic Profile of the Respondents:

Category		Respondents (48)	Percentage (%)
Gender	male	40	83.33
	female	8	16.67
Caste	OC	19	39.58
	BC	16	33.33
	SC	7	14.58
	ST	6	12.50
Age	Less than 25	5	10.42
	25-35	7	14.58
	35-45	15	31.25

	45 & above	21	43.75
Education	Primary	16	33.33
	Upper primary	13	27.08
	High school	6	12.50
	Graduate	4	8.33
	No	9	18.75

Source: Primary data: Two villages from Regonda Mondal warngal District.

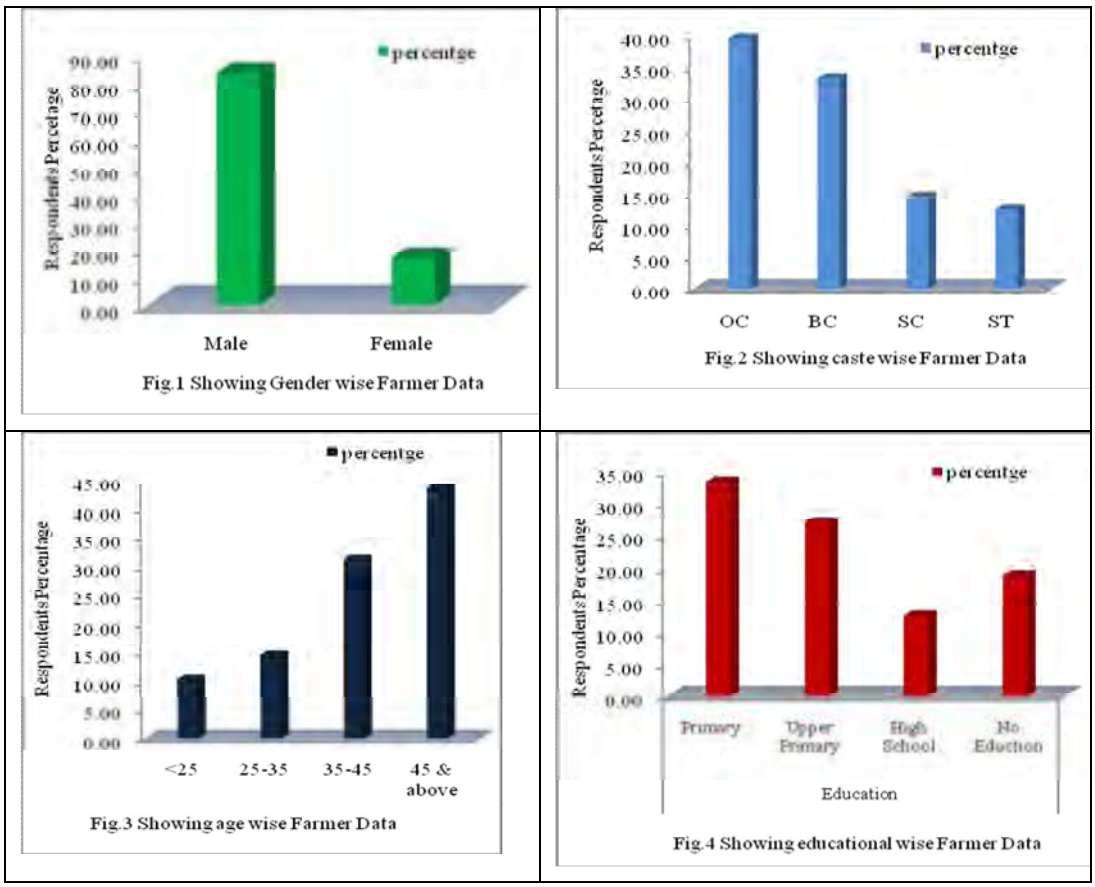


Fig.1 Showing Gender wise Farmer Data

Fig.2 Showing caste wise Farmer Data

Fig.3 Showing age wise Farmer Data

Fig.4 Showing educational wise Farmer Data

Graphical Representation - Demographic Profile of the Respondents

Table-1 and Fig.1 reveal the details of demographic profile of respondents such as gender, caste, age education wise distribution. Among 48 respondents from rural Graphical Representation - Demographic Profile of the Respondents

83.33 % were male and 16.67% were female. This can be noted that male farmer percentage is high compared with female.

