Designed and Printed by: Excel Printing Universe, e-mail: printing@groupexcelindia.com • www.groupexcelindia.com

Publishing Consultancy

Group Excel India
www.groupexcelindia.com

Excel India Publishers
91 A, Ground Floor, Pratik Market, Munirka, New Delhi-110067
Call: +91-11-2671 1755/ 2755/ 3755/ 5755• Fax: 011-2671 6755
e-mail: publishing@groupexcelindia.com • Web: www.groupexcelindia.com

Vol. 2 No. 2 July-December 2016 ISSN: 2454-5732

International Journal of Social Science & Development Policy

Babasaheb Bhimrao Ambedkar University
in academic collaboration with
Association of the Socio-Economic Development Studies
Lucknow, India

Details of the Journal

1. Registration No.	ISSN: 2454-5732
2. Place of Publication	Department of Economics, Ground Floor Babasaheb Bhimrao Ambedkar University (A Central University) Lucknow-226025 www.bbau.ac.in
3. Periodicity of Publication	Bi-annual
4. Patron	**R.C. Sobti** Vice Chancellor Babasaheb Bhimrao Ambedkar University NAAC Accrediated A-Grade Central University Lucknow-226025
4. Publisher and Editor-in-Chief	**N.M.P. Verma** Professor, Department of Economics Babasaheb Bhimrao Ambedkar University NAAC Accredited A-Grade Central University Lucknow-226025 Founder President, Association of the Socio-Economic Development Studies (Jointly published by BBAU & ASEDS)
6. Nationality	Indian
7. Printer	**Excel Printing Universe** Munirka, New Delhi, India printing@groupexcelindia.com www.groupexcelindia.com
8. Nationality	Indian

Name and address of the individual who own the newspapers and partners or share holders holding more than one per cent of the total capital: BBAU, Lucknow, India

NMP Verma, Editor-in-Chief

Annual Subscription

- Individual Rs. 1000 each issue
- Institutional Rs. 2000 each issue
- Overseas US $ 50 each issue

All queries may be addressed to the Editor-in-Chief

Guidelines for Contributors

The Journal is a peer-reviewed international Journal dedicated to encourage scholarly exchange among teachers, researchers, academicians and policymakers. The publications of papers, comments and reviews will be from various branches of social sciences. Initially the journal is published twice a year in print versions by Babasaheb Bhimrao Ambedkar University and Association of the Socio-economic Development Studies. The scope of the Journal includes all fields of social sciences such as sociology and social anthropology, political science and public administration, economics, international studies, social geography and demography, commerce and management, social and allied psychology, education, law and human rights, environmental studies and energy and national security and strategic studies. Authors are encouraged to submit full, original unpublished papers that are not under review in any other Journal. All submissions should be in English. Manuscripts from 4000 to 6000 words in length are preferred. All manuscripts should be mailed in MS Word format. Upon receiving the paper, the editor sends an email of confirmation to the author. The paper will pass through a peer review process while keeping reviewer's and author's identities anonymous. The paper will be reviewed by one or two experts as per requirements. The review process may take about a few months. The authors will receive proofs for approval prior to publication. An e-mail will be sent for the finalisation of the acceptance of the paper. After publication; the corresponding author will receive one copy of the paper. However, the author will have to purchase the journal as per the subscription rate. Copyrights for papers are retained by the authors with first publication rights granted to the Journal. The publisher of the Journal is not responsible for subsequent uses of the paper.

- **GENERAL GUIDELINES: Referencing Style:** APA 6, All Headings: Times New Roman, Bold and Font size 12, Page Margins: Normal (2.54 cm top and bottom and 3.17 cm left and right), Font Size and Type: 12-pt. Times New Roman, Line Spacing: 1 line spacing throughout the paper, including the title page, abstract, body of the document, references, appendices, footnotes, tables, and figures, Alignment Justified, Orientation portrait, Page size: A4
- **GUIDELINES FOR ABSTRACT SUBMISSION:** Title - Times New Roman, Font size 12, Study Title Times New Roman, Font size 12, Capitalize each word. Author 1 Last Name, First Name, and Middle Name. Affiliation. Email Author 2 Last Name, First Name, Middle Name. Affiliation. E-mail. Author X Last Name, First Name, Middle Name. Affiliation. E-mail. Presenter Author Name, Correspondence Author Name, Abstract body, Times New Roman, Font size 12, Justify margins, Line Spacing 1, Maximum 300 words. Keywords: Three to five keywords.
- **GUIDELINES FOR FULL PAPER SUBMISSION:** Abstract, Main Heading Times New Roman, Bold, Font size 12 and Upper Case, Second Heading: Indented 1.27cm left, Times New Roman, Bold, Font size 12 and Capitalize Each Word, Third Heading: Indented 2.54cm left. Times New Roman, Bold, Font size 12 and Capitalize Each Word, Table in the Centre of the Page.

  Table Layout Auto Fit Window, Table Caption Above the Table, Figure in the Centre of the Page, Figure Caption Above the Figure, Above and Below the Inserted Figure and Table, One Line Free Space.

International Journal of
Social Science and Development Policy

Vol. 2 No. 2 July-December 2016 ISSN: 2454-5732

www.groupexcelindia.com

International Journal of
Social Science and Development Policy

Vol. 2 No. 2 July–December 2016 ISSN: 2454–5732

Babasaheb Bhimrao Ambedkar University
in academic collaboration with
Association of the Socio-Economic Development Studies
Lucknow, India

International Journal of Social Science and Development Policy

Vol. 2 ● No. 2 ● July–December 2016

ISSN: 2454-5732

Publishing Consultancy

EXCEL INDIA PUBLISHERS
91 A, Ground Floor, Pratik Market, Munirka,
New Delhi-110067
Tel: +91-11-2671 1755/ 2755/ 3755/ 5755
Fax: +91-11-2671 6755
E-mail: publishing@groupexcelindia.com
Website: www.groupexcelindia.com

Typeset by
Excel Publishing Services, New Delhi-110067
E-mail: prepress@groupexcelindia.com

Printed by
Excel Printing Universe, New Delhi-110067
E-mail: printing@groupexcelindia.com

Contents

12th Five Year Plan and Inclusive Growth

Davinder Kumar Madaan[1]

Abstract—*The 12th five year plan (2012–17) of India aimed to achieve faster, sustainable and more inclusive growth of 8 per cent. However, the actual average annual growth was 6.75 per cent during 2012–16. Inclusive growth means an equitable allocation of resources with benefits incurred to every section of the society. It results in lower incidence of poverty, improvement in health, education, employment, agriculture, etc. with particular attention to the SC/ST, OBC, women, children, minorities and other marginalized groups. India witnessed the adverse effects on agriculture, employment, education, poverty, inequality, etc. during 12th five year plan. Consequently, the growth was not inclusive. The share of agriculture in GDP declined more rapidly than employment. The per capita income inequalities were very high between agricultural and non-agricultural workers. The unemployment rate increased and the growth of employment was slowed down as compared to GDP. The literacy rate went up, but the male-female literacy gap was not reduced substantially.*

INTRODUCTION

India is the 7th largest economy of the world in terms of the size of GDP (US$ 2074 billion in 2015). The country is a lower middle income economy of the world with per capita income of US$ 1590 only in 2015. It accounted 17.8 per cent of the world population and 2.8 per cent of the world GDP during 2015 (World Bank, 2016). India adopted corporate-led model of economic development consisting of liberalization, privatization and globalization in July 1991. As a result, the economic growth rate increased appreciably. Overall annual average growth rate was 7.7 per cent in 10th five year plan (2002–2007) and 7.9 per cent during 11th five year plan (2007–12). Indian government approved 12th five year plan (2012–17) on 4 October 2012 with its aim to achieve faster, sustainable and more inclusive growth rate of 8 per cent. However, the country witnessed average annual growth of 6.75 per cent during the first four years of the 12th five year plan (2012–16).

Inclusive growth means an equitable allocation of resources with benefits incurred to every section of the society. It is broad-based, shared, and pro-poor growth. It reduces the growth rate of poverty and unemployment, and increases the involvement of all people into the growth process of the country, which is necessary for the sustainable development and equitable distribution of wealth and prosperity. Inclusive growth results in lower incidence of poverty, improvement in health, education, employment, agriculture, and basic amenities like water, electricity, roads, sanitation and housing with particular attention to the SC/ST, OBC, women, children, minorities and other marginalized groups. Planning Commission of India first started talking of "inclusive growth" as an objective while

[1]*Professor of Economics & Head, School of Social Sciences, Punjabi University, Patiala–147002*

formulating the 11th Five Year Plan (2007–12). This paper is an attempt to examine the implications of Inclusive Growth in India during 12th Five Year Plan (2012–17).

INEQUALITIES IN INDIA

Though India had made considerable progress during the post reform era (1991–2016), but the inequalities have increased substantially in the country. The Global Wealth Report 2016 (Credit Suisse, 2016) pointed out that the top 10 per cent Indians own 80.7 per cent of country's wealth, while the remaining 90 per cent shares only 19.3 per cent wealth. Further, the share of the top 1 per cent has increased in the total India's wealth from 40.3 per cent in 2010 and 58.4 per cent in 2016 -- higher than the global figure of about 50 per cent. Further, according to the Report on "Socio-Economic and Caste Census for Rural India", released on 3rd July 2015, 75 per cent of the rural households have less than Rs. 5000 as monthly income. For an average family size of five members, this amounts to less than Rs. 1000 per capita. Indian economic development process during economic reforms period is characterized by very large inter-sectoral inequalities. In fact, more money in the hands of poor promote development at higher rate than if it is put at the disposal of rich, and hence rejecting the 'trickle-down theory', propagated earlier by the World Bank.

STRUCTURAL INEQUALITES

The percentage of agricultural workers in the total workers in the country has come down from 58.2 per cent in 2001 to 54.6 per cent in 2011 (Verma: 2005, 2007; Census, 2011). Table 1 depicts the sectoral share in employment and Gross Value Added (GVA).

Table 1: Sectoral Share in Employment and GVA in India (at 2011–12 prices)

(Per cent)

Year	Share of Agriculture in		Share of Industry in		Share of Services in	
	Employment	GVA	Employment	GVA	Employment	GVA
2011–12	48.9	18.5	24.3 (12.6)	32.5	26.9	49.0
2015–16	n.a.	15.4	(10.7)	31.4	n.a.	53.2

Note: GVA=GDP-Taxes on Products including import duties + Subsidies on Products
Figure in ( ) is share in manufacturing.
Source: Central Statistical Office.2017: Key Economic Indicators, November

It can be seen from this table that the share of agriculture in GVA diminished from 18.5 per cent in 2011–12 to 15.4 per cent during 2015–16. But the share of agriculture in employment declined at a slow rate. It means the share of agriculture declined more rapidly in GDP than employment during the corporate led model of development in India. This happened because agricultural growth lagged behind the non-agricultural growth during post reforms period. The annual growth of agricultural sector was 1.6 per cent during 12th Plan (2012–16) against the target of 4 per cent. It went down to -0.2 per cent in 2014–15 and 0.8 per cent in 2015–16. A sharper decline in contribution of agriculture in GDP than in its share in

employment implies a decline in its relative productivity and increase in income differentials between agriculture and non-agricultural sectors. Thus, a continuance of heavy dependence of workers and population on agriculture as source of income and livelihood is a matter of concern from the viewpoints of poverty and inequality. As shown in Table 1, the share of services in GVA increased from 49 per cent in 2011–12 to 53.2 per cent in 2015–16. Hence, service sector progressed well during post reforms period. Meanwhile, the share of industrial sector in GVA declined from 32.5 per cent in 2011–12 to 31.4 per cent in 2015–16. The share of employment in manufacturing also declined from 12.6 per cent in 2011–12 to 10.7 per cent in 2015–16.

It is revealed from the above discussion that structural inequality between agriculture and non-agriculture sector increased during the 12th plan in India. While the growth of agriculture sector decelerated, the growth of services, followed by industry, accelerated well during this period. Hence, burden of population is still on agriculture sector due to lack of employment diversification. Farm incomes have been deliberately kept low. During 1970–2017, wheat procurement price per quintal increased from Rs. 76 to Rs. 1625 i.e. 21.4 times. However, an average salary of government employee has been increased by about 120 times during this period. 38 per cent of the rural households in India were landless doing casual labour. Further only 5 per cent of the rural households in India had salaried job in government.

HUMAN DEVELOPMENT INDEX

The Human Development Index (HDI) provides a composite measure of three dimensions of human development: living a long and healthy life, measured by life expectancy; knowledge or education, measured by expected years of schooling that a child of school entrance age can expect to receive, and Mean years of schooling by people ages 25; and a decent standard of living, measured by per capita Gross National Income GNI), using Purchasing Power Parity (PPP) rates. India got 130th rank in HDI in 2014 as compared to 134 in 2011, before the start of 12th five year plan. The country's value of HDI increased by 6.2 per cent from 0.547 to 0.609 during this period (Verma, 2002).

INTER-STATE INEQUALITIES

The per capita income inequality remains very high among different states in India during 12th Plan period. West Bengal's per capita income has increased enormously by 47.8 per cent. In 2011–12, the per capita income of Punjab was Rs. 85577 as compared to Haryana's Rs. 107343. But in 2015–16, the per capita income of Punjab was much lower Rs. 126063 than Haryana's Rs. 165204. During 2014–15, Punjab has been slipped down to the 10th rank after Haryana, Uttarakhand, Kerala, Tamil Nadu, Maharashtra, Gujarat, Telangana, Karnataka, and Himachal Pradesh among major states of India.

Table 2 shows the variations in per capita incomes of major states in India during 2011–15. While the growth of India's per capita income was 14.9 per cent during this period, but this growth in some states like West Bengal, Gujarat, Tamil Nadu, Bihar, Jharkhand, Uttarakhand, Himachal Pradesh, Kerala, Karnataka, Haryana, Andhra Pradesh and Telangana was more than that of India. However, this growth was less than India in case of Assam, J & K, U.P., Rajasthan, Odisha, M.P., Punjab, Chhattisgarh, and Maharashtra. Thus, there was no inclusive growth of per capita income in these nine major states in India during the 12th Plan period.

Table 2: Variations in Per Capita Income among Major States during 12th Five Year Plan in India

(Value in Rupee)

S. No.	States	2011–12 At Current Prices	2014–15 At 2011–12 Prices	Growth (%)	Variations from India
		I	II	III=(II*100/I)-100	IV=(III-14.86)*100/14.86
1	West Bengal	53383	78903	47.8	221.7
2	Gujarat	85814	108433	26.4	77.4
3	Tamil Nadu	93042	113817	22.3	50.3
4	Bihar	21918	26736	22.0	47.9
5	Jharkhand	41254	50071	21.4	43.8
6	Uttarakhand	101128	120759	19.4	30.6
7	Himachal Pradesh	87721	104717	19.4	30.4
8	Kerala	97912	115225	17.7	19.0
9	Karnataka	89717	105350	17.4	17.3
10	Haryana	107343	124092	15.6	5.0
11	Andhra Pradesh	68866	79441	15.4	3.3
12	Telangana	91664	105488	15.1	1.5
13	Maharashtra	98910	113379	14.6	-1.6
14	Chhattisgarh	55177	62394	13.1	-12.0
15	Punjab	85577	96638	12.9	-13.0
16	Madhya Pradesh	36658	41336	12.8	-14.1
17	Odisha	47019	52516	11.7	-21.3
18	Rajasthan	57427	64002	11.4	-23.0
19	Uttar Pradesh	31886	35072	10.0	-32.8
20	Jammu & Kashmir	51382	54289	5.7	-61.9
21	Assam	41154	42349	2.9	-80.5
	INDIA	**63460**	**72889**	**14.9**	0.0

Source: Central Statistical Organization, New Delhi & Economic & Statistical Organisation, Punjab, 2016

POVERTY

Poverty is the inability to get the minimum consumption requirements for life, health and efficiency. International poverty line is defined as per capita consumption expenditure of less than US$ 1.9 per day in October 2015. In India, an individual in rural area must get 2400 calories and in urban area 2100 calories per day. Thus, in 2011–12, required per capita per month expenditure was Rs. 816 in

rural area and Rs. 1000 in urban area. The new poverty line derived by the Expert Group (Rangarajan) in June 2014, works out monthly per capita consumption expenditure of Rs. 972 in rural areas and Rs. 1,407 in urban areas in 2011–12. Table 3 depicts absolute poverty in rural and urban India. During the 12th plan period, though poverty ratio has been reduced, but absolute urban poor have been increased. Further, variations in poverty ratio of different states shows inequalities in India. While poverty ratio was as high as 33.7% in Bihar during 2011–12, it was 7.1% in Kerala, 8.3% in Punjab, 5.1% in Goa, 32.6% in Odisha, 29.4% in UP and 32% in Assam.

The experience from BRICS countries indicates that a one percentage growth in agriculture is at least two to three times more effective in reducing poverty than the same growth emanating from non-agriculture sectors. Given that India is still home to the largest number of poor and malnourished people in the world, a higher priority to agriculture will achieve the goals of reducing poverty and malnutrition as well as of inclusive growth. (Verma, 2010, 2015)

Table 3: Number of Poor and Poverty Ratio in India

Year	Rural Poverty		Urban Poverty		Total Poverty	
	Nos (Mn)	Ratio	Nos (Mn)	Ratio	Nos (Mn)	Ratio
2011–12 (Tendulkar)	216.5	25.7	52.8	13.7	269.3	21.9
2011–12 ((Rangarajan)	260.5	30.9	102.5	26.4	363.0	29.5

Source: Govt. of India, Planning Commission.

HIGHER EDUCATION

India has the second largest higher education system in the world. It is one of the youngest nations in the world with more than 54 per cent of its total population below 25 years of age. The country had higher level of gender gap (8.2 percentage points) in youth literacy rate in 2011. At the end of 11th Plan in 2011–2012, India had total 642 universities, out of with 140 were private universities. However, in 2016, there were 785 universities in India, out of which 267 were private universities, 46 were central universities, 347 state universities, and 125 deemed universities. The country had 38056 colleges as on 31 March 2015 as compared to 34852 colleges in 2011–12 (Bawa, 2017). There were 14.2 lac teachers to teach 3.3 crore students in higher education in March 2015. Pupil-Teacher Ratio in regular mode was 21 only. The access to higher education is measured in terms of Gross Enrolment Ratio (GER), which is a ratio of persons enrolled in higher education institutions to total population of the persons in the age group of 18 to 23 years. India's GER in higher education increased from 20.8 per cent in 2011–12 to 24.3 per cent in 2014–15. However, this ratio of 2014–15 was quite low as compared to 94.3 per cent in USA, 76.1 per cent in Russia 61.9 per cent in Germany, etc. during 2012. The GER of Schedule Caste in India was 18.5 per cent only during 2014–15. The current target of India is to increase GER to 30 per cent by 2020–21.

The quality of education provided in a large number of higher education institutions is a matter of great concern. The National Assessment and Accreditation Council (NAAC) established in 1994 as a measure of quality assurance and to enhance standards of higher education. Of the 140 universities accredited by NAAC, only 32 per cent are rated as A grade. Among the 2,780 colleges accredited by the NAAC, only 9 per cent are rated as A grade. Hence 68 per cent of the universities and 91 per cent of the colleges are rated average or below average in terms of the quality. There has been mushroom growth of private colleges and universities, many of them of indifferent quality. There has been an enormous growth of private higher education institutions. The share of private sector in higher education institutions was more than 75 per cent. The motive of these institutions is to earn profit rather than improving standard of education. Majority of Indian Private Universities critically lack the element of research. Private higher educational institutions charge high fee from students and pay less to faculty. They mostly employ inexperienced contractual faculty. Exploitation of teachers is taking place with poor salary. The central and state governments jointly fund the spending on higher education. The grants to universities and affiliated colleges are not released in time. Accordingly, government run institutions face serious financial problems that often result in poor quality. Slow progress in the renewal of higher education curriculum and inadequate funding for research and development, further, deteriorate the quality of high education in India. Today, public education faces the challenges of standardized testing, budget constraints, teacher retention, explicit curriculum standards, and global workforce competition.

It is suggested that adequate public funding of education should be made by government to make education more inclusive, accessible and affordable. Funding for girls' hostels should be provided. Majority of the people cannot afford to pay the fee and funds for-profit-private service providers. This would result in further exclusion of rural students, particularly form the marginalized sections. That would have very serious socio-economic and political implications. New colleges should be opened in the rural areas where GER is quite low. If liberal establishment of private universities is permitted, it may be difficult to ensure maintenance of the standards, and it may defeat the very purpose of expansion of higher education. Corporates could be encouraged to start professional institutions, but it must be ensured that their entry do not lead to commercialization. Recruitment system of teachers in high education should be transparent. Appointment of the Vice Chancellor in the Universities should be on merit. Further, there should be autonomy in recruitment of teachers, finalization of teaching curriculum and fee fixation. Government should plan for capacity building in terms of development of faculty and physical infrastructure. Further, instead of opening new institutions, capacity building of the existing institutions should be encouraged.

CONCLUSION

India observed the adverse effects on agriculture, employment, education, poverty, inequality, etc. during 12th five year plan. Consequently, the growth was not inclusive, and a large section of the population was excluded from the benefits of development. The per capita income inequalities were very high between agricultural and non-agricultural workers and were increasing during this period. The growth in some states like Assam, J & K, U.P., Rajasthan, Odisha, M.P. and Punjab was less than that of India's average. The unemployment rate increased and the growth of employment was slowed down as compared to GDP. The literacy rate went up, but the male-female literacy gap was not reduced substantially. Inclusive growth is possible, if the corporate sector shares its prosperity with those who were harmed by the development process. The government should create non-farm employment opportunites by promoting rural education. Equal distribution of resources is must for all states in India. Further structural inequalities should be solved. More revenue should be generated from Direct Taxes instead of Indirect Taxes. More dependence on indirect taxes pushes significant proportion of population into poverty because of higher consumption expenditure of the poor. The government should increase its expenditure on health and education. Though number of private higher educational institutions has increased during 12th Plan, but it should be ensured that their entry do not lead to commercialization by putting regulatory checks on these institutions.

Corporate Social Responsibility (CSR) makes a positive contribution to the underprivileged communities by supporting a wide range of socio-economic, educational and health initiatives. The Companies Act, 2013 enforced from 1st April 2014 for the first time made a legal provision for a mandatory 2 per cent CSR contribution by the companies out of their net profit after tax during the previous year. The effective implementation of CSR activities like promotion of education, eradication of poverty, health care, environment sustainability, etc. can make weaker section as partners in the development process.

REFERENCES

[1] Agarwal, P. (2006), "Higher Education in India: The Need for Change", *Working Paper No 180, Indian Council for Research on International Economic Relations.*

[2] Bawa, R.S. (2017), "Higher Education in India Since Independence: Performance and Perspectives", University News, Association of India Universities, Vol. 55, No. 05, January 30-February 05.

[3] Bhalla, G.S. (2008), "Globalization and Employment Trends in India", *The Indian Journal of Labour Economics*, Vol. 51, No. 1, Jan-March.

[4] Bhattacharya, B.B. and Sakthivel, S. (2005), "Growing APART: Growth, Employment and Wage Inequality in the 1980s and 1990s", *Seminar Paper*, IEA, ISID & IHD.

[5] Credit Suisse Research Institute (2016), *The Global Wealth Report 2016*, 22 November.

[6] Government of India (2013), *Economic Survey 2012–13*, Ministry of Finance.
(2017), *Economic Survey 2015–16*, Ministry of Finance.

[7] Government of India (2012), *Report on Employment and Unemployment Survey.*
2011-12, Ministry of Labour and Employment.

[8] Government of India (2017), Second Advance Estimates of National Income (2016-17) and Quarterly Estimates of GDP for the Third Quarter(CB)
[9] Government of India (2012), *Quarterly Report on Changes in Employment in Selected Sectors*, Ministry of Labour and Employment, Labour Bureau, Chandigarh.
[10] Government of India (2010), *Annual Report to the People on Employment*, Ministry of Labour and Employment.
[11] Government of India (various years) *Selected Educational Statistics*, Ministry of Human Resource Development, New Delhi.
[12] ILO (2012), *Global Employment Trends 2012: Preventing a Deeper Job Crisis*, Geneva.
[13] Knowledge Commission (2006), *Highlights of Recommendations*, Govt. of India.
[14] Kurien, N.J., (2000), "Widening Regional Disparities in India: Some Indicators", *Economic & Political Weekly*, Vol. 35, pp, 538–50.
[15] Mahendra Dev, S. and Venkatanarayana, M. (2011), *Youth Employment and Unemployment in India*, Indira Gandhi Institute of Development Research (IGIDR), Mumbai, April.
[16] NSSO (2011), *Key Indicators of Employment and Unemployment in India 2009–10*, 66 Round.
[17] Papola, T.S. and Sahu, Partha Pratim (2012), "Growth and Structure of Employment in India: Long Term and Post Reform Performance and the Emerging Challenge", *ICSSR*, March.
[18] Stiglitz, J.E. (2002), *Globalization and its Discontents*, Norton and Company, New York.
[19] Tilak, Jandhyala, B.G. (2007),'Knowledge Commission and Higher Education", *Economic & Political Weekly*, Vol. XLII, No. 8, February 24.
[20] Verma, NMP (2005), 'Structural Rigidities in Rural unemployment', Indian Journal of Applied Economics, Vol 2, No. 1.
[21] Verma, NMP (2007), 'Employment and Income Disparities among Social Group in Jagdishpur U.P.', Manpower Journal.
[22] Verma, NMP (2010), 'Correlates of Poverty and Malnutrition: A Study of Indian Women and Children', International Journal of Economics and Business Modeling, Vol. 1, No. 2.
[23] Verma, NMP (2002), 'Human Development: Concepts and International Standards' in a book edited by Ruddar Datt Human Development and Economic Development, Deep & Deep Publications Private Ltd., New Delhi.
[24] Verma, NMP (2015), 'Global Growth and Persistence of Poverty: Some Analytical Arguments', in Globalization and Environment, edited by Manis K Verma, Rawat, Jaipur.
[25] University Grants Commission (UGC) (various years), *Annual Reports*, UGC, New Delhi.
[26] World Bank, (2016), *World Development Indicators*.

Forecasting Production and Area of Potato Cultivation in India using ARIMA Model

Gagan Kumar[1]

Abstract—*Potato is an important food crop in India. Being an important part of our vegetables, its production is important and it is also a cash crop for the farmers. In the present study an effort is made to forecast production and area of cultivation of potato using a model based on ARIMA model using univariate time series data. The ARIMA model has been developed to forecast the production and area under cultivation of this crop using the data from 1980 to 2015. The study reveals that ARIMA (1,1,2) for production and ARIMA (2,1,3) for area are the best possible models for forecasting in case of potato in India. The prediction shows that both production and area under cultivation of potato would increase during the forthcoming years.*

Keywords: *Autoregressive, Auto-correlation Function, Partial Auto-correlation Function, Stationary*

INTRODUCTION

Potato (Solanum Tuberosum) is a cool-season vegetable that ranks with wheat, rice and maize as one of the most important staple crops in the human diet around the world. The Portuguese introduced potatoes to India in early seventeenth century when they cultivated it along the western coast. British traders introduced potatoes to Bengal as a root crop. By the end of the 18th century, it was cultivated across northern hill areas of India. More than 80% of the potato crop is raised in the winter season (Rabi) under assured irrigation during short winter days from October to March. According to potato maps of India-the major states growing potatoes are U.P., West Bengal, Bihar and Gujarat. About 8% area lies in the hills during long summer days from April to October. Rainy season (kharif) potato production is taken in Karnataka, Maharashtra, H.P., J & K and Uttarakhand mainly. Plateau regions of South-eastern, central and peninsular India, constitute about 6 per cent area where potatoes are grown as a rain fed crop during rainy season (July to October).

India is the second largest producer of potato after China (FAOSTAT, July, 2015) in the world. It produced 48 million tonnes in 2015 whereas it produced just 1.54 million tonnes in 1950. As far as area under its cultivation is concerned, it increased from 0.23 million hectares in 1950 to 2.08 million hectares in 2015. (NHRDF,2016) Thus, the increase in production as well as area is phenomenal since 1950. Potato has become one of the most important food crops after wheat, rice, maize etc

[1]*Associate Professor & HoD, Department of Economics, S L K College, Sitamarhi*
(A Constituent Unit of B R A Bihar University, Muzaffarpur)
E-mail: gaganks_slk@yahoo.in

contributing to food and nutritional security in India and the world. It was only because of indigenously developed technologies that potato in India has shown spectacular growth in area, production and productivity during the last six decades (Verma: 2015, 2016). In this paper an effort is made to forecast production and area of cultivation for the five leading years. The model developed for forecasting is an Autoregressive Integrated Moving Average (ARIMA) model. This model was introduced by Box and Jenkins in 1960 and hence this model is also known as Box-Jenkins Model which is used to predict a single variable. The main reason for choosing this model in this study for forecasting production as well as area separately is due to the fact that this model assumes and takes into account the non-zero autocorrelation between the successive values of the time series data.

LITERARY REVIEW

Raymond Y.C. Tse (1997) suggested for the following two questions must be answered to identify the data series in a time series analysis (1) whether the data are random and (2) have any trends? This is followed by another three steps of model identification, parameter estimation and testing for model validity.

If a series is random the correlation between the successive values in a time series is close to zero. If the observations of time series are statistically dependent on each other, then the ARIMA is appropriate for the time series analysis.

Meyer *et al.* (1998) drew a framework for ARIMA time series models for forecasting Irish inflation. In their research, they emphasized heavily on optimising forecast performance while focussing more on minimising out of sample forecast errors, rather than on optimising in-sample goodness of fit.

Stergion (1989) in his research used ARIMA model technique on a 17 years time series data (from 1964 to1980 and 204 observations) of monthly catches of pilchard from Greek waters for forecasting up to 12 months ahead and forecasts were compared with actual data for 1981 which was not used in the estimation of the parameters. The research found mean error as 14% suggesting that ARIMA procedure was capable of forecasting the complex dynamics of the Greek pilchard fishery which, otherwise was difficult to predict because of the year to year changes in oceanographic and biological conditions.

Contreras *et al.* (2003) in their study, using ARIMA methodology, provided a method to predict next day electricity prices both for spot markets and long term contracts for mainland Spain and Galifornian markets.

The ARIMA approach in modelling time series with trend is to filter and then fit a stationary model of the class. Recent relevant references also include Diebold (2001), Patterson (2000) and Gujarati (2003).

In fact, a plethora of research studies is available to justify that a careful and precise selection of ARIMA model can be fitted to the time series data of single variable (with any kind of pattern in the series and with autocorrelations between the successive values in the time series) to forecast with better accuracy, the future values in the series. This study is also an attempt to predict the future production values of potato in India by fitting ARIMA technique on the time series data of past years.

CURRENT SCENARIO

During 2016, the price of different varieties of potato has almost doubled. This is partly due to the heavy rains that damaged the crops in the states of Bihar, Jharkhand, Odisha and Assam, and consequent increase in demand, which is being met from the old stock. "A sudden demand from these states has pushed up prices. Moreover, rains have destroyed crops in South India too". (Varma, 2016)

The objective of this study is to develop appropriate ARIMA models for the time series of potato area and production in India and to make at least five year forecasts with appropriate prediction interval.

Table 1: Production of Potato, Area under Cultivation, Yield/ Hectare and Seed Production in India during 1980 and 2015

Year	Production (Million Tonnes)	Area (Lakh Hectare)	Yield (Tonnes per Hectare)	Seed (Million Tonnes)
1980	8.3266	6.852	12.1521	1.1712
1990	14.7708	9.4	15.7136	1.4968
2015	48	20.8	----------	----------

Source: Compiled from website: www.potatopro.com/india/potato-statistics and The Economic Times dated June 17, 2016.

METHODOLOGY

The Auto Regressive Integrated Moving Average (ARIMA) model is a generalization of an Autoregressive Moving Average (ARMA) model. These models are fitted to time series data either for better understanding the data or to predict future points in the series. The existing study applies Box-Jenkins (1970) forecasting model popularly known as ARIMA. The ARIMA is an extrapolation method, which requires historical time series data of underlying variable, ARIMA model is commonly used in macro level data analysis. The annual data on potato cultivated area and production for the period from 1980–81 to 2015–16 were used for forecasting the future values using Auto Regressive Integrated Moving Average (ARIMA) models. The ARIMA methodology is also called as Box-Jenkins methodology (Box and Jenkins 1976). The Box-Jenkins procedure is concerned with fitting a mixed ARIMA model to a given set of data. The main objective in fitting ARIMA model is to identify the stochastic process of the time series and predict the future values accurately. These methods

have also been useful in many types of situations which involve the building of models for discrete time series and dynamic systems. However, this method is not good for lead times or for seasonal series with a large random component (Granger and Newbold 1970). Originally ARIMA models were studied extensively by George Box and Gwilym Jenkins during 1968 and their names have frequently been used synonymously with general ARIMA process applied to time series analysis, forecasting and control. However, the optimal forecast of future values of a time series are determined by the stochastic model for that series. A stochastic process is either stationary or non-stationary. The first thing to note is that most time series are non-stationary and the ARIMA models refer only to a stationary time series. Since the ARIMA models refer only to a stationary time series, the first stage of Box-Jenkins model is for reducing non-stationary series to a stationary series by taking first order differences. The model in specific and general form may be expressed as follows, let Yt is a discrete time series variable which takes many values over a period of time. The corresponding AR(p) model of Yt series, which is a generalisation of autoregressive model can be expressed as:

$$AR(p): Y_t = \Phi_0 + \Phi_1 Y_{t-1} + \Phi_2 Y_{t-2} + \ldots\ldots\ldots + \Phi_p Y_{t-p} + \varepsilon_t. \quad (1)$$

Where Yt is the response variable at time t. Y_{t-1}, Y_{t-2}, Y_{t-3}.....are the respective variables at different time lags. Φ_0, Φ_1,, Φ_2,.....Φ_p are the coefficients and ε_t is the error term. Similarly the MA(q) model which is again the generalisation of moving average model may be specified as:

$$MA(q): Yt = \mu_t + \varepsilon_t + \delta_1 \varepsilon_{t-1} + \ldots\ldots\ldots + \delta_p \varepsilon_{t-q} + \upsilon_t \quad (2)$$

Where μt is the constant mean of the series, εt, εt-1, εt-2, εt-q are the error terms of different lags, δ1, δ2, δ3,.....δp are the coefficients of the error term. On combining both these models we get the ARIMA model which may be represented as follows:

$$Yt = \Phi_0 + \Phi_1 Y_{t-1} + \Phi_2 Y_{t-2} + \ldots\ldots\ldots + \Phi_p Y_{t-p} + \varepsilon_t + \delta_1 \varepsilon_{t-1} + \ldots\ldots\ldots + \delta_p \varepsilon_{t-q} + \upsilon_t \quad (3)$$

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

The main stages in setting up a Box- Jenkins forecasting model are as follows:

1. Identification
2. Estimating the parameters
3. Diagnostic checking
4. Forecasting

RESULTS AND DISCUSSION

In the present study the data for cultivated area and production of potato for the period 1980–81 to 2015–16 were used following the above mentioned stages of ARIMA model with the help of Gretl software.. The data have been obtained from the website- www.potatopro.com/india/potato-statistics *and The Economic Times dated June 17, 2016.* on Indian economy.

MODEL IDENTIFICATION

For forecasting potato area and production, ARIMA model was estimated only after transforming the variable under forecasting into a stationary series. The stationary series is the one whose values vary over time only around a constant mean and a constant variance. There are several ways to ascertain this. The most common method is to check stationarity through examining the graph or time plot of the data. Non-stationarity in mean is corrected through appropriate differencing of the data. In this case difference of order 1 was found to be sufficient enough in order to achieve stationarity in mean.

The newly constructed variable Y_t can now be examined for stationarity. The graph of Y_t was stationary in mean. (Fig. 2) The next step was to identify the values of of p and q. For this the autocorrelation and partial auto correlation coefficients of various orders of Y_t were computed (Table 3). The Auto Correlation Function (ACF) and (PACF) show that the order of p and q must be 1 and 2 respectively for production. Mixed models are also favoured by the fact that the sum of any two mutually independent autoregressive process gives rise to an ARMA process. Several tentative ARIMA models were tested and the models which had minimum AIC (Akaike Information Criterion), SBC (Schwartz Bayesian Criterion) and Hannan Quinn Criterion were chosen with preference for AIC criterion minimum values in

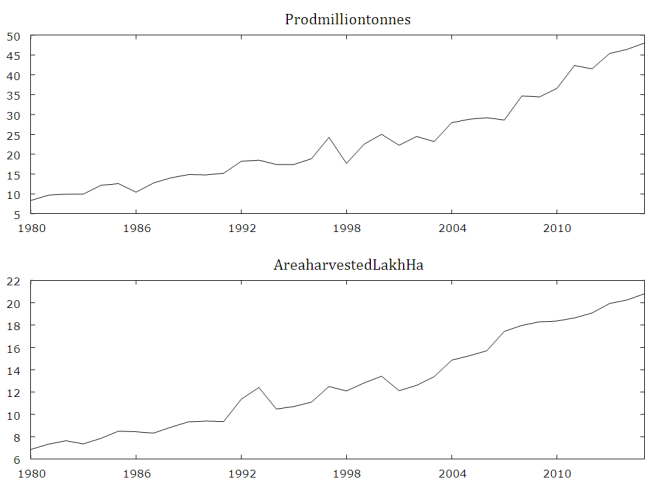


Fig. 1: Time Plot of Data on Production and Area in Level

Both production and area plots exhibit increasing trend over time and the two series are not stationary in level. For transforming the data into stationary, differencing is needed. The following Fig. 2 shows the stationarity with first differencing with mean and variance not changing with time. The following time plot displays the differenced data which indicated stationarity for both production and area case of conflict. The models and their corresponding AIC, SBC and Hannan Quinn Criterion are as in Table 2:

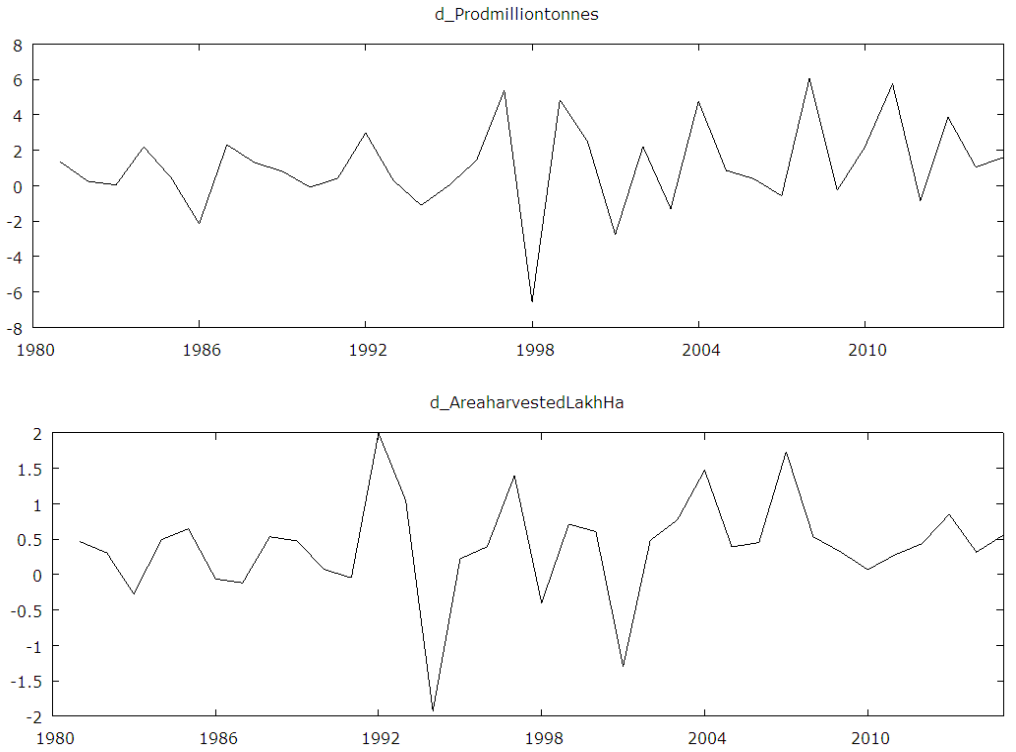


Fig. 2: Time Plot of First Differenced Data on Production and Area

As reported above the model selection criterion are AIC, SBC or BIC and Hannan Quinn Criterion. In brief, each criterion is a sum of two terms, one that characterizes the number of freely estimated parameters in the model which increases with increasing model order. By minimising both the terms, we seek to identify a model that is both parsimonious and while also accurately modelling the data. Under small sample conditions, AIC may outperform SBC or HQ in selecting the true model order.(Lutkepohl, 2006) The most suitable model was found to be ARIMA (2,1,3) for potato area and ARIMA (1,1,2) for potato production which had lowest AIC, SBC and Hannan Quinn Criterion values. The model selection has been done on the basis of lowest AIC values in case of conflict. The reason for preference to lowest AIC values

lies in the fact that it is asymptotically optimal in selecting the model with least mean squared error, under the assumption that the exact "true" model is not in the candidate set (as is usually the case in practice), BIC is not asymptotically optimal under the assumption. Yang (2005) shows that the rate at which AIC converges to the optimum is, in a certain sense, the best possible. For area the Hannan Quinn criterion value is second lowest whereas the SBC Value is high. So, a compromise has been done. For production, both AIC and SBC values are the lowest but the Hannan Quinn Criterion value is second lowest.

Table 2: Model Identification

Variable	ARIMA(p,d,q)	AIC	SBC	Hannan-Quinn
Potato Prod	0,1,1	160.821	165.487	162.432
	1,1,0	161.535	166.202	163.146
	1,1,1	161.838	168.059	163.985
	1,1,2	**155.319**	**163.095**	**158.003**
	2,1,0	160.362	166.584	162.510
	2,1,1	162.230	170.006	164.914
	2,1,2	166.841	166.841	160.730
	2,1,3	156.101	166.988	159.859
	3,1,3	160.164	172.607	164.459
Potato Area	0,1,1	81.182	85.848	82.793
	1,1,0	81.660	86.326	83.270
	1,1,1	81.145	87.366	83.292
	1,1,2	80.504	88.281	83.189
	2,1,0	78.933	85.155	81.080
	2,1,1	80.627	83.312	88.404
	2,1,2	82.804	91.936	85.825
	2,1,3	**78.454**	**89.341**	**82.212**
	3,1,3	80.439	90.881	84.734

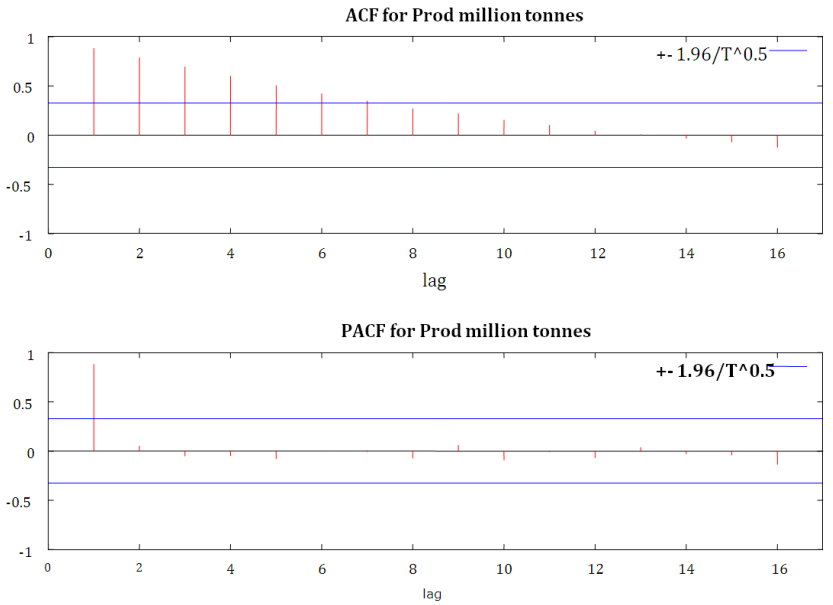
MODEL ESTIMATION AND VERIFICATION

Potato production area and production model parameters were estimated using Gretl software. Results of estimation of ACF and PACF are reported in Table 3 and estimates of fitted ARIMA model in Table 4. The model verification is concerned with checking the residual of the model to see if they contain any systematic pattern which still can be removed to improve on the chosen ARIMA. This was done through examining the autocorrelations and partial correlations of the residuals of various orders. The ACF and PACF of the residual also indicate good fit of the model.

In the following plot for ACF and PACF for production, we see that the decay in ACF is geometric but the PACF is significant only in first lag, which indicated an AR process of order 1.

Table 3: Auto-correlations and Partial Auto-correlations of Potato Production and Area

Production				Area			
Autocorrelation Function for Prod (Million Tonnes)				Autocorrelation Function for Area (Lakh Ha)			
Lag	**ACF**	**PACF**	**Q-stat. [p-value]**	**Lag**	**ACF**	**PACF**	**Q-stat. [p-value]**
1.	0.8810 ***	0.8810 ***	30.3334 [0.000]	1.	0.9045 ***	0.9045 ***	31.9738 [0.000]
2.	0.7877 ***	0.0517	55.2954 [0.000]	2.	0.8141 ***	-0.0218	58.6380 [0.000]
3.	0.6926 ***	-0.0491	75.1808 [0.000]	3.	0.7323 ***	-0.0018	80.8678 [0.000]
4.	0.5995 ***	-0.0479	90.5430 [0.000]	4.	0.6513 ***	-0.0408	99.0012 [0.000]
5.	0.5018 ***	-0.0772	101.6535 [0.000]	5.	0.5673 ***	-0.0633	113.2035 [0.000]
6.	0.4199 **	0.0026	109.6923 [0.000]	6.	0.4859 ***	-0.0394	123.9705 [0.000]
7.	0.3467 **	-0.0060	115.3612 [0.000]	7.	0.4064 **	-0.0452	131.7610 [0.000]
8.	0.2681	-0.0719	118.8728 [0.000]	8.	0.3114 *	-0.1410	136.4991 [0.000]
9.	0.2172	0.0597	121.2628 [0.000]	9.	0.2181	-0.0656	138.9096 [0.000]
10.	0.1521	-0.0915	122.4800 [0.000]	10.	0.1529	0.0757	140.1392 [0.000]
11.	0.0999	-0.0083	123.0263 [0.000]	11.	0.0902	-0.0381	140.5840 [0.000]
12.	0.0408	-0.0688	123.1212 [0.000]	12.	0.0202	-0.0876	140.6072 [0.000]
13.	0.0053	0.0378	123.1229 [0.000]	13.	-0.0193	0.1060	140.6294 [0.000]
14.	-0.0333	-0.0289	123.1917 [0.000]	14.	-0.0359	0.0837	140.7093 [0.000]
15.	-0.0699	-0.0404	123.5098 [0.000]	15.	-0.0689	-0.1086	141.0189 [0.000]
16.	-0.1246	-0.1350	124.5723 [0.000]	16.	-0.1270	-0.1880	142.1214 [0.000]



ACF and PACF for Production (Million Tonnes)

The ACF in the following figure has a decay which is geometric and the PACF has spike at first lag which indicates that AR process should also be of order one in case of area too. But this is only an indication. The actual identification the AIC, BIC or Hannan Quinn Criterions must be considered.

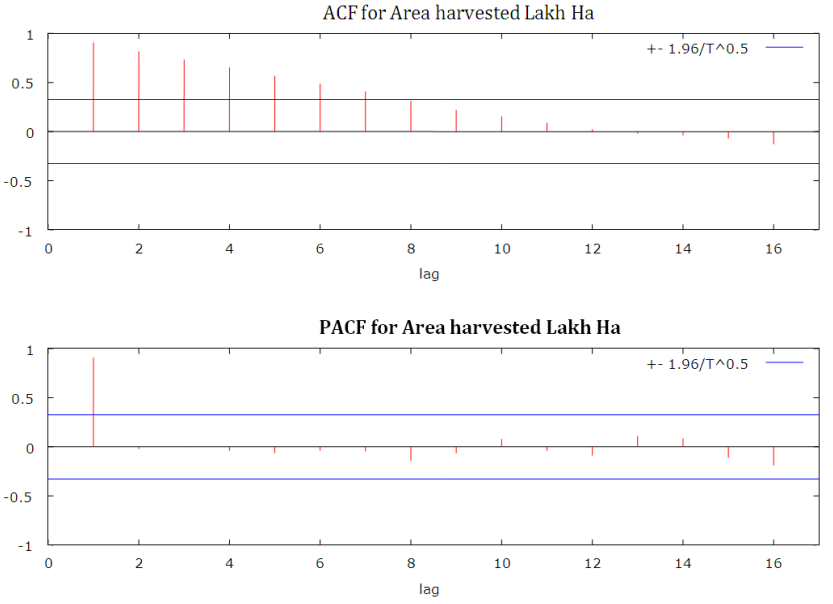


Fig. 3: ACF and PACF for Area under Cultivation in Lakh Hectares

Table 4: Estimates of Fitted ARIMA Model for Potato Area and Production

Function evaluations: 60 Evaluations of gradient: 25 Model 1: ARIMA, using observations 1981-2015 (T = 35) Estimated using Kalman filter (exact ML) Dependent variable: (1-L) Prodmilliontonnes Standard errors based on Hessian					Function evaluations: 64 Evaluations of gradient: 23 Model 2: ARIMA, using observations 1981-2015 (T = 35) Estimated using Kalman filter (exact ML) Dependent variable: (1-L) AreaharvestedLakhHa Standard errors based on Hessian				
Parameter	Coefficient	Std.error	Z	p-value	Parameter	Coefficient	Std.error	Z	p-value
Const.	1.12653	0.325948	3.456	0.0005 ***	Const.	0.397816	0.0705017	5.643	1.67e-08 ***
phi_1	0.620193	0.179246	3.460	0.0005 ***	phi_1	−0.427596	0.122646	−3.486	0.0005 ***
					phi_2	−0.769819	0.150861	−5.103	3.35e-07 ***
theta_1	−1.43230	0.136838	−10.47	1.22e-025 ***	theta_1	0.394311	0.203854	1.934	0.0531 *
theta_2	0.847022	0.174708	4.848	1.25e-06 ***	theta_2	0.621306	0.268048	2.318	0.0205 **
					theta_3	−0.449036	0.222839	−2.015	0.0439 **
Mean dependent var 1.133526 S.D. dependent var 2.547236 Mean of innovations 0.036457 S.D. of innovations 1.867377 Log-likelihood −72.65930 Akaike criterion 155.3186 Schwarz criterion 163.0954 Hannan-Quinn 158.0031					Mean dependent var 0.398514 S.D. dependent var 0.725585 Mean of innovations −0.005375 S.D. of innovations 0.572945 Log-likelihood −32.22678 Akaike criterion 78.45356 Schwarz criterion 89.34100 Hannan-Quinn 82.21191				
Real Imaginary Modulus Frequency --- AR Root 1 1.6124 0.0000 1.6124 0.0000 MA Root 1 0.8455 -0.6825 1.0866 -0.1081 Root 2 0.8455 0.6825 1.0866 0.1081 ---					Real Imaginary Modulus Frequency --- AR Root 1 -0.2777 -1.1054 1.1397 -0.2892 Root 2 -0.2777 1.1054 1.1397 0.2892 MA Root 1 -0.4217 -0.9067 1.0000 -0.3193 Root 2 -0.4217 0.9067 1.0000 0.3193 Root 3 2.2270 0.0000 2.2270 0.0000 ---				

Table 5: Residual ACF and PACF-Production and Area

Production	Area
Residual autocorrelation function	Residual autocorrelation function
LAG ACF PACF Q-stat. [p-value]	LAG ACF PACF Q-stat. [p-value]
1 0.0122 0.0122 0.0057 [0.940]	1 0.0022 0.0022 0.0002 [0.989]
2 -0.1016 -0.1018 0.4108 [0.814]	2 -0.0265 -0.0265 0.0277 [0.986]
3 0.1053 0.1091 0.8596 [0.835]	3 0.0121 0.0122 0.0336 [0.998]
4 0.0259 0.0118 0.8876 [0.926]	4 -0.1087 -0.1095 0.5271 [0.971]
5 0.0631 0.0861 1.0596 [0.958]	5 0.0844 0.0869 0.8348 [0.975]
6 -0.2141 -0.2319 3.1064 [0.795]	6 -0.1242 -0.1347 1.5237 [0.958]
7 0.0565 0.0899 3.2542 [0.861]	7 0.2569 0.2804 * 4.5755 [0.712]
8 0.2189 0.1604 5.5535 [0.697]	8 -0.0586 -0.1197 4.7401 [0.785]
9 0.0763 0.1426 5.8437 [0.755]	9 -0.1321 -0.0731 5.6090 [0.778]
10 -0.3270 * -0.3687 ** 11.3826 [0.328]	10 0.0023 -0.0561 5.6093 [0.847]
11 0.0491 0.1126 11.5129 [0.401]	11 -0.0372 0.0548 5.6841 [0.894]
12 0.1963 0.0774 13.6814 [0.322]	12 0.0565 -0.0303 5.8640 [0.923]
13 -0.0878 0.0206 14.1347 [0.364]	13 -0.0735 -0.0113 6.1819 [0.939]
14 -0.0911 -0.1080 14.6467 [0.403]	14 -0.0177 -0.1059 6.2011 [0.961]
15 -0.0891 -0.0479 15.1612 [0.440]	15 0.1229 0.1741 7.1788 [0.952]
16 0.0534 -0.1534 15.3557 [0.499]	16 0.0487 0.0800 7.3402 [0.966]

Table 6: Forecast Evaluation Statistics

Item	Mean Error	MSE	RMSE	MAE	MPE	MAPE	Theil's U
Production	0.036457	3.5726	1.8901	1.5118	-1.5292	7.2828	0.73334
Area	-0.0053746	0.36243	0.60202	0.41932	-0.60349	3.5312	0.73696

MSE-Mean Square Error, RMSE-Root Mean Square Error, MAE-Mean Absolute Error, MPE- Maximum Percentage Error, MAPE- Maximum Absolute Percentage Error

Note: The above values of Mean error, MSE etc are the minimum values.

FORECASTING WITH ARIMA MODEL

An ARIMA model is used to produce the best weighted average forecasts for a single time series (Rahulamin and Razzaque 2000). The accuracy of forecasts for both ex-ante and ex-post were tested using the tests such as Mean Square Error (MSE) and Mean Absolute Percentage Error (MAPE) (Markidakis and Hibbon 1979). ARIMA models are developed basically to forecast the corresponding variable. To judge the forecasting ability of the fitted ARIMA model important measures of the sample period forecasts accuracy was computed. The MAPE for potato cultivated area turned out to be 3.5312 and potato production turned to be 7.2828. Theil's U statistic is a relative accuracy measure that compares the forecasted results with the results of forecasting with minimal historical data. It also squares the deviations to give more weight to large errors and to exaggerate errors, which can help eliminate methods with large errors Theil's U statistic less than 1 indicates that forecasting technique is better than guessing.(Table 6) This measure indicates that forecasting inaccuracy is low. The forecasts for potato area and production during 2016 and 2020 showing increasing trend are given in the Table 7.

Table 7: Forecasting with Appropriate Intervals

For 95% Confidence Intervals, z(0.025) = 1.96 Production*				For 95% Confidence Intervals, z(0.025) = 1.96 Area*			
Year	Prediction	Std. Error	95 % Interval	Year	Prediction	Std. Error	95 % Interval
2016	50.6754	1.8674	47.0154 - 54.3354	2016	21.150	0.5729	20.027 - 22.273
2017	51.7265	1.9001	48.0024 - 55.4505	2017	21.616	0.7969	20.027 - 22.273
2018	52.8062	2.1434	48.6051 - 57.0073	2018	21.897	0.9287	20.077 - 23.717
2019	53.9037	2.5545	48.8969 - 58.9105	2019	22.292	0.9664	20.398 - 24.186
2020	55.0122	3.0337	49.0664 - 60.9581	2020	22.781	1.0522	20.719 - 24.843

*Production measured in million tonnes and area in lakh hectares

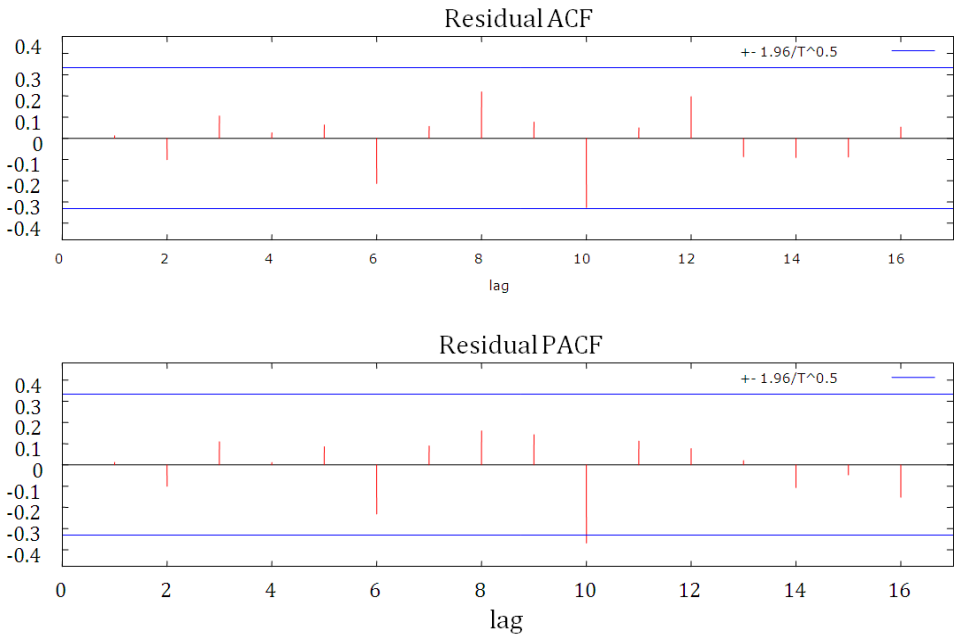


Fig. 4: Residual ACF and PACF for Differenced Data on Production

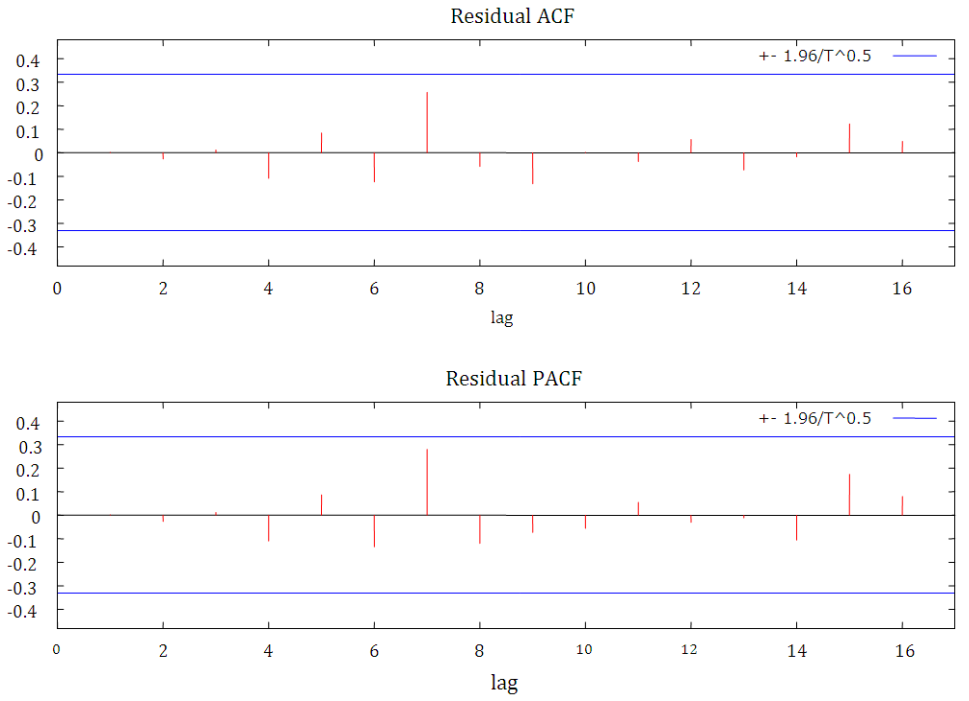


Fig. 5: Residual ACF and PACF for Differenced Data on Area

LIMITATIONS

The major limitation of this technique of forecasting is that it does not take into account other factors. But this technique is quite popular for prediction of farm related output.

CONCLUSION

In this study ARIMA (2,1,3) for potato area and ARIMA (1,1,2) for potato production were developed for prediction. From the forecasts available by using the developed model, it can be seen that forecasted potato cultivated areas and production were to increase in the coming years. Potato is an important constituent of our vegetable basket and recent price rise would induce more and more farmers for cultivating this cash crop and in all probability its production would rise. The analysis and subsequent forecasting on the basis of the univariate time series data on area of cultivation, also reveals that the area is going to increase. Production is directly related to area of cultivation. If area increases, production would also increase. Going by the past trend, this forecasting technique may be used for other commodities too. The policy imperatives involved are that the government should provide more irrigation facilities, crop insurance, ensure bank credit, disseminate modern cultivating techniques through internet, social media, krishi vigyan kendras etc, expand storage capacity and ensure availability of seeds in order to increase the production.

REFERENCES

[1] Box, G.E.P. and Jenkin, G.M. (1976), *Time Series of Analysis: Forecasting and Control*, Sam Franscico, Holden Day, California, USA.

[2] Contreras, J. (2003), "ARIMA Models to Predict Next-day Electricity Prices", *IEEE Transactions on Power Systems*, Vol. 18, No. 3, August 2003, pp. 1014–1020.

[3] Diebold, F.X. (2001), *Elements of Forecasting*, South-Western Publishers, USA.

[4] *The Economic Times*, Dated 28 March, 2016.

[5] FAOSTAT (Retrieval date July 3, 2015), 25 Top Potato Producing Countries of the World.

[6] Granger, C.W.J. and Newbold, P. (1970), "Spectral Methods", *Econometrica*, Vol. 30, pp. 424–438.

[7] Gujarati, D.N. (2003), *Basic Econometrics*, 4th ed, McGraw Hill, New York, USA.

[8] https://en.wikipedia.org/wiki/Potato

[9] Simpson, J. and Weiner, E., eds. (1989), "potato, n". *Oxford English Dictionary* (2nd ed.). Oxford: Clarendon Press. ISBN 0-19-861186-2.

[10] Lutkepohl, H. (2006), *New Introduction to Multiple Time Series Analysis*, Springer-Verlag, New York.

[11] Makridakis, S. and Hibbon, M. (1979), "Accuracy of Forecasting: An Empirical Investigation", *Journal of Royal Statistical Society* A, Vol. 41(2), pp. 97–145.

[12] Meyer *et al.* (1998), *Forecasting Irish Inflation using ARIMA Models*, Central Bank of Ireland, Technical Paper 3/RT/98.(December) pp.85-102.

[13] NHRDF (Data, 2016)

[14] Patterson, K. (2000), *An Introduction to Applied Econometrics: A Time Series Approach*, St.Martin's Press, USA.

[15] Rahulamin, M.D. and Razzaque, M.A. (2000), "Autoregressive Integrated Moving Average Modeling for Monthly Potato Prices in Bangladesh", *Journal of Financial Management and Analysis*, Vol. 13(1), pp. 74–80.

[16] Raymend, Y.C. Tse (1997), "An Application of the ARIMA Model to Real Estate Prices in Hong Kong", *Journal of Property Finance*, Vol. 8, No. 2, pp. 152–163.

[17] Stergion, K.I. (1989), "Modelling and Forecasting Fishery for Pilchard (Sardinapilchardus) in Greek Waters using ARIMA Time-series Models", *IEEE Journal of Marine Science*, Vol. 46, No. 1. pp. 16–23.
[18] Varma, Subodh (2016), "Tripple Whammy as Dal, Tomato and Potato Prices Surge Together", *Economic Times*, June 17, 2016
[19] Verma, NMP (2015), "Global Growth and Persistence of Poverty: Some Analytical Arguments", in Globalization and Environment, edited by Manis K Verma, Rawat, Jaipur.
[20] Verma, NMP (2016), "Innovation-Inclusion Interface in Agriculture: Empirical Evidences from Indian Irrigation, Bridging the Science–Policy Gap for Inclusive Growth in India", Pages 1–11, Edited by: Ranbeer Chander Sobti and Venkatesh Dutta, Narendra Publication.
[21] Weatherford, J. McIver (1988), *Indian Givers: How the Indians of the Americas Transformed the World,* New York: Fawcett Columbine. p. 69. ISBN 0-449-90496-2.
[22] website: www.potatopro.com/india/potato-statistics and The Economic Times dated June 17, 2016.
[23] Website: http://www.mapsofindia.com/top-ten/india-crops/potato.html
[24] Yang, Y. (2005), "Can the Strengths of AIC and BIC be Shared? A Conflict between Model Identification and Regression Estimation", *Biometrika*, Vol. 92, pp. 937–950.

Challenge in Implementation of Rights Based Policy: A Critical Evaluation of Role of PRIs in MGNREGA Implementation in Uttar Pradesh

Preety Choudhari[1]

Abstract—*The uniqueness of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) lies primarily in ensuring the accountability framework in form of legally enforceable provisions for implementing agencies and the Act itself attaches great importance to PRIs by stipulating a mandatory provision of minimum fifty percent of the funds to be utilised only through gram panchayat. Thus, the gram panchayat has a key role in implementation of the Act, however, it has been found from the field level experience that the weak institutional capability of gram panchayats and lack of supporting mechanism in place have severely affected the outcome expected in implementation of such programme.*

Since April1, 2008, MGNREGA is implemented in all districts of Uttar Pradesh comprising nearly fifty-two thousands of gram panchayats. Proactive disclosure of information, use of information technology(IT) and Management Information System (MIS), social audits and other transparency and accountability mechanisms like payments only through bank accounts, grievance redressal rules, ombudsman and monitoring of programmes through a team of state and national level quality monitors, such unique features of MGNREGA have been designed for better implementation of the programme, however, the lack of minimum basic infrastructure at gram panchayat level such as absence of adequate staff, lack of office buildings of gram pacnhayats, lack of engineers and IT skilled staff and other required support systems to carry out the functions of PRIs as mandated in MGNREGA is clearly visible when one evaluates the outcomes of MGNREGA. This paper seeks to highlight this institutional weakness and capability constrains of PRIs in proper implementation of functions and roles assigned to these institutions and in doing so the paper intends to make some policy suggestions for strengthening the capabilities of PRIs in Uttar Pradesh.

Keywords: *Panchayati Raj, MGNREGA, Uttar Pradesh, Implementation*

INTRODUCTION

Over the past two decades, 'governance' has come to be seen as a core development problem for developing state like India. There is a widespread concern stimulated by increasing inequality along-with growth that has created an impression of weakening of public policy system and questions are raised about a legitimate administrative authority to make it effective, accountable public authority.

[1]*Assistant Professor, Department of Political Science, BBAU, Lucknow*
E-mail: preetychoudhari2009@gmail.com

Globalisation, liberalisation and market reform has been much acclaimed as instrument of growth and prosperity. This process of reform and emergence of 'new economy' paradigm has contributed to make India a model of "*roaring capitalist success*" (Foreign Affairs, 2006), at the same time the growing inequity and poor performance on human development index has led to sharp questions being raised on roll- back of State and the credibility of governance and policies. Globalisation and market liberalization has done little to uplift the rural areas. The rising inequity and failure of the state in reaching out to benefit poor has been echoed by many studies [e.g., Basu (2010), Bhaduri (2009), Kabra (2008)]. Mishra (2006) highlighted it in most telling manner in following words "...business-centric view of India suppresses more facts than it reveals. Recent accounts of the alleged rise of India barely mention the fact that the country's $728 per capita gross domestic product is just slightly higher than that of sub-Saharan Africa and that, as the 2005 United Nations Human Development Report it, even if it sustains higher growth rates, India will not catch up with high income countries.... Nor is India very fast on the report's Human Development Index, where it ranks 127, just two rungs above Myanmar and more than 70 below Cuba and Mexico. Despite recent reduction in poverty levels, nearly 380 million people live on less than a dollar a day."

In such an environment of growing dissatisfaction over state's performance and failure in reaching out to the poor, the response from Indian state has been to create a much larger role for its public policy and service delivery system by introduction of National Rural Employment Guarantee Act, 2005 {the name changed as Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA), since an amendment was made to the Act in October, 2009}. This was the first ever legislation passed by Indian Parliament to confer legal rights on people to get public service delivered and this has made it unique in history of public policy mechanism, as for the first time, it introduced the concept of legal obligation on state to provide public service in form of employment (limited to 100 days per year for willing households) within a time bound manner. Addressing the State's Ministers of Rural Development, the then Prime Minister Manmohan Singh (2005) in his address mentioned the Act as "...a path breaking legislation. It is a landmark in the economic history of our people in the regime of rights enjoyed by our people and in our efforts for social equity and justice." Highlighting the significance of role of panchayati raj and institutional mechanism to implement the Act, he further suggested, "The foremost requirement is establishing institutional mechanisms for implementing the guarantee. The Panchayati Raj Institutions, with the assistance of government agencies, are central to this process. Panchayati Raj Institutions, will have to be geared up for it. This is also an opportunity for strengthening grassroot democracy. You would need to ensure capacity building of these institutions so that they may discharge their responsibilities effectively and purposely. Besides the panchayats, other supporting agencies like the District Administration and Line Departments should be properly trained for the tasks that lie ahead. All agencies responsible for the implementation at all levels should know that deficiencies and deviations bear costs." (Ibid.)

The importance of implementation challenge and focus on making effective PRIs' delivery mechanism is enunciated itself in clear terms in goals of MGNREGA. The critics notwithstanding, the implementation of MGNREGA has been acclaimed as one of the most pioneering legislation and international institutions like International Labour Organization (ILO:2009) have lauded the programme for providing employment to poor as it stands to "offset the potential shock to the poorest" in this time of recession. World Bank's Country Director Roberto Zagha (2009) highlighted the importance of the programme by commenting "India is fortunate to have in place a (MGNREGA) program that people can fall back on to find work in these hard times."

Not only legal entitlements for getting service from state was mandated for the first time with MGNREGA but also the Act provided various other provisions like mandatory role of panchayati raj institutions (PRIs) in planning and execution, in built mechanism of transparency, accountability and social audit in delivery mechanism. All these concepts are very new for the classical Weberian model institutions involved in public policy delivery.

The experience of successful public policy implementation has not been very promising in developing countries and more so in India. In the same year, when MGNREGA was introduced in the Parliament, the World Bank came out with a detail report on status of implementation of public policy in India and raised its concern in following words "India's sterling economic performance has been accompanied by a curious inversion. In past decades people would fret about economic performance, but marvel at India's institutional strengths in the public sector—a vibrant democracy, an extraordinarily talented top-tier bureaucracy (the "steel frame" of the Indian Administrative Service), and a set of organizations that could provide law and order, revenue collection, and a modicum of services in a sprawling poor country. Today, these concerns are almost inverted: it is easy to be optimistic about India's economic prospects, but there is growing concern that the basic institutions, organizations, and structures for public sector action are failing—especially for those at the bottom. Statements of the need for institutional reform come from inside and outside of government, from the left and right of the political spectrum, and from the top to the bottom." (Development Policy Review, 2006:1).

How public policy and service delivery system of PRIs has responded to the mandated provisions and spirit of MGNREGA is a key question in understanding the nature and capacity of institutions in responding to the aspirations of its people in governance milieu.

This is important to create an analytical and practical framework for using resources more effectively for making PRIs work for poor people as Devrajan and Shah (2004:907) put aptly in following words, "Society and governments at all levels should learn from their innovations by systematically evaluating and disseminating information about what works and what does not. Only then can the innovations be scaled up to improve the lives of the quarter of a billion poor people in India."

SALIENT FEATURES OF MGNREGA

The introduction of MGNREGA has introduced paradigm shift for policy implementation by mandating regime of legal rights and entitlements of people in demanding the service and providing provisions for compensating in case of failure to deliver the services.

MGNREGA has been significant to introduce following salient features in concept and implementation of public policy:

1. Creating a right based regime and legal entitlement for people to demand services.
2. Compensating people in case of failure to provide entitlements in time bound manner (in form of unemployment allowance, compensation for wages).
3. Provision of dedicated manpower and role definition for various authorities involved in implementation.
4. Increasing role of Gaon Sabha and PRI in programme delivery by making them key player in the planning, execution and monitoring of the programme.
5. Creating in-built structure of transparency and proactive disclosure.
6. Creating a provision of Social Audit for ensuring effective accountability in service delivery.
7. Creating an IT enabled Management Information System (MIS) for monitoring of the programme.
8. Creating a system of perspective planning, preparation of shelf of work.
9. Creating a pro-active grievance redressal mechanism to address the failure of service delivery in the programme.
10. Creating a system of fund allocation based on outcome and delivery, thus the Act is designed to offer an incentive structure to the States for providing employment as ninety percent of the cost for employment provided is borne by the Centre. There is a concomitant disincentive for not providing employment as the States then bear the double indemnity of unemployment and the cost of unemployment allowance.
11. With such new concepts and extensive institutional arrangements envisaged in MGNREGA, the State Governments have been entrusted to deliver the programme as per legal mandate, however, this elaborate and comprehensive arrangement requirement have created various challenges for PRIs in the policy implementation.

Within this broad framework of achievements, there has been growing concern about the leakage, denial of rights as mandated in Act and constrains of the programme being implemented in its spirit. Not only the Comptroller and Auditor General of India(CAG) has observed the gaps in programme delivery as major issue but also various other evaluation studies conducted by the Ministry of Rural Development (MORD) itself have suggested that implementation challenges have been yet to overcome despite several years of the programme implementation. There has been hardly an instance of unemployment allowance or compensation being given for delay of wages in entire country. Again, in carrying out its policy mandate for MGNREGA, the policy implementation institutions have to deal with manifold complex and interrelated challenges. These include in major ways following key issues:

- Internal staffing and capacity including supervision and management;
- Streamlining processes for effective, efficient, and equitable delivery;
- Interacting and coordinating with other institutions, including state institutions;
- Interfacing with a variegated, complex and demanding citizenry; and
- Responding to the complex contemporary challenges that have been shaped by the provisions of transparency and accountability in form of Right to Information and Social Audit.

There have been questions about PRIs' capacity to deliver large scale social safety net programmes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) because of difficulty to implement due to governance challenges related to elite capture, leakages, and corruption. The ability to identify how the governance challenges of policy implementation can be met requires detailed insights into the actual process of programmes implementation, with clear views on the source of leakage and mismanagement, the sensitivity of public policy implementation under the influence of different actors, local power structures and informal bureaucratic processes involved in gram panchayats and other structures of decentralised planning.

In view of the national scenario of implementation, Uttar Pradesh being the largest state in terms of rural populace has been a significant mirror of success and challenge of policy implementation issues in the programme. Taking MGNREGA implementation in Uttar Pradesh as a case study, an attempt is made to understand the limits of public policy in context of the specific features of the MGNREGA implementation process that have brought in a paradigm shift in terms of management, planning, project implementation by decentralisation and bottom-up approach as envisaged in the Act. The insights gained can be used to identify policy options for reforming the administrative process of right based programme and public service delivery system based on the capacities of present panchayati raj structure.

SUCCESS AND CONSTRAINTS OF MGNREGA

On February 2, 2006 while launching of the first programme under the National Rural Employment Guarantee Act at Bandlapalli Gram Panchayat in Anantpur district of Andhra Pradesh, the then Prime Minister Manmohan Singh (2006) said, "This is a historic day not only for the poor people of Bandlapalli, but for lakhs of people across the country." When we analyse the macro picture at national level about the performance of the MGNREGA, we find that probably the observation of the Prime Minister would have been more appropriate if he had used the word crores instead of lakhs while commenting on the reach of the programme. In its size of implementation and successes of physical reach MGNREGA over the years have been touching not the lakhs but crores of people across the country. There can be hardly any parallel or comparison with any other such programme around the world.

To explain it in context of Uttar Pradesh it is worth to see the findings of Indian Institute of Management, Lucknow (IIML: 2009) report on the five districts of U.P. (Gorakhpur, Jalaun, Jhansi, Barielly, Kushinagar). The report suggests following positive impact:

- Local wage rate prevailing in the surveyed GPs have increased by 15–20 percent. The results of the study show that this has also benefited the agricultural/ non-skilled labourers.
- In terms of inclusive growth particularly for disadvantaged groups, the scheme has made positive impact as most beneficiary households belong to disadvantaged groups.
- Participation in MGNREGS has provided an opportunity to the marginalized sections of rural sector to have increased access to financial institutions.
- NREGS has contributed in creating durable assets as the major type of works taken-up include rural connectivity, draught proofing, flood control, water conservation, minor & micro irrigation works and social forestry. NREGS is focusing more on job creation rather than livelihood development through creation of productive assets. In all the districts covered under survey, creation of these assets has strengthened the rural infrastructure base.
- NREGS has significantly contributed in stemming of rural-urban migration.

Although there is no denying the fact that MGNREGS has been one of the most profound schemes ever implemented, however, not everything related to MGNREGS has been positive. The NSSO 66th Round data for 2009–10 indicated that for India, as a whole only 25 percent of rural households were provided work under the scheme and around 19 percent of the total rural households sought work but did not get employment. A study by Dutta et al., (2012) analysing the NSSO data observed that

some of the poorest states, Bihar(34 percent), Odisha (29percent) and Jharkhand (28 per cent), have low participation rates and high levels of unmet demand.

Based on sample survey of ten districts in six major north Indian states (Bihar, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Rajasthan and Jharkhand) Dreze and Ritika (Khera, 2011:64) made following observation, "...In all the sample districts, the provisions and guidelines of the act were routinly violated, casuing much frustration (if not anger) among NREGA workers...Behind these failures were deep sturutral problems including poor flow of funds, staff shortage, flawed record –keeping, and lack of grievane redressal, to cite a few." Again, Dreze emphasises that, "there is still a very long way to go in protecting the basic entitlements of rural workers under NREGA: work on demand, minimum wages, payment of wages within 15 days, basic worksite facilities, and unemployment allowance, among others. While these basic entitlements have become legal rights under the law, the current grievance redressal provisions under MGNREGA are very week, making it possible for government officials and gram panchayat functionaries to get away with gross violations of the Act"(Ibid: 20).

A Planning Commission evaluation study (2009) conducted across 20 districts observed in its findings that eighty percent of the households(HHs)expressed that they did not get the work within the stipulated 15days time of demand for work in writing, neither were they paid any unemployment allowance. Further, it opines, "It is disappointing to note that 38 percent of the HHs did not agree with the measures taken by GP to check out-migration. They expressed that the GP did not take any measures to create sustainable assets to generate wage employment within the village." It was just not the initial phases of implementation that accounted for above mentioned problems but these problems have continued even after, as we find that in another CAG report presented in 2013, following critical observations were made (CAG, 2013):

1. The intended beneficiaries had not been able to fully exercise their rights.
2. In the test checked gram panchayats, it was noticed that in over 47,687 cases, the beneficiaries were neither provided employment on demand nor received unemployment allowance on a routine basis.

The above cited evaluations and observations clearly point out that the challenges and problems that have been identified in various research studies only reflect the overall status of problems and challenges faced across India. The implementation has been more in form of top-down government driven programme rather that an inclusive participatory programme ensuring the rights and legal entitlements as desired in the letter and spirit of the Act. In the following section, an attempt is made...to present the constrains and gaps in implementation..not only in U.P. but also suggesting a diagnostic analysis of challenge of implementation that is required to understand the question as to why this failure has been happening.

ADMINISTRATIVE BURDEN AND CHALLENGE IN IMPLEMENTATION: A PRI'S PERSPECTIVE

While doing research, this author interacted with a number of PRI functionaries and officials to understand their viewpoint about MGNREGA implementation. "I strongly feel that MGNREGA have become a huge burden for me", this sentiment was echoed by almost all the functionaries responsible for implementation of the scheme, however, it was insisted in its strongest tone by all the gram pradhans and panchayat secretaries. In one of the gram panchayat like other pradhans, one of them said "We live in a rural area, this is a part-time job for me and the added duties are making me wonder if I want to continue as gram pradhan. Every year, it gets more complicated!" His experience was not unusual. Another official said: "The MGNREGA process has created a burden for the gram panchayat and takes too much time to plan and complete any work till end and the job is not over with the completion but due to Management Information Systems (MIS) data feeding and the verification of work along with the documentation and provisions of social audit it seems to never end." Commenting on the constrains of skills and capability of field level officials and the pradhans, one of the block development official (BDO) said, "it is very difficult to get workers that are qualified and can handle all the paperwork related to the documentation of the Scheme as required in the Act." Regardless of their role and designation every-one of the officials answered that they find the MGNREGS burdensome in their present capacity to deliver.

At gram panchayat (GP) level, the gram pradhan and the gram panchayat secretary (*sachiv*) operate the MGNREGS account. The panchayati raj structure existing today has a major administrative challenge, as there are about 52000 GPs in Uttar Pradesh and only about 16000 sachiv posts sanctioned and not all these are also filled (about 13000 filled). Thus, one sachiv is in-charge for more than 4–5 or sometimes 7–8 GPs. The field research revealed that due to several accounts for every panchayat and being in-charge of several panchayats at one time, the secretaries were extremely burdened. To name a few, scholarship distribution, schemes of Sarv Shiksha Abhiyan, various kind of pensioners' verification(old age, widow, physically handicapped, etc.,), all survey related works of government (during the course of field visits socio-economic survey/preparation of Rashtriya Swasthaya Bima Yojna(RSBY) smart card/electoral roll revision were cited as an exemplar), election related work, electric transformers, hand-pump and tube-well verification, tail feeding of canal verification, and other works were cited as major functions apart from the rural development schemes and panchayati raj schemes that the panchayat secretary is responsible for at panchayat level. Thus, maintaining the multiple accounts of all these running schemes and overall implementation of so many schemes had already made the secretary a multiple role playing functionary and above all, he is in-charge for the MGNREGS at gram panchayat level. This is certainly a challenging task for him to perform and function in an effective manner.

The block development officers, the gram pradhans and the gram panchyat secretaries unanimously suggested that they have many other schemes, thus, the energy and resource in terms of time and capacity, that is required to implement the rights based provisions of the MGNREGS is not possible for them. This aspect clearly demonstrates the point, that without a fully dedicated staff only for the MGNREGS at every level from panchayat to block, district and state level, it is not possible to implement the provisions of the Act in its right spirit.

All the BDOs and other senior officials at district and state level suggested that the role that was envisaged in the scheme for PRIs has not been commensurate to the capacity of the PRIs and the institutional structure of the PRIs is still too weak for delivery of such right based policy. It was suggested by almost all functionaries and gram pradhans that the technical measurement of works in time bound manner and project preparation is severely constrained due to shortage of junior engineers (s). All the gram pradhans said that lack of proper building of panchayat and lack of staff at the panchayat level has severely constrained their performance in implementation of the scheme. The problem of smooth fund transfers and uncertainty about the fund availability along-with fear of burden of unemployment allowance was suggested as the prime reason for not mandating the rights of the worker in terms of providing proper opportunity for demand of work and giving due acknowledgement receipt.

Most of the gram pradhans suggested that they find a challenge in deciding the work priorities in open gaon sabha meetings because of the priorities advised by the panchayat secretary and block level officials being accorded preference. It was found that the majority of stakeholders at grass-root preferred rural connectivity and not water conservation and creation of natural resource base as suggested in the Act.

Almost all the officials and pradhans suggested that the wage: material ratio of 60:40 is a challenging task in maintaining the quality of the assets created and almost all of them had preference for material intensive work rather than labour incentive works. This clearly suggests that the people, who are entrusted with the responsibility of the implementation of the Act on ground, are not properly aware or sympathetic to the spirit of the Act.

The MGNREGA-MIS that has been created for proper transparency and process monitoring of the Scheme was viewed by the field level functionaries as too complex and burdensome. Lack of power electricity supply in block and gram panchayat, lack of data entry operators, lack of proper IT-infrastructure and internet connectivity at gram panchayat and block level coupled with improper understanding of the MIS system due to lack of proper training, all these were cited by almost all of the field level functionary as major burden for them.

The contractual staff were hired as gram rojgar sahayak and technical assistants also opined their problems. Apart from complaining about very meagre salary and delay of their salary payment, the status of these contractual staff clearly highlighted the point that the state machinery has not prepared proper rules for role and responsibility of contractual employees working under the scheme. The training of the contractual staff was never done properly and most of them were not even properly aware of the provisions of the Act. They performed their task as per the instructions of the panchayat secretary or the pradhan at gram panchayat level without any knowledge of the provisions of the Act. Similar was the case of technical assistants, who only functioned on the instructions of either the BDOs or the junior engineer (J.E.) of the region. No independent role and responsibilities were played in any effective manner by these contractual staff.

The bank payments were also not free from irregularities as was found in the field survey. An exclusive study on this aspect also found that, "...the social context has an important bearing on the functioning of the system of bank payments. Once a labourer's wage are withdrawn from the bank account, it is her relationship with (say) the Sarpanch or contractor that determines her share." (Adhikari and Bhatia, 2010:36)

The above points on the administrative, financial and structural capabilities of PRIs and challenges posed by the provisions of the Act clearly demonstrate the fact that the PRIs were not having the institutional design and capability required for such programme in field but also the provisions and mechanisms of the Act have been quite burdensome for PRIs to implement properly.

MONITORING, ACCOUNTABILITY AND TRANSPERENCY

It has been desired in the Act, that from the apex level Central Employment Guarantee Council (CEGC) up-to the GP level vigilance and monitoring committees(VMC) to be formed and function in a vibrant manner for proper monitoring of the scheme. Being innovative and first of its kind, these arrangements could never function properly. The spirit and design of the Act has been that the people at village level would exercise control over the planning and executions of works through *gaon* sabha and its related institutions like VMCs, however, the panchayati raj system in India and particularly in Uttar Pradesh is still not strong enough and the gram pradhan is all powerful, whereas gaon sabha is hardly empowered. Weaken *gaon* sabha structure and lack of administrative and institutional arrangements like sufficient number of gram panchayat secretary and gram panchayat building to organize gaon sabha meetings on regular interval, seriously undermined the provisions of monitoring and transparency.

The record keeping and MIS has been major challenge due to lack of capacity of the staff and basic IT infrastructure. The provisions of social audit could never be properly implemented because it involved hiring of staff to conduct the social audit

and the State government had already faced serious challenge in recruitment of staff earlier so lack of sufficient administrative fund and hesitation of administrative burden of contractual staff that would be deployed for social audit led the state government to delay its institutionalisation as far as possible.

The absence of any detail norms about material procurement in the scheme guidelines and the mandatory provisions related to worksite facilities or requirement of material for projects, posed a serious constrains on the PRIs. Such kind of scheme and provisions were not practised earlier, so it led the field level PRIs' functionaries exercising their discretion with ill intention and there could hardly be any control or monitoring of this aspect of leakage of the scheme funds. To understand the kind of corruption, it is worth mentioning here a case study related to a detail inquiry done by a State Quality Monitor (SQM) of the Department of Rural Development, Uttar Pradesh regarding the implementation of the scheme in the gram panchayat Bhatolia of block Ghorwal in Sonbhadra. The report (2011) highlights various extreme cases of irregularities and corrupt practises in the functioning of this gram panchayat. In the fifty five page long report the SQM found following grave charges of corrupt practise: "the pradhan and the secretary of the gram panchayat themselves functioned as contractor in the scheme and the material was purchased from the firms that belonged to the real relatives. The data on muster roll and payment were forged to siphon the money. The measurement book and the quotations were having fictitious entries and forgery to siphon money. Fake job cards were used to fudge the entries in muster roll and MIS. The project costs were highly inflated and there was also favouritism done not only in selection of worksites but in selection of workers as well. The key implementing personnel both the gram panchayat secretary and the pradhan amassed huge wealth in terms of increase in their property and personal assets by siphoning the public money."

The above major findings and the narrative of this case study is primarily taken as an exemplar to highlight the challenge of corruption linked with the weaken PRI institution in the process of implementation of the Scheme.

CONCLUSION

The MGNREGA provided a mandatory provision of at least fifty percent of the projects under the scheme to be undertaken by gram panchayats. This move has often been highlighted as a great measure to enhance the decentralisation of the authority in the process of implementation; however, the practice on the ground suggests that without a proper strong gaon sabha functioning, this has resulted into great source of corruption due to weak PRIs and its capture by the pradhan. The purpose of this study is not to discuss the strength and weakness of panchayati raj institutions; however, it is noteworthy to highlight the systematic constraints that have emerged as challenge in implementation of the scheme due to PRIs being the major implementing agencies in the scheme.

In the existing three tier panchayati raj system, the chairperson of the Zila Panchayat (at district level) and the Intermediary Panchayat (at block level called Kshetra Panchayat) is elected through indirect method and the members of Zila Panchayat and the Intermediate Panchayat vote for the chairperson to preside over for five years of the tenure. It is now widely known and undisputed fact that, the indirect mode of electing the chairperson at these two levels is now marred with corrupt practice of buying the members at hefty price for their vote. Again, as the chairperson is elected with such corrupt and indirect method, there is hardly any accountability in terms of ethical pressure of common people of the region or the members of the concerned institution. As the chairperson has political clout so the local bureaucracy often is constrained and prefers not to enforce any accountability for these elected chairpersons at Zila Panchayat and *Kshetra Panchayat*. In such an environment of functioning of the top two tier of panchayati raj institutions, the MGNREGA transparency provisions could never have been enforced by these institutions and this has a domino effect for the gram panchayat as it being an organic extension at lower tier. An evaluation study conducted on the functioning of the panchayat made following remarks, "In actual practice, the Gram Sabha has not risen to the expectations of the law-makers and the spirit of the Constitution of India. The socio-economic and political realities of India with illiteracy, prevailing caste and gender biases, the rigid caste hierarchy and the powerful patriarchal norms are not conducive to legislations bringing desired changes."(PRIA 2005).

Based on a sample study of PRIs in implementation of a scheme related to beneficiary selection on the criteria of their vulnerability, the Planning Commission (2006) found that nearly half of the beneficiary were undeserving and it commented that, "... though the ordinary village people feel optimistic about the potential of panchayats, they think that it has not brought the fruits of development to them. Corruption is singled out as the most important cause for the ineffective functioning of these institutions. Control which is exercised by the Sarpanch and Block Level officials over Village Panchayats and Gram Sabhas has not only buttressed corruption, but it has also led to pessimism that villagers on their own and at their level cannot change or improve things because of heavy dependence on elected functionaries and Block officials. The present system is, therefore, seen to have actually reinforced dominance and unequal access to power, besides rendering the villagers helpless and alienated."

The capture of gram panchayat by gram pradhan in absence of a strong functional gaon sabha mechanism has not been visualised in the design of the MGNREGA. Even the most active supporters of the Act like Jean Dreze, who highlights the success of the scheme in citing the example of contractor raj disappearing have found it difficult to deal with the new avatar of the contractor in form of the pradhan at gram panchayat level and based on the status of implementation constrain in Rajasthan he puts the problem in following words, "In Rajasthan the trail-blazer in this field,

there have been disquieting accounts of a revival of corruption in the run-up to the Assembly elections in 2008, and to the gram panchayat elections in 2010, when NREGA funds became a tempting resource for election campaigns... there has been a backlash against social audits, led by corrupt *Sarpanchs* and other vested interests." (Khera, 2011:247-48).

Thus, we find that the Act has been designed on the ideals of the gaon sabha functioning, without making any evaluation of the status of the strength and weakness of PRIs structures and this has resulted adversely in deficiency or failure of implementing the transparency provisions at grass-root level. The belief that the people in gaon sabha are capable enough to implement the provisions has not been successful because of lack of proper strengthening of *gaon* sabha.

Policy implementation requires someone to do the job of implementing. This job might be welcome or unwelcome, hard or easy. The burdens of policy implementation are embedded into the day-to-day existence of the implementer. It surely, has an influence on bureaucratic preferences and actions related to these policies. And yet, the concept of administrative burden has been given little direct attention in administrative scholarship. In this paper an attempt was made to understand the existing challenge of MGNREGA implementation from PRIs perspective as they perceived. It is argued that the administrators experience of policy implementation as onerous is an important variable in understanding policy preferences at PRI level. The design of the Act is based on the premise of an ideal functioning of a gaon sabha, whereas, the panchayati raj structure is still too weak to work as a vibrant forum providing proper access and opportunity to weak and poor. The way forward is to recognise the reality and built in not only the institutional formal support structure in terms of office, technical resource and other supportive staff available at gram panchayat level but also to involve a mechanism of proactive partnership with civil society groups to enable a strong empowerment and capability approach towards poor so that they can become a real stakeholder in the whole process of implementation of the rights based regimes and Acts.

REFERENCES

[1] Adhikari, Anindita and Bhatia, Kartika (2010), "NREGA Wage Payments: Can we Bank on the Banks?", *Economic and Political Weekly*, Vol. 45(1), pp. 30–37, January 2, 2010.
[2] Basu, Kaushik (2010), *Beyond the Invisible Hand: Groundwork for a New Economics*, New Delhi: Penguin.
[3] Bhaduri, Amit (2009), *The Face You were Afraid to See: Essays on the Indian Economy*, New Delhi: Penguin.
[4] Shantayanan, Devaranjan and Shah, Shekhar (2004), "Making Services Work for India's Poor", *Economic and Political Weekly*, Vol. 39(9), pp. 907–919, February 28, 2004.
[5] Dreze, J. (2011), "Breaking the Nexus of Corruption, in Khera, Reetika (2011)", *The Battle for Employment Guarantee*, New Delhi: Oxford, pp. 247–48.
[6] Dreze, Jean and Khera, Ritika (2011), "The Battle for Employment Guarantee, in Khera, Ritika (ed.)", *The Battle for Employment Guarantee*, New Delhi: Oxford, p. 64.
[7] Dreze, Jean (2011), "Employment Guarantee and the Right to Work, in Khera, Ritika (ed.)", *The Battle for Employment Guarantee*, New Delhi: Oxford, p. 20.
[8] Dutta, P., Murgai, R., Ravallion, M. and Dominique, W.V. (2012), "'Does India's Employment Guarantee Scheme Guarantee Employment?", *Policy Research Paper*, Washington DC: World Bank.

[9] IIM Lucknow (2009), "Quick Appraisal of 5 Districts under NREGS", http://www.nrega.net/pin/reports-and-resources/reports-submitted-to-the-ministry-of-rural-development/; downloaded on 4 January 2016,
[10] ILO (2009), *Global Employment Trends Update, May 2009*, Geneva: ILO.
[11] Kabra, Kamal Nayan (2008), *High Growth, Rising Inequalities, Worsening Poverty: India's Development Experience*, Delhi: Book for Change.
[12] Mishra, Pankaj (2006), "The Myth of New India", in *The New York Times*, July 26, 2006.
[13] PRIA (2005), *Gram Sabha Mobilisation Synthesis Paper*, March 2005.
[14] Planning Commission (2009), All-India Report on Evaluation of NREGA: A Survey of Twenty Districts, http://planningcommission.gov.in/reports/genrep/rep_NREGA_03-08-2009.pdf; downloaded on December 24, 2012.
[15] Report no.-6 of 2013-Union Government (Ministry of Rural Development) (2013), Report of the Comptroller and Auditor General of India on Performance Audit of Mahatma Gandhi National Rural Employment Guarantee Scheme, New Delhi.
[16] Singh, Manmohan (2005), "PM Addresses State Ministers of Rural Development, 27-September, 2005", viewed on 22 January2016, http://pib.nic.in/newsite/ erelcontent.aspx? relid=12270,
[17] State Quality Monitor (SQM) Choube's Report in Inquiry of Village Ghorwal in District Sonbhadra, Uttar Pradesh, Available on www.mgnrega.nic.in, accessed on 10th January, 2016.
[18] Verma, NMP (1986) Rural....Comment Employment Planning: Comment in Prof. R.K. Sinha, (ed.) Employment Policy in India, Deep and Deep, New Delhi.
[19] World Bank (2006), "India Inclusive Growth and Service Delivery: Building on India's Success", *Development Policy Review.*
[20] Zagha, Roberto (2009), "People can Fall Back on NREGA in these Hard Times: World Bank", *The Economic Times*, June 3, 2009.

Problems and Challenges in Rural Healthcare Services: A Case Study in a Village of Uttar Pradesh

Imteyaz Ahmad[1]

Abstract—*The study investigate a piece of work attempting to explore the current rural health care problems and challenges in the country in general and to know the availability of health care facilities with respect to government health policies and schemes, infrastructure, manpower and the acceptance level or the utilization pattern of the different health care facilities in rural area of Uttar Pradesh, India. The major objectives of the investigation are to find out the problems and challenges of rural health care services in access to healthcare services in the community. The study suggest that community participation and awareness level of the village people needs to be increased which will help towards the upliftment and better rural health care services.*

Keywords: *Rural Healthcare, National Health Mission, National Health Policy, WHO*

INTRODUCTION

The study investigate a piece of work attempting to explore the current rural health care problems and challenges in the country in general and to know the availability of health care facilities with respect to government health policies and schemes, infrastructure, manpower and the acceptance level or the utilization pattern of the different health care facilities in rural area of Uttar Pradesh, India. In general, the rural health system works well in India to some extent. However, the rural health system has some delimitation. The healthcare system facilitates the achievement of optimum level of health to the community through the delivery of services of appropriate quality and quantity.

The Government of India (GOI) has been making endeavours to reach out healthcare to the people since its inception through various health schemes. The Primary Health Care concept came into being in 1948 as per Bhore Committee recommendations. And National Rural Health Mission (NRHM) came into being in 2005, both are provided preventive and curative services have been targeted to deliver right at grassroots with Accredited Social Health Activist (ASHA) being the key players as first contract in the community level (Verma, *et al*., 2010).

[1]*Centre for the Study of Social Exclusion and Inclusive Policy, Maulana Azad National Urdu University, Hyderabad–500032*
E-mail: imteyaz9@gmail.com

Table 1: Child Health Indicators

Item	Uttar Pradesh			India		
	Rural Area	Urban Area	Total	Rural Area	Urban Area	Total
Infant Mortality Rate	75.0	64.0	72.7	62.0	42.0	57.0
Child Mortality Rate	--	--	25.6	--	--	18.4
Total Fertility Rate	4.13	2.95	3.82	2.98	2.07	2.68

Source: National Family Health Survey (NFHS-3), 2005–06

As per National Family Health Survey-3, infant mortality rate (IMR) is worse in rural area instead of urban area in Uttar Pradesh and compare to national level it is not better, as well CMR and TFR also worse as compare to average of national. There is need to implement of health policy for upliftment of health status of the adolescent and women from general populace.

United Nation Millennium Development Goal (MDG) which has just ended in 2015, India embarked to reduce child mortality, nutritional deficiency, strengthen immunization and enhance water and sanitation with host of other programme and agenda. The MDG had not been able to make much headway in achieving its goals. The MDGs are being replaced by a new set of mission and goals, the Sustainable Development Goals (SDG) which runs from 2015 to 2030. When it comes to health, the five major issues are responsible for not fulfilling MDG within set time, these are: requirement of more resources, utilizing the available resources as effectively as possible, acute shortage of manpower and infrastructure, lack of strong political will and widening demand and supply gap.

HEALTHCARE AND ROLE OF THE GOVERNMENT IN UTTAR PRADESH

The Government of Uttar Pradesh is dedicated to provide high quality, reasonable, available, and curative health care services to the populace. But the performance of the state on different health parameters is not encouraging. Government enhance and strengthen Health system, main issues that the health systems must confront are lack of financial and material resources, health personnel issues and health policies in a pluralistic environment. Human resource development and capacity building play a key role in enhancing health care services.

The healthcare challenges in Uttar Pradesh for underprivileged population, adolescent and young people, women, ageing people, persons with disabilities are somewhat different from those of the general population. Health care services for those peoples require a different specific approach, participation and empowerment of community may be fully insured and health education and health communication may be undertaken in a big and strategic way to bridge the knowledge and behaviour change gap.

The m-health initiatives launched on January 2016 to enhance access; make health care services affordable and health systems more vital. The inaugurate of four mobile health (mHealth) services–Kilkari, Mobile Academy, M-Cessation and TB

Missed Call initiative is a part of the Government's Digital India programme, is in line with its commitment to arrangement of public health care services and build citizen-centric health care services by supporting India's expanding mobile phone penetration. These four mobile health services will be a game changer in health communications, these initiative actions will bring us closer to people who need health care services the most, based on harnessing technology for the benefit of people.

AIMS AND OBJECTIVES

The major objectives of the investigation are outlined: To find out the problems and challenges of rural health care services in access to healthcare services in the community. The aim is to understand issues of community people regarding access to health care services.

DATA AND METHODOLOGY

The present research study relates to Adari village of Mau district in Uttar Pradesh. Multistage random sampling technique was used to draw the representative sample. The source of primary data has been collected through administering the questionnaire; the questionnaire was design and developed with the help of my supervisor. The researcher had consulted the doctors working in the PHCs, SCs, CHCs and faculty working in Social Studies. After due consultations the questionnaire was revised and then finalized. Before final administration of the questionnaire a pilot study was undertaken besides that keeping in view the aims, objectives and the nature of data required under the study interview schedule, case study and focused group discussion for data collection is also used. Primary data about rural health care services has been collected from 100 households and doctors, paramedical staff, ASHAs, ANMs, health workers and village committee members.

The secondary data was procured from National Family Health Survey (NFHS) 1, 2 and 3 reports and District Level Household & Facility Survey (DLHS) 1, 2, 3 and 4. Data was also collected from Health Management and Information Systems, working under the Ministry of Health and Family Welfare, visiting various universities library, journals, magazines, research articles.

RESULTS

The healthcare challenges in Uttar Pradesh for underprivileged population, adolescent and young people, women, ageing people, persons with disabilities are somewhat different from those of the general population. Health care services for those peoples require a different approach, specific and participation and empowerment of community may be fully ensured and health education and communication may be undertaken in a big and strategic way to bridge the

knowledge and behaviour change gap. The data (Table 2) shows that the infant mortality rate from the year 2011 to 2014 improved as well as maternal mortality rate also improved in consecutive year.

Table 2: Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) in India during the Year

Year	2011	2012	2013	2014
MMR	206	197	189	181
IMR	44	43	41	39

Source: data.worldbank.org/indicator/SH.STA.MMRT

The socio-demographic profiles of study showed that majority of respondents were male. Most of respondents were patients. By and large availability of health care services was average regarding to availability of doctors, paramedical staff, and waiting area in the outpatient department (OPD) and the cleanliness of the OPD.

Table 3: Problems Facing by Community in Access to Healthcare Services

Item	Agree	Neutral	Disagree
Medicines not available	40	12	48
Poor quality of services	52	17	31
Attitude/Behaviour of the doctors	18	21	61
Attitude/Behaviour of the paramedical personnel	47	8	45
Poor Infrastructural Facilities	56	14	30
Doctors not giving sufficient time	24	7	69
Overcrowding in the Health Facilities	62	4	34
Distance from home to Health Centre	37	7	56

Source: Self administered questionnaire

Table 3 showed with reference to problems facing in access to health care services by community that near half of the respondent did not get proper medicine, and also half of the respondents claim about poor quality of health services. Respondent to some extent not satisfied with attitude and behaviour of doctor and at greater extent attitude and behaviour of paramedical personnel not satisfactory. Majority of respondent agree that they face poor infrastructure facility and overcrowding at health service centre. And respondents face distance problem from their home to health services centre.

DISCUSSION

The present study was an attempt to assess the problems faced by community people in access to health care services with the various aspects of health care services in the public health centre in a village in Mau District of Uttar Pradesh. The data (Table 2) shows that the infant mortality rate from the year 2011 to 2014 improved as well as maternal mortality rate also improved in consecutive year.

Inequality and poverty are the root causes of bad health. Access to quality health care services on cost effective and equitable basis in many parts of the country remains an unfulfilled goal. Capacity building through training, especially training of

paramedical personnel, is planned as an essential element, to diminish cost, especially in tertiary care. Health care delivery systems must be improved and accomplishment of Universal Access to affordable, equitable, and quality healthcare services, responsible and responsive to people's needs, with effective inter-sectoral concurrent action to address the wider social determinants of health.

CONCLUSION

Community Participation and awareness level of the village people needs to be increased which will help towards the upliftment and better rural health care services. Ensuring the attainment of access to healthcare services strengthening of health systems, institutions and capacity. Government's responsibility to ensure the delivery of high-quality health care services on equitable, affordable price to all its populace including the poor and vulnerable population. This allows health systems to accomplish their goals of improving health, reducing health discrimination, securing equity in health care financing and responding to population needs.

For the success of health programmes needs strong political commitment, financial resources, sufficient and quality infrastructure and a scientific background. Health is at centre of development dialogue and looked at as a keystone for economic growth of any nation. It can contribute to alleviate poverty and paucity lead a nation to a more productive and financially secure status and MDGs and SDGs well interwoven in the fabrics of social and economic development.

SUGGESTIONS

- Regulate transparency, and accountability in all procedures and mechanisms.
- Improve efficiency and competence to optimize use of available resources.
- Effective social marketing of health programmes to bring in the behavioural changes in community people to promote health care services.
- Establish environment of trust between people and providers of healthcare services.

REFERENCES

[1] Datta, P.C. (1955), *Rural Health and Medical care in India*, Ambala: Army Education Press
[2] GOI (1946), *Report of the Health Survey and Development Committee (Bhore Committee)*, Delhi: Manager of Publications.
[3] GOI (2002), *National Health Policy*, Government of India.
[4] GOI (2010), Rural Health Statistics Bulletin 010, Office of Registrar General of India, India,
[5] GOI (2011), *Annual Report to the People on Health*, Ministry of Health and Family Welfare, Government of India.
[6] Government of India (2010), *Annual Report to the People on Health*, Ministry of Health and Family Welfare.
[7] ICMR (2007), *Health Research Policy-ICMR*, New Delhi: Indian Council of Medical Research.
[8] India Chamber of Commerce (2012), "Healthcare Infrastructure and Services Financing in India-Operation and Challenges", (Retrieved from www.pwc.com/india on 12/01/2014)

[9] Kopparty, S.N.M. (1994), *Social Inequality and Health Care*, New Delhi: Northern Book Centre
[10] Mandal, S.K. (2010), *Ethics in Business & Corp Governance*, New Delhi: Tata McGraw-Hill Education.
[11] Mandal, S.K. (2010), *Ethics in Business & Corp Governance*, Tata McGraw-Hill Education.
[12] Ministry of Health, GOI (1962), *Report of the Health Survey and Planning Committee (Mudaliar Committee)*, New Delhi: Government of India.
[13] NRHM (2012), *Newsletter Ministry of Health and Family Welfare*, Govt. of India, Vol. 7, No. 4, July-Aug. 2012.
[14] Paul, Vinod Kumar *et al.* (2011), "Reproductive Health and Child Health and Nutrition in India: Meeting the Challenge", (Retrived from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3341742/ on 10/01/2014)
[15] PWC (2007), "Healthcare in India", *Emerging Market Report 2007 by Pricewaterouse Coopers*, (Retrieved from www.pwc.com/globalhealthcare on 12/01/2014)
[16] PwCIL (2010), *Report on Indian Growth, PricewaterhouseCoopers International Limited*.
[17] Salins Swarthick E. (2008), "Primary Health Care Delivery in Rural India: Examining the Efficacy of a Policy for Recruiting Junior Doctors in Karnataka", University of St Andrews, Scotland.
[18] Sharma, J.K. and Narang, Ritu (March-2011), "Quality of Healthcare Services in Rural India: The User Perspective", Vikalpa, Ahmedabad
[19] Sharma, R. and Chaturvedt, S.K. (1978), India Chapter 4. In B.S. Hetzel, *Basic Health Care in Developing Countries: An Epidemiological Perspective*, Oxford University Press.
[20] Verma, NMP (2010), "Correlates of Poverty and Malnutrition: A Study of Indian Women and Children", International Journal of Economics and Business Modeling, Vol. 1, No. 2.
[21] The World Health Report (2000), *Health Systems: Improving Performance*, Geneva: World Health Organization.
[22] WHO (2006), *World Health Report 2006: Working together for Health*, World Health Organization.
[23] Yeravdekar, Rajiv, Yeravdekar, Vidya Rajiv, Vidya, Rajiv M.A., Bhatia, Neeta P. and Tambe, Murlidhar (2013), "Strengthening of Primary Health Care: Key to Deliver Inclusive Health Care", *Indian Journal of Public Health*, Vol. 57(2), April-June, 2013.

Gender Differentials in Employment and Wages: What is the Scenario?

Shachi Joshi[1]

Abstract—*Employment and employment outcome is highly gender biased which may arise due to factors such as different human capital endowments, the sectors and occupations that provide employment to women and the social practices. Higher percentage of women than men are concentrated in the agriculture related activities in the lower-income segments and working as casual wage workers. This paper attempts to analyze gender differentials in terms of various dimensions of participation of women in labour market and wages and earning received by regular and casual women workers in rural and urban India using NSSO data.*

Keywords*: Gender, Employment, Wages, Gender Differentials*

INTRODUCTION

Gender equality is recognized as important component of sustainable economic growth and poverty reduction across the world. Employment and income opportunities are critical for poverty reduction and enhancing status of women in the society. India has one of the lowest labour force participation rate (LFPR) of women in the world, particularly in case of urban women. It is pertinent to mention that in rural India poverty considerations lead to greater LFPR. (Bhalla and Kour, 2011).

Differential in labour market refers to unequal treatment of the workers with same education, training, work experience or productivity levels in hiring or in wage payment, but differing in some non-economic personal characteristics associated with sex or caste (Phelp, 1972).

In labour market human capital endowments or other personal characteristics determine the employment opportunities as well as employment outcomes. Any difference in wages in different sexes, races etc. which are not explained by these factors, may be considered to be the labour market discrimination (Becker, 1957).

Gender inequality remains an issue within labour markets across the globe. Women suffer multiple disadvantages in terms of access to labour markets, and often do not have the same level of freedom as men to choose to work. Gender differences in labour force participation rates and unemployment rates are a persistent feature of labour markets. In developed economies, part of the gender gaps in participation in employment can be attributed to the fact that some women can afford not to enter the labour market and they do so. Yet in some regions, remaining outside of the labour force is not a choice (ILO, 2009)

[1]*Faculty, National Institute of Labour Economics Research and Development, Sec-A-7, Institutional Area Narela, Delhi*
E-mail: shachi.joshi7@gmail.com

Not only in work but in wage payments also sharp gender differentials are witnessed. This is in part because women often hold low-level, low-paying positions in female-dominated occupations. According to an ILO study on Global Employment Trends, review of data available for six diverse occupation groups shows that in most economies, women still earn 90 per cent or less of what their male co-workers earn in a typically male dominated occupation.

According to Anupama (2010), a study conducted in Punjab region shows that differences in labour market outcomes are purely due to cultural bias in favor of males. In addition to the unequal burden of poverty, women are also faced with inequality of resource distribution and poor ownership as well as access to economic resources, land, property, etc., (Rustagi,2010). Literature argues that gender gaps in income, employment and wages may arise due to several factors such as different human capital endowments, the sectors and occupations that provide employment to women and the rigid social practices.

In the light of above, objective of this paper is to analyze gender differentials in terms of various dimensions of participation of women in labour market and wages and earning received by regular and casual women workers with rural urban divide and compares it with their male counterparts.

LABOUR FORCE PARTICIPATION RATE (LFPR)

Labour force denotes the number of persons able, available and willing to participate in employment. This comprises the employed labour force plus unemployed. LFPR is defined as the proportion of person's day in the labour force to the total person days. The growth of labour force is primarily affected by the demographic, social, economic and institutional factors.

Increase in female workforce participation is desirable in order to reduce the higher incidence of poverty faced by women. Table 1 below provides the LFPR for the country as a whole and also for rural and urban areas for the years 1987–88 to 2011–12 across various NSSO Rounds. Table reveals that about 55 per cent of rural males and 25 per cent of rural females belonged to labour force during 2011–12. In the urban areas, the LFPR was 56 per cent for males and 15.5 per cent for females during the same period. During the period 2004–05 to 2009–10, the LFPRs remained almost the same for rural males but decreased by about 6 percentage points for rural females.

The data revealed that LFPR for the country as a whole decreased from 42.1percent to 40.4 percent during 1987–88 to 1999–2000, LFPR improved to 43.0 percent during 2004–05 and thereafter continued to decline during 2009–10 and 2011–12. The LFPR for women at all India level also declined from 35.6 percent to 25.8 percent from 1987–88 to 1999–00 and showed improvement to 29.4 percent during

2004–05, LFPR further fell down to 23.3 percent and 22.5 percent respectively during 2009–10 and 2011–12. This trend was consistent with all India trend in LFPR.

When the trend in LFPR was compared in case of rural and urban women, it is observed that participation rate was significantly lower in urban areas. This may be due to prevalence of higher employment avenues of women in agriculture and allied activities or compulsion to work due to poverty in rural areas or higher participation of women in education and skill training in urban areas. Further, a high LFPR may be indicative of poverty driven phenomenon particularly in a subsistence economy.

According to Himanshu, (2011), the movement of rural women into the labour force between 1999–00 and 2004–05 was due to the agrarian crisis of the period. The subsequent sharp drop in labour participation to 2009–10 is interpreted as a withdrawal from the labour markets as economic conditions improved again. Others have pointed to the very large increase in participation in education as a major reason for withdrawal of women from the labour market

Thus, the phenomenon of decline in LFPR is governed primarily by increasing participation of women and children in education and withdrawal of aged population from the labour force due to improved economic conditions.

Table 1: Labour Force Participation Rate (%) in India (UPSS)

Gender / Year	1987–88	1999–2000	2004–05	2009–10	2011–12
Rural					
Male	54.9	54.0	55.5	55.6	55.3
Female	33.1	30.2	33.3	26.5	25.3
Total	54.5	42.3	44.6	41.4	40.6
Urban					
Male	53.4	54.2	57.0	55.9	56.3
Female	16.2	14.7	17.8	14.6	15.5
Total	28.8	35.4	38.2	36.2	36.7
All India					
Male	54.5	54.1	55.9	55.7	55.6
Female	35.6	25.8	29.4	23.3	22.5
Total	42.1	40.4	43.0	40.0	39.5

Source: Various Reports of NSSO

WORKFORCE PARTICIPATION RATE (WPR)

WPR is an important indicator of development showing the proportion of working population to total population in any economy. The Census of India and the National Sample Survey Organization (NSSO) are two main sources of data on employment of female workforce. None of these definitions have been able to fully capture the extent and degree of women's participation in the workforce.

Trends in female WPR is presented in Table 2.During the year 2011–12; 38.6 per cent of the population in the country was usually employed consisting of 40 per cent employed in the rural India and 35.5 per cent in the urban India. Total WPR has declined from 2004–05 to 2011–12 indicating that rate of growth of work force (WF) is less than the population growth.

The gender differential in the WPR was distinct. The WPR for rural females was 25 per cent while it was 54.3 per cent for rural males during 2011–12. In the urban areas, WPR was 14.7 per cent for females and 54.6 per cent for males during 2011–12. This gap widened for rural women while a slight improvement was noticed in urban female participation rate reducing the gap between participation rate between urban men and women during 2011–12 as compared to 2009–10.

WPR data for 2004–05 reveals that urban females recorded highest women employment rate comparing to preceding periods. This may be owing to the fact that the economic opportunities expanded during 2004–05 leaving positive impact on employment of women in urban areas. Sudden fall in employment during 2009–10 which further fell during 2011–12 both for urban and rural areas may be attributed to the fact that larger women are opting for education and training.

The WPR of women in urban locations is far lower than that of rural women. It has been argued that this phenomenon are urbanization-linked factors such as better and higher earning profiles for men, and the resultant dissuasion for entry of women into the urban labour market; higher educational attainment of women and the kind of formal sector employment they seek, especially women belonging to relatively better economic backgrounds; the burden of household work and other responsibilities which prevents them from supplying their labour in the market and so on (Rustagi, 2010)

Table 2: Work Participation Rate (%) in India (UPSS)

Year/Gender	1987–88	1999–2000	2004–05	2009–10	2011–12
Rural					
Male	53.9	53.1	54.6	54.7	54.3
Female	32.3	29.9	32.7	26.1	24.8
Total	43.4	41.7	43.9	40.8	39.9
Urban					
Male	50.6	51.8	54.9	54.3	54.6
Female	15.2	13.9	16.6	13.8	14.7
Total	33.7	33.9	36.5	35.0	35.5
Total					
Male	53.1	52.7	54.7	54.6	54.4
Female	28.5	25.9	28.7	22.8	21.9
Total	41.2	39.7	42.0	39.2	38.6

Source: Various Reports of NSSO

WPR BY LEVEL OF EDUCATION

The percentages of workers who are usually employed in a particular education category are defined as education level specific worker population ratio. Education, especially professional and technical education enables an individual to enter into workforce and earn better income. Educational attainments are directly related to gender differences in employment. Not only employment but wages are also directly linked to acquisition of education.

Table 3 below analyses the WFP by level of education and compares WFP of women with men. A glance at the table reveals that WPR is highest among illiterate women in rural areas as compared to other levels of education. This also corroborates with WFP of rural males. It is pertinent to mention here that with increase in level of education, WPR amongst rural women declined significantly while for their male counterparts it declined marginally. Among the rural female graduates, the WPR in 1993–94 showed a decline of about 5.5 percentage points from what it was during 1999–2000 and then increased to 34.5 percent in 2004–05.This again suffered a fall of more than 4 percentage points during 2009–10 and remained unchanged during 2011–12.

During the entire period women with qualification graduate and above participated more in work force as compared to middle, secondary and higher secondary levels of education in both urban and rural locations. For rural males with educational qualification graduate and above, WP was substantially higher, though a declining trend was seen during 2009–10 and 2011–12.

Table 3: Workforce Participation Rate (%) in India by Level of Education

Education Level	1993–94		1999–2000		2004–05		2009–10		2011–12	
	M	F	M	F	M	F	M	F	M	F
Rural										
Illiterate	91.8	50.0	89.5	51.3	89.2	55.0	87.4	43.2	88.0	41.8
Literate up to primary	90.9	41.6	88.0	40.3	89.5	44.9	90.0	38.4	89.2	36.1
Middle	77.0	29.0	76.8	29.0	80.2	37.1	78.4	29.4	77.0	27.6
Secondary	72.8	25.8	73.7	25.7	73.2	30.5	69.7	22.2	66.8	22.2
Higher secondary	68.6	23.4	71.3	20.6	70.9	25.2	63.4	18.3	61.8	17.6
Graduate and above	83.4	36.6	83.6	31.1	85.1	34.5	79.3	29.7	78.1	29.7
All	86.4	48.6	84.1	45.2	84.6	48.5	81.2	37.2	80.0	35.2
Urban										
Illiterate	87.0	30.0	83.9	27.1	83.1	30.4	81.6	23.1	83.2	24.0
Literate up to primary	85.0	20.3	83.0	17.1	85.5	23.4	84.4	20.6	84.7	22.3
Middle	72.3	13.1	73.2	12.9	76.0	16.1	76.0	15.4	76.5	15.8
Secondary	67.7	13.4	66.8	12.4	67.3	12.3	66.7	9.7	65.1	11.0
Higher secondary	60.7	14.7	60.8	12.4	60.8	12.9	57.6	9.4	58.3	10.8
Graduate and above	81.8	30.1	80.6	27.3	79.5	29.0	78.8	25.9	79.0	27.9
All	76.8	22.3	75.2	19.7	76.3	22.7	74.0	18.3	74.1	19.5

Source: Various Reports of NSSO

Among the urban women, the highest WPR was observed in case of illiterate women. Urban women with educational attainment, graduate and above also showed higher level of WPR during the entire periods under consideration as compared to middle, secondary and higher secondary levels of educational attainment. In case of participation of graduate women in employment same trend is manifest in urban areas as in rural areas. When compared with male work participation rate it is observed that at all the levels of education WPR was higher amongst men during the entire period under observation as compared to women. Several factors such as compulsion for men to earn, the greater availability of employment opportunities for men etc may be attributed to lower Female WFP (Verma, 1988, 1990).

BROAD SECTORAL DIVISION OF WORKFORCE

There has been a substantial structural change as a shift in the distribution of the work force is taking place. Besides this shift, there is a higher dependence of female workers on agricultural sector. The Table 4 below presents sectoral distribution of workforce by sex. It reveals that during 2011–12, in rural areas, nearly 75 per cent of women were engaged in agricultural sector while secondary and tertiary sectors shared 17.6 per cent and 8.3 per cent of the female workers, respectively. It is evident that larger percentage of females is working in primary sector while their share is far less in other two sectors as compared to their male counterparts. It is encouraging to note that their share in primary sector is declining not only this the years 2009–10 and 2011–12 observed higher rate of decline as compared to men.

Table 4: Broad Sectoral Distribution of Workers (%) (UPSS) in India

Year/sector	Primary		Secondary		Tertiary	
	Male	Female	Male	Female	Male	Female
Rural						
1987–88	75.2	85.1	11.4	9.6	13.4	5.3
1999–2000	71.4	85.3	12.6	9.0	16.0	5.7
Change over 1987–88	-3.8	+0.2	1.2	-0.6	+2.6	+0.4
2004–200	66.5	83.3	15.6	10.1	17.9	6.5
Change over 1999–200	-4.9	-2.0	+3.0	+1.1	+1.9	+0.8
2009–200	63.0	79.4	19.0	13.0	18.0	8.0
Change over 2004–05	-3.5	-4.1	+3.4	+2.9	+0.1	+1.5
2011–12	59.36	74.94	22.0	16.74	17.63	8.32
Change over 2009–200	-3.6	-4.4	+3.0	+3.7	-0.4	+0.3
Urban						
1987–88	10.4	30.2	32.7	30.9	56.9	38.9
1999–2000	6.6	17.7	32.8	29.3	60.6	52.9
Change over 1987–88	-3.8	-12.5	+0.1	-1.6	+3.7	+14.0
2004–05	6.1	18.1	34.5	32.4	59.4	49.5
Change over 1999–200	-0.5	-0.4	+1.7	+3.1	-1.2	-3.5
2009–10	6.0	14.0	35.0	33.0	59.0	53.0
Change over 2004–05	-0.1	-4.1	+0.6	+0.6	-0.4	+3.5
2011–12	5.64	10.91	35.25	34.0	59.1	52.35
Change over 2009–10	-0.4	-3.1	+0.3	+1.0	+0.1	-0.6

Source: Various Reports of NSSO

The analysis reveals that among rural workers, females have always been more likely to be engaged in the primary sectors, most of which is agriculture, than men, and, correspondingly, less in the secondary sectors. The sectoral employment data also reveals a significant trend towards the feminization of agriculture.

The sectoral distribution of the workers in the urban areas was distinctly different from that of rural areas. In urban areas the share of the tertiary sector was dominant followed by that of secondary sector while primary sector engaged only a small proportion of total workers for both males and females but females outnumbered men even in urban locations.

INDUSTRIAL DISTRIBUTION OF WORKERS

To understand the gender differentials in employment, a comparison of male and female workers in various industrial divisions is essential. Table 5 below provides details of the employment of female and male workers at one digit level according to industry divisions. Employment in agriculture and allied sector dominated women employment and also remained higher as compared to their male counterparts in rural areas as has been revealed by sectoral distribution. Employment of women in manufacturing activities has shown an increasing trend from 1987–88 to 2004–05 but decline minutely by 0.9 percent during 2009–10. Since the same trend was observed for males it may be attributed to declining share of employment in manufacturing sector. Employment of women in growing construction sector continued to increase to 8.3 percent up to 2004–05 and showed a slightly declining trend. The construction sector employed higher percentage of males during, the period under consideration as compared to women. Vast majority of new jobs created between 2004–05 and 2009–10 were in casual employment, mainly in construction sector. Sectors like trade, hotel & restaurant and transport storage and communication employed significantly lower proportion of women as compared to men. The employment of rural women in these sectors is growing at a very lower pace. An increasing trend has been observed in the proportion of rural males engaged in various service sectors such as trade, hotels and transport while for rural females, the increasing trend has been seen for ‘manufacturing’, ‘other services’ and ‘trade, hotel and restaurant’.

In case of urban women employment also, activity wise analysis of employment shows that share of agriculture sector is declining, whereas for males it is almost stagnant during 1999–2000, 2004–05 & 2009–10. This may be attributed to releasing of cultivable land around urban areas.

Table 5: Industrial Distribution (%) of Workers in Rural India (UPSS)

Sector	1987–88	1999–00	2004–05	2009–10	2011–12
Male					
Agriculture and allied	74.5	71.4	66.5	62.8	59.4
Mining & quarrying	0.7	0.6	0.6	0.8	0.5
Manufacturing	7.4	7.3	7.9	7.0	8.1
Electricity, water etc.	0.3	0.2	0.2	0.2	0.3
Construction	3.7	4.5	6.8	11.3	13.1
Trade, hotels & restaurants	5.1	6.8	8.3	8.2	8.0
Transport, storage & communication	2.0	3.2	3.8	4.1	4.2
Other services	6.2	6.1	5.9	5.5	6.4
Female					
Agriculture and allied	84.7	85.4	83.3	79.2	74.9
Mining & quarrying	0.4	0.3	0.3	0.3	0.3
Manufacturing	6.9	7.6	8.4	7.5	9.8
Electricity, water etc.	-	-	-	0.0	0.1
Construction	2.7	1.1	1.5	5.2	6.6
Trade, hotels & restaurants	2.1	2.0	2.5	2.8	3.0
Transport, storage & communication	0.1	0.1	0.2	0.2	0.2
Other services	3.0	3.7	3.9	4.6	5.2

Source: Various Reports of NSSO

A big shift to manufacturing sector for women workers of urban areas has been observed, the share has increased to more than 4.2 percentage points from 1987–88 to 2004–05 but declined slightly during 2009–10 and again increased during next period. More women are employed in manufacturing sector in urban areas over the entire period as compared to men. Services sectors such as trade, hotel, and restaurant and transport storage of communication are dominated by men. Other services which include education health etc. women outnumber their counterparts in urban areas. Table 6 below presents the details of urban employment among various sectors for both rural and urban areas. Some common trends have been observed such as a slight decline in the share of employment in the manufacturing sector which is consistent with the constancy of the manufacturing share in the Indian economy than planned; a decline in the share of agriculture and allied industries; a sharp increase in construction; and a large share of the labour force in urban areas in trade, (Choudhury, 2011; Verma & Awasthi, 2010).

Though the common trend was observed between rural and urban locations, the difference between the share of industrial employment in total male and female employment is found across the entire period under consideration. Women are still overrepresented in the primary sector. In spite of some gradual decline in the percentage of women workers, their share compared to men in agriculture remains significant and has in fact risen due to the shift away from agriculture by men. In rural areas, women workers have shifted into manufacturing; construction; trade,

hotels and restaurants; and community, social and personal services, while urban women gained employment in manufacturing and finance, insurance, real estate and business industrial sectors

The sex segregation of occupations is changing, but slowly. Female stereotypes, such as care-giver and home-based worker, are still being reinforced and may be continued into the next generation if restricted and inferior labour market opportunities for women(Rustagi, 2010).

Table 6: Industrial Distribution (%) of Workers in Urban India (UPSS)

Sector	1987–88	1999–00	2004–05	2009–10	2011–12
Male					
Agriculture and allied	9.1	6.6	6.1	6.0	5.6
Mining & quarrying	1.3	0.9	0.9	0.7	0.9
Manufacturing	25.7	22.4	23.5	21.8	22.4
Electricity, water etc.	1.2	0.8	0.8	0.7	1.4
Construction	5.8	8.7	9.2	11.4	10.7
Trade, hotels & restaurants	21.5	29.4	28.0	27.0	26.0
Transport, storage & communication	9.7	10.4	10.7	10.4	11.7
Other services	25.2	21.0	20.8	21.9	21.4
Female					
Agriculture and allied	29.4	17.7	18.1	13.9	10.9
Mining & quarrying	0.8	0.4	0.2	0.3	0.3
Manufacturing	27.0	24.0	28.2	27.9	28.7
Electricity, water etc.	0.2	0.2	0.2	0.4	1.0
Construction	3.7	4.8	3.8	4.7	4.0
Trade, hotels & restaurants	9.8	16.9	12.2	12.1	12.8
Transport, storage & communication	0.9	1.8	1.4	1.4	2.7
Other services	27.8	34.2	35.9	39.3	39.6

Source: Various Reports of NSSO

WOMEN IN ORGANIZED SECTOR

Employment in organized sector is another indicator of good quality employment. The percentage of women workers in organized sector employment is very low as compared to their counterparts and improving at a very slow pace. Table 7 below provides the percentage distribution of employment of women workers in organized sector by public and private Sector divisions. It depicts that private sector employed larger percentage of women as compared to public sector. The marginal presence of women employment in organized sector may be due to lack of educational/skill attainments among women as the organized sector employment require certain minimum educational qualification.

Table 7: Employment of Women in Organized Sector

Year	Public Sector % of Women	Private Sector % of Women	Total % of Women
2000	14.8	23.9	17.6
2001	14.9	24.2	17.8
2002	15.4	24.3	18.1
2003	15.6	24.5	18.4
2004	15.9	24.8	18.7
2005	16.2	24.8	19.0
2006	16.5	24.1	19.0
2007	16.8	24.7	19.5
2008	17.2	25.0	20.0
2009	17.4	24.2	19.9
2010	31.96	26.63	20.4
2011	31.71	27.83	20.5

Source: Directorate General of Employment & Training, M/o Labour

EMPLOYMENT STATUS OF WORKFORCE

Employed persons are categorized into three broad groups according to their employment status: self-employed, regular employed and casual labourers. Self-employed operate in the labour market for profit emerging from their own enterprise. In India a small proportion of these enterprises employ hired workers, while large section of these work as owners cum workers. Further, a large proportion of these workers are small and petty traders and small and marginal farmers as many a times, their earning levels are as low as that of casual workers. More than 11 percent of the rural self-employed persons resort also to casual labour work in order to supplement household income (DGET, 2009; Verma & Awasthi, 2010, Verma, 2014). Regular salaried/wage employees are those who work in others' farm or non-farm enterprises and in turn receive salary or wage on a regular basis. Casual wage labour are those person who are casually engaged in others' farm or non-farm enterprises and, who in return, receive wages according to the terms of the daily or periodic work contract.

Table 8 depicts the status of employment of workers. The employment status clearly indicates that more women than men were found as casual workers in both rural and urban areas, except during 2004–05 where in case of rural women this number was closer to that of men.

Urban gender difference among casual workers was sharper than that of the rural gender differences among casual workers. Percentage of urban women in wage employment was higher than that of rural women but lagged behind the men during 1999–2000 to 2009–10, though the percentage of women employment was found to be improving during the same period. Percentage of self-employed women was higher in rural areas as compared to urban areas. This may be attributed to the fact that to meet the household requirements women are bound to take up self-employment ventures.

It is observed that share of regular employment in rural areas remained low for men & women both. Decline in urban casual work from 1999–2000 to 2004–05 was noticed for both men & women but was prominent for women. A shift to self-employment is witnessed during the period. A large part of increase in self-employment may be distress driven, led by inability to find adequately paid gainful employment.

Table: 8 Distributions (%) of Workforce (UPSS) by Type of Employment (%)

Type of Employment	1987–88		1999–00		2004–05		2009–10		2011–12	
	M	F	M	F	M	F	M	F	M	F
Rural										
Self-employed	58.6	60.8	55.0	57.3	58.1	63.7	53.5	55.7	54.5	59.3
Regular/wage employed	10.0	3.7	8.8	3.1	9.0	3.7	8.5	4.4	10.0	5.6
Casual labour	31.4	35.5	36.2	39.6	32.9	32.6	38.0	39.9	35.5	35.1
Urban										
Self-employed	41.7	47.1	41.5	45.3	44.8	47.7	41.1	41.1	41.7	42.8
Regular/wage employed	43.7	27.5	41.7	33.3	40.6	35.6	41.9	39.3	43.4	42.8
Casual labour	14.6	25.4	16.8	21.4	14.6	16.7	17.0	19.6	14.9	14.3

Source: Various Reports of NSSO

In urban areas, sharp increase in wage employment was witnessed. This may be attributed to improved educational attainments of women. Casual employment both for urban men and women witnessed a fluctuating trend.

It is observed that in both rural and urban areas, the share of female in regular wage/salaried employees was lower than that shared by males. Share of casual labour in female workforce was higher than that of males in both rural and urban areas.The period 2011–12 observed decline in women casual workforce.

The distribution of workers across self, regular and casual status is widely taken as an indicator of quality of employment and conditions in the labour market. The data on the number of casual workers show distinct signs of casualisation of women workers. Casual wage labourers are one of the most disadvantaged groups in the labour market. While their work contract is terminated and renewed normally on daily basis, low wages and poor working conditions push them into poverty.

OCCUPATIONAL DISTRIBUTION OF WORKFORCE

The occupational profile of women workers portrays a different picture, especially when examined at detailed disaggregated level. Field based research had shown that there are various survival strategies adopted by women for livelihood which are not adequately registered in the occupational coding (National Occupational Classification). Many of these activities fall under not classified elsewhere (Rustagi, 2010).

A glance at table 9 which portrays occupational distribution of women for the year 2011–12 depicts that larger percentage of women in rural areas were working in

skilled agriculture and fishery workers. This category included subsistence and market oriented skilled agriculture and fishery workers. Women were also seen in higher percentage in elementary occupations in rural areas (33.3 percent). These two categories also employed larger percentage of men but their share was lower than the share of women in these occupations. Women lagged behind their counterparts in all the other occupations in rural areas.

Urban areas depicted a little improved scenario where percentage of women was higher than men in occupations classified as technical & associate professionals, and their percentage was 9.5 in these occupations. This is the indicator of more and more women opting for professional and technical education in urban areas. Women were found in higher percentage in elementary occupations, followed by craft and related trade workers in urban India. Percentage of men in occupations such as legislatures, service officials and managers was 17 percent which is fairly higher than women (10.8 percent). Again, it confirms larger participation of women in primary sector occupations.

Table 9: Distribution (%) of Workers by Occupation (2011–12)

NIC Codes	Occupations (NCO 2004)	2011–12			
		Rural		Urban	
		Male	Female	Male	Female
1	Legislature senior officials & managers	4.2	2.0	17.0	10.8
2	Professionals	1.9	1.1	8.1	11.6
3	Technical and associate professionals	1.8	1.9	6.0	9.5
4	Clerks	1.0	0.3	4.9	5.0
5	Service workers & shop and market workers	5.6	2.7	15.4	11.5
6	Skilled agriculture & fishery workers	38.8	47.9	4.1	6.4
7	Craft and related female workers	11.0	10.0	19.0	19.9
8	Plant and machine operators and assembles	4.1	0.6	10.8	2.7
9	Elementary occupations	31.4	33.3	14.5	22.5
10	Others	0.1	0.1	0.1	0.1

Source: NSSO, Employment and Unemployment Survey, 68th Round, 2011–12

INEQUALITY IN WAGES

Level of wages and salaries are the reflection of access to decent and productive employment. Gender pay gap (or gender wage differential), means the difference between the wages earned by women and those earned by men. Various studies on gender gaps in income in India have shown that unexplained difference in wage of male and female is 50 to 60 percent (Duraisamy and Duraisamy, 1996). NSSO data for both 2004–05, 2009–10 and 2011–12 shows that in case of women wage workers, for all categories of employment, considerable wage differentials prevailed in both rural and urban areas.

Table 10 provides average daily wages and salaries paid to salaried regular and casual worker by rural and urban divide. Average daily wages for regular rural women employees was Rs.155.87 per day as against Rs.249.15 for males during

2009–10. The gender bias index in rural areas for regular women employees during 2009–10 was 0.63. Urban regular women employees received better remuneration than rural women. When the remuneration is compared with men it was still less for urban women but gap is narrower than rural areas and gender bias index was 0.82.

Table10: Average Daily Wages (in Rs.) of Regular and Casual Workers (15 to 59 years)

	2004–05			2009–10			2011–12		
	Male	Female	Index of Gender Bias in Wage Payment	Male	Female	Index of Gender Bias in Wage Payment	Male	Female	Index of Gender Bias in Wage Payment
Regular Workers									
Rural	144.93	85.53	0.59	249.15	155.87	0.63	322.28	201.56	0.63
Urban	203.28	153.19	0.75	377.16	308.79	0.82	469.87	366.15	0.78
Casual Workers									
Rural	55.03	34.94	0.63	101.53	68.94	0.68	149.32	103.28	0.69
Urban	75.1	43.88	0.58	131.92	76.73	0.58	182.04	110.62	0.61

Source: Various Reports of NSSO

When compared with 2004–05 gender bias index in wage payments witnessed reduction in wage gaps for both rural and urban areas during the year 2009–10. This is reflection of improvement in wage payments for women over 5 year's period. However, data for 2011–12 did not show any change in case of rural women wage gaps while in urban sector wage gaps reduced. It is worthwhile to mention that even though gender wage differentials existed, rural wages have been rising leading to improvement in the life of rural population.

It has been observed that women causal laborers received lower remuneration than men both in rural and urban areas. This is even low by the standard of many developing countries. Further, it is observed that women casual workers in urban locations received higher wages during both the periods under consideration as compared to their rural counterparts while wage gap in rural areas is less. The gender bias index showed an improvement in wage payment for rural women during 2009–10 as compared 2004–05 and it was 0.68 during 2009–10 as against 0.63 in 2004–05. For urban women casual workers, the gender bias index remained constant during first two periods while gap reduced during 2011–12. Gender disparity in wages in the urban areas usually results from employment of women in lower paying activities.

It is observed that the gender wage gaps tend to be much larger for casual workers than for regular workers especially for urban women. Rural casual workers constitute single largest segment of total workforce of the country. Among rural casual workers agricultural workers occupy a predominant position. Rural agricultural wages are hence considered one of the most prominent indicators of economic wellbeing, not only for agricultural workers but also for rural population as a whole. Agricultural

wages have not only been low but also increasing at slower rate than non-agricultural wages. There may be various factors for higher wages in non-agricultural activities such as enhanced labour productivity through education and training, policy interventions through employment generation programmes etc. In contrast agriculture remains overcrowded leading to lower labour productivity and lower wages.

Both economic and non-economic factors are responsible for a gender biased wage structure. Sociological factors are more dominant in deciding gender roles, hence affecting gender work participation. A number of studies have established that gender differentials in wage payments are actually the outcome of labour market discrimination which is generally biased against women (Jacob and Lim, 1992; Verma, 1988, 1998).

CONCLUSION

The paper concludes that gender gaps in employment and wages exist in India besides economy is growing fast. LFPR of women is declining; this phenomenon of decline is governed primarily by increasing participation of women in education due to improved economic conditions. Majority of rural women workers are concentrated in primary sector activities such as agriculture, hunting, forestry, fishing, etc. Women are overrepresented in the agricultural sector, and if more industrialized regions are excluded, almost half of female employment can be found in this sector alone.

Representation of women in organized sector is very low. The employment status clearly indicates that more women than men were found in casual workers category in both rural and urban areas. Percentage of self-employed women was higher in rural areas as compared to urban areas. This may be attributed to the fact that to meet the household requirements women take up self-employment. Women were also seen in higher percentage in elementary occupations in rural areas.

NSSO data shows that in case of women wage workers, for all categories of employment, considerable wage differentials prevailed in both rural and urban areas. They are not only concentrated in low paid occupations in the unorganized sector and in casual work but are subjected to discrimination in wage payments

Increased participation of women in labour market has a great potential to contribute in growth and development of the economy. There is a need to encourage greater participation of women in labour market by providing decent and productive employment avenues and investing in women education and training. Since the concentration of women is higher in primary sector, there is a need to pay a greater attention towards improving productivity of agriculture. To achieve this appropriate policies interventions dealing with gender discrimination in labour market need to be put in place.

REFERENCES

[1] Bhalla, S. and Kaur, R. (2011), "Labour Force Participation of Women in India, Some Facts, Some Queries", Asia Research Centre Working Paper No. 40.

[2] Phelp. E.S. (1972), "The Statistical Theory of Racism and Sexism", *American Economic Review*, Vol. 62, No. 4.

[3] Becker, Gary (1957), *The Economics of Discrimination*, Chicago University Press, Chicago.

[4] ILO (2009), "Global Employment Trends for Women", March.

[5] Anupama (2010), "Gender Wage Differentials in Punjab: A Case of Urban Malwa Region", *Manpower Journal*, July-September, Vol. XLV, No.3.

[6] Rustagi, Preet (2010), *Employment Trends of Women in India*, ILO Asia Pacific Paper Series.

[7] Himanshu (2011), "Employment Trends in India: A Re-examination", *Economic and Political Weekly*, September10, Vol. XLVI, No. 17.

[8] Chowdury, Subhanil (2011), "Employment in India: What does the Latest Data Show?", *Economic and Political Weekly*, Vol. 46, No. 32.

[9] DGET (2010), "Annual Report to the People on Employment", Ministry of Labour and Employment.

[10] Duraisamy, M. and Duraisamy, P. (1996), "Sex Discrimination in Indian Labour Market", *Feminist Economist*, Vol. 2, No.2.

[11] FAO, ILO, IFRD (2010), "Gender Dimensions of Agricultural and Rural Employment: Differentiated Pathways out of Poverty Status, Trends and Gaps", Food and Agriculture Organisation, International Labor Organization and International Fund for Rural Development.

[12] Jacob, J. and Lim, S. (1992), "Trends in Occupational and Industrial Segregation in 56 Countries–1960–80", *Work Occupation*, Vol. 19, No. 4.

[13] Verma, NMP (1988), "Wage and Employment Structure of Drought Prone Agriculture: Analysis of a Survey", Manpower Journal, Vol., XXIV, No 1 April-June.

[14] Verma, NMP (1990), "Female Labour and Work Participation: Validity of the Existing Hypothesis", Manpower Journal, Vol. XXVI, No. 4, October-December.

[15] Verma, NMP (1998), "Determinants of Women Workers Participation: Notes on Some Interdisciplinary Controversies", Indian Journal of Industrial Relations, Vol, 34, No. 1, July.

[16] Verma, NMP and Awasthi, IC (2010), "Contractual Employment in Indian Labour Market: Emergence and Expansion", Concept Publishering House, New Delhi.

[17] Verma, NMP (2014), "Economic Miseries among Social Group: A Study of UP", Research India Publications, New Delhi.

Conceptualization of Environment and Sustainable Development: A Gender Geographical Perspective

Sabina Bano[1]

Abstract: *Biosphere is unique in the sense that it is the only sphere that sustains life. Life on earth passed many stages of dynamic evolution. Starting from evolution human being has tried to achieve progress in their endeavor to achieve the development. On the major drawbacks of the concept development has been that it is often equated with growth. Development is a holistic concept. It has to be culturally compatible, socially acceptable, ecologically viable and politically participative. Earlier the concept of development did not probe the linkages between individual and its environment which leads to victimization of women in the development process.*

From the very beginning women's work as the active, labour based interaction with the material world forms an important determinant of women's interaction with the natural resources and ecological processes. Their work, and therein the interaction with the physical environment, is gender determined. So this paper is an attempt to discuss environment and sustainable development from the gender perspective.

Keywords: *Women, Development, Sustainable Development, Women Environment and Development (WED), Women and Environment Management (WEM).*

INTRODUCTION

Environment is the sum of substances and forces external to the organism in such a way that it affects the organism's existence. In relation to human, the environment constitutes of air, land, water, flora and fauna because these regulate the man's life. Environment does not mean only our immediate surroundings but also a variety of issues connected with human activity, productivity, basic living and its impact on natural resources such as land, water, atmosphere, forests, dams, habitats, health, energy resources, wild-life etc. Like other animals, human beings depends on environment and also becomes an integral part of an ecosystem. Starting from their evolution human being has tried to achieve progress. In their endeavour to achieve that, they have now threatened the sustainability of the earth. Development equated with the change of two dimensional cultural landscapes into three dimensional forms by the human interaction with environment. One of the major drawbacks of the concept of development has been that it is often mistaken with growth. Growth can bring money to individuals. It can ensure the prosperity in terms of infrastructure, transport or communication. But it never recognizes the multidimensional needs of individuals. Yes Development is a holistic concept. It has

[1]*Assistant Professor, Department of Geography, Faculty of Social Science, Khwaja Moinuddin Chishti Urdu, Arabi-Farsi University, Lucknow, India*
E-mail: sabina.dhn@gmail.com

to be culturally compatible, socially justifiable, ecologically viable and politically participative. It also incorporates accessibility, availability and equity of means for overall distribution. But as naturally resources are not available in a uniform way. Nature also sets certain choices for the development (Verma *et al*., 2010).

LITERATURE REVIEW

Over the last forty years, the relationship of women with development process has been discussed at great length. Women's concerns were brought to focus when it started becoming clear that planned development efforts, which were meant to improve the lives of the whole community and environment, were either not helping women, or were actually deteriorating environment. Planners assumed that development programmes would automatically benefit all the members of the community, but this assumption was found to be invalid almost everywhere. In the 1950s when the newly independent countries began planned development, the model adopted was from the west. It was thought that industrialization and modern agriculture would lead in growth and development, and therefore, the focus was on industrialists, landowners, rich farmers and entrepreneurs. Government of developing countries are 'betting on the strong', assuming that the benefits of development would 'trickle down' to the poor majorities, and gradually whole community would prosper ultimately is not ever fruitful proved. During the 1950s and 1960s, development theory and practice was based on the idea that, with western assistance accompanied by a western definition about what it meant to modern newly independent states in the south could 'take off' into self sustained economic growth (Nalini Visvanathan, 1997).

Separate literatures on women, environment and development illustrate the invisibility of women in development process. Rachel Carson's works The Sea Around Us (1950) and Silent Spring (1962) knock the door of environmentalists for its awareness. She challenged the directions, priorities, and values of the science industry government complex: "Man's attitude toward nature is today critically important simply because of his new found power to destroy it". Supporting the voice English Political scientist Barbara Ward put on the question for biosphere and techno sphere which are out of balance and deep in conflict (Ward and Dubos, 1972). Even specific model was prepared 'The Limits to Growth' (1972) by Dennis Meadows and others to convince that major problems facing humanity are also so intricately interrelated that traditional institutions and policies will not able to cope them. As crystallization is started in the early 1970s with growing interest in women's relations with environment in the countries of south emerged within the development discourse. Women, environment and development (WED) as a theme within the development debate has increasingly attracted international attention.

During the last four decades it has been taking shape via a number of different disciplines. Basically Geography discipline stimulates curiosity about the diverse people, places and environments of the earth's surface and thereby enhancing the spatial and ecological understanding about it. It leads to understand the interdependence of the economy and environment for sustainable development. Progress of human civilization and consequent growth in the consumption natural resources is noticed all part of the countries. Such consumption not only deprives us of resources needed for future development but also contributes to the world's environmental degradation. Debate started on the basis that most of the natural resources are not indefinite and not infinitely exploitable. The 'oil crisis', initiated by oil producing countries brought this matter to all countries. This oil crisis discussion divided the world map into two parts i.e. north world and south world. Development planners began to give serious attention to the need for more systematically global energy planning for future. So it was very clear that south world would depend on their energy needs on wood fuel and that oil or other energy sources would be simply very expensive for them. On the other hand roles and responsibilities of women are expected in the patriarchal societies of the developing countries. Their task were collection of wood-fuel, water for drinking, cooking food, looking after animals and producer and care taker of babies, etc. Interestingly it was women, in their role as users of wood, were to become the target group for the strategy to grapple with the future trends of diminishing such resources (Braidotti, Charkiewics, Housler & Wieringa, 1994). A powerful image emerged of poor families of south, with too many children consuming more fuel and the image was having no choice that's destroyed the environment. Study on deforestation of Himalayan region was pointed out that commercial tree–falling and expansion of agricultural region is the major cause for the shortage of wood rather than fuel consumption (Sarin, 1989).

Before this it was Boserup's work, an interest in women's role in agriculture as well as in rural development at large had emerged. In the light of global economic problems, increasing environmental degradation and the feminization of poverty in the south debate on the specific effects of these processes on women gained momentum. It is really important to note that the WED debate started from within environment-related disciplines such as forestry (fuelwood energy) and agriculture in the context of development. It became increasingly recognized that women had to spend more time and energy to obtain fuel, water and fodder for household use. Women were subsequently seen as the major victims of the crisis, emerging as the poorest of the poor.

At the NGO Conference held parallel to the 1972 UN Conference on the Human Environment in the Stockholm, the initiatives of local people in India to protect their forests-widely known as Chipko Movement-were reported by Sunderlal Bahuguna, the movement's leader. The success of the Chipko women's activities later inspired

other local initiatives in the south, and also those wishing to stimulate bottom up, people–oriented development work. Later at Nairobi Forum, held parallel to the UN Women and Development Conference, women's action and special role in environmental management were represented and there they appears as environmental managers whose involvement was crucial to the achievement of sustainable development. These studies were powerful tools to further the Women, Environment and Development debate and stimulate international recognition of women's problems in relation to natural resource management. At both occasions for the first time attention was asked for women's position on relation to environment and natural resources at the international level.

The Brundtland Report, Our Common Future, published in 1987, promoted long-term strategies for achieving sustainable development (development that meets the needs of the present without compromising future generation's ability to meet theirs) and highlighted the importance of environmental issues in the development process. In the years following publication of the Brundtland Report, the WED debate focused on the imperative for women's involvement in strategies and programmes aimed at sustainable development. Gradually, 'women, environment and development' became 'women, environment and sustainable development'. And in the late 80's national and international events organized on the WED theme gained increased momentum. The image of poor women in the South as victims became transformed into images of strength and resourcefulness. In the wider debate on sustainable development women were increasingly promoted as 'privileged environmental managers' and depicted as possessing specific skills and knowledge in the environmental care. During the process for the preparations of the UN Conference on Environment and Development (UNCED), Rio 1992, many women's organizations and individuals played a major role in putting gender issues on the agenda; and finally in Agenda 21 it was underlined that environmental sustainability for life on this planet was unthinkable without considering the women who make up more than one-half of the world's population. At the World Summit for Social Development, in Copenhagen in 1995, women were able to bring worldwide attention to the fact that majority of people living in poverty are women and that the majority of women are poor. It was highlighted there, that women must be involved in decision making to bring about the necessary changes (Shiva and Dankelman, 1992).

Since the 80's the connection between Gender, Environment and Development (GED) has been emerging as an area of special interest for researchers, policy makers and activists. GED as a theme has been extended from occasional research and scattered activism into a worldwide NGO network, and entered the expression at highest levels of international policy. Gender as a term used here refers to culturally and historically specific concepts of feminity and masculinity, and the power relations between men and women (Schrijivers 1993). Along with factors

such as class, age, race and ethnicity, gender is a fundamental concept in understanding human behaviour and social processes. As gender is also fundamental in understanding human interactions with the environment, it is better to focus on gender than to focus on women only. With respect to natural resources gender shapes the sexual division of labour, knowledge, responsibility and control. Because of gender, women play a special role in managing these resources.

In conceptualizing women's work, Maria Mies (1986), coming from a Marxist background, developed her argument by defining women's role in child bearing and rearing as work. According to scholar reproduction, that is providing the basic necessities for family survival, constitutes women's closer relation to nature. Through this double role women's understanding of nature is superior to men's. Women not only work closer to nature, women are nature because they give birth and nurture their children, and hence they are double exploited within patriarchal society globally. Gita Sen and Caren Grown (1987) pointed clearly that women are neither responsible for the crisis in the world system, nor can they expected to resolve it. Whereas scholars support the idea that investing in women would be a major resource for improving environment. In fact poor rural women have also been identified as 'day-to-day environmental managers' (Dankelman and Davidson 1988)

Shiva (1989), develops her ideas of an alternative development model based on traditional subsistence agriculture. She introduces the notion of the feminine principle (prakriti), a term originating in Hindu cosmology denoting the life giving force she associates with women. She equates the feminine principle with women in real life and constructs the practical relation that women have with nature in Indian rural reality as the embodiment of the feminine principle. Wonderfully she addresses that this relation needs to be recovered as the basis for a truly sustainable development model. In India, according to her, this mode existed before the era of colonialism. Under colonialism and later under the influence of the development process, a capitalist mode of development and green revolution technology has penetrated India's rural economies, a process that destroyed the economic base of small scale local survival agriculture. Due to unsustainably large scale, mechanized market oriented agriculture leads to marginalization of the majority of the south's small scale farmers, particularly poor women.

The entire agricultural typology of the north world has been questioned and reflects dominant mode of development patriarchal and based on a reductionist model of science and technology that serves the global market and is effectively destructive for women, nature and all 'others' i.e non western people. Basically western model propagates monoculture plantation techniques in both forestry and agriculture in service of the market and capital accumulation. In the present scenario subsistence agriculture in India is replaced tribal people's culture with a large number outside the caste system who, even today, is not integrated into society. Shiva's traditional society model has not accounted for highly exploitative structures along the axes of

race, class and caste within Indian society today. Ignoring patriarchal structures she focused on the state and global economy for environmental crisis. The scientific and technological advancements have a profound impact on the development process. Usually the neglect of women and destruction of the environment within the development process are compared. Side by side women and environmental interests to a certain extent become identical: the cause