From the table-1 and Fig.2. It is also observed that of 48 respondents regarding caste 39.58 % respondents belongs to OC community, 33.33% respondents belongs to BC community, 14.58% respondents belongs to SC and 12.50% respondents belongs to ST

community. Clearly OC community farmer percentage is high compared with all other communities and next followed by caste is BC. In the table-1 and Fig.3 It is also showed that of 48 respondents regarding age 10.42% respondents has age less than 25 years, 14.58% respondents were between 25-35 years age, 31.25% respondents were between 35-45 years age and 43.75% respondents were 45 years and above. Clearly majority of respondent's farmers whose age are 45 and above high compared with all other age groups. Table-1 and Fig.4. Reveals the details of age education wise distribution of respondents. Among 48 respondents from rural 33.33 % were only primary educated, 27.08% were have upper primary education, 12.50% respondents were studied up to high school, very few that is 8.33% respondents were graduates and 18.75 % respondents were illiterates. This can be noted that primary educated farmer percentage is high compared with other education.

Table 2: Respondent awareness on Agriculture credit

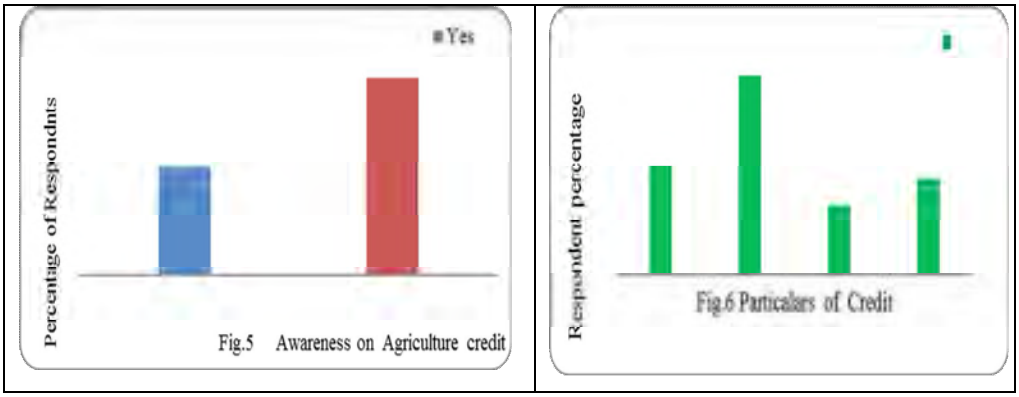
Awareness on agriculture credit		Respondents(48)	Percentage (%)
Respondent	Yes	17	35.42
	No	39	64.58

Source: Primary data: Two villages from Regonda Mondal warngal District

Table 3. Particulars of the credit taken by the respondents

Credit Particulars	Respondents	Percentage (%)
Credit from Banks	17	35.42
Others (private finance etc)	31	64.58
Bank Repayment	11	22.92
others repayment	15	31.25

Source: Primary data: Two villages from Regonda Mondal warngal District



Graphical Representation – Particulars of the credit taken by the respondents

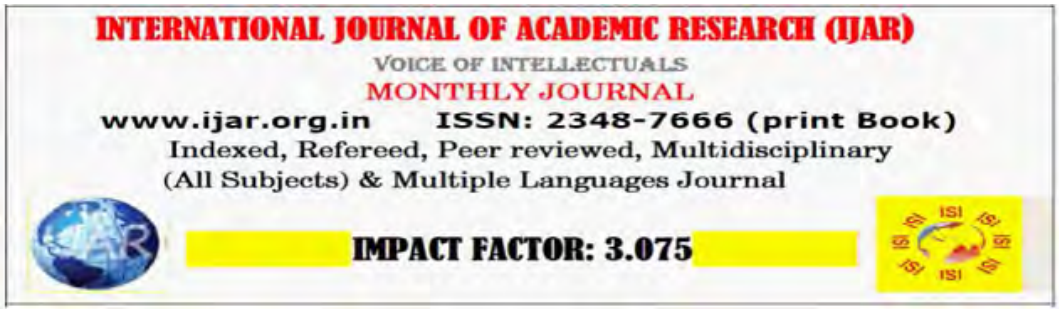
Table-2 and Fig.5 reveal the details of respondent awareness on Agriculture credit. Among 48 respondents from two rural villages 64.58 % respondents have no awareness about Agriculture credit but 35.42 % respondents were positively responded about the awareness of credit. This can be noted that very less respondents has awareness about the credit. Table-3 and Fig.6 reveal the Particulars of the credit taken by the respondents towards Agriculture credit. Among 48 respondents 35.42% respondents who have awareness about Agriculture credit taken loan from banks but only 22.92 % of them were cleared. 64.58% respondents who do not have awareness about Agriculture credit taken loan from others such as private money lenders, private finance etc. But 31.25 % of them were cleared. Clearly it was observed that most of times farmers approaching private finances and money lenders when we compared with banks etc. In this study, the field experiences reveal that there has been an increasing trend towards rural credit. At the same time farmers have difficulties on utilizing the credit system and repayments due to the polices taken by the policy makers in the public sector.

Conclusions:

1. The study reveals that the demographic profile such as caste, age, and education can plays a significant role in agriculture credit system.
2. Majority of farmers in rural areas they have no idea about the agriculture credit due to lack of awareness.
3. Most of the farmers approaching private financiers etc. in order to get credits other than banks. This kind of problems may degrade the agriculture policies taken of the economists.

References

1. Adegeye, A. J., and J. S. Ditto (1985). Essentials of Agricultural Economics. Impact Publishers Nigeria Limited, Ibadan.
2. Andhra Pradesh journal February 2009.
3. Badiru I. O (2010). Review of Small Farmers Access to Agricultural Credit in Nigeria. International Food Policy Research Institute. Series No. 25.
4. Productivity of Rural Credit: A Review of Issues and Some Recent Literature M.S. Sriram.
5. Rural Credit in India - An Overview of History and Perspectives Devaraja T.S. Department of Commerce University of Mysore Hassan, India.



Dear Sir/Madam, Greetings from ijar:
IJAR covers all the subjects like:

Economics, Rural Development, Entrepreneurship, International Finance & Business, Commerce, Management: Marketing, Finance, HR Retailing, Advertising, Production/Operations Management, Science & Technology, Engineering, Computer Science, Biology, Chemistry, Physics, Technology & Innovation, Library and Information Science, Philosophy, psychology- Meteorology, Marine, Education, Organizational Development, Financial Institutions & Markets Tourism, Hospitality and Leisure, Corporate Finance, Transportation, Geography, Public Administration Political Science, Anthropology, Mathematics, Physical Education, Journalism & Mass Communication, Social Work, Languages- Literature, (Any other discipline)

Mail articles to : drtvramana@yahoo.co.in
Dr. T.V. Ramana, **M.A., MBA., PGDCA, PGDIM, PGDHRM, (BL), Ph.D**
Andhra University Campus, Kakinada, 533005, Andhra Pradesh, India,
Office : 46-8-10/4 Opp. Aditya School, Jagannaikpur, Kakinada-2, AP, India

International Journal of Academic Research
ISSN: 2348-7666; Vol.4, Issue-1(2), January, 2017
Impact Factor: 4.535; Email: drtvramana@yahoo.co.in

Guidelines to the Authors : These give credentials to your paper.
Plagiarism is strictly prohibited. Authors are jointly and severely responsible for any sort of plagiarism

1. **Manuscript** must be on a standard A4 size paper setting and ***less than 12 pages*** prepared on
   1.5 spaces and typed in 12 point Times New Roman Font.
2. **Author Name(S) & Affiliations:** The author (s) full name, designation, affiliation (s), address, mobile/landline numbers, and email/ address should be underneath the title.
3. **Abstract:** Abstract should be in fully italicized text, not exceeding 300 words. The abstract must be informative and present overall idea (explain background, aims, methods, results and conclusion) of the paper.
4. **Keywords**: Abstract must be followed by list of keywords, subject to the maximum of five. These should be arranged in alphabetic order
5. **Introduction :** A short introduction of the research problem followed by a brief review of literature and objectives of the research
6. **Objectives and Methodology:** Describe the materials used in the experiments and methods used for data collection, statistical tools used in data collection
7. **Results/findings and discussion:** This segment should focus on the fulfillment of stated objectives as given in the introduction. It should be contain the findings presented in the form of tables, figures and photographs.
8. **Conclusion**: Analysis conclude with suitable and effective suggestions (if any)
9. **Style of Referencing:** The list of all references should be alphabetically arranged. It must be at the end of the manuscript. The author (s) should mention only the actually utilized references in the preparation of manuscript and they are supposed to follow Harvard Style of Referencing. The author (s) is supposed to follow the references as per following:

Books:

Sundara Rao M., (1996), "Tribal Development." Tata McGraw, Hill, New Delhi, page. 250

Contributions to books:

Ramana T.V (2008) ," Education- A multi-Dimensional weapon for all-round Development: Edited by D.Pulla Rao, Development of Education-Emerging Dimensions in 21st Century, Chapter 13, pp.190-202.

Journal and other articles:

Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

Conference papers: Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

Unpublished dissertations and theses:

Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

Online sources: Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

Website: Kelkar V. (2009): Towards a New Natural Gas Policy, Economic and Political Weekly,refered on February 17, 2011 http://epw.in/epw/user/viewabstract.jsp

Note: *Papers relating to the Languages may be followed as their research (Ph.D/M.Phil) style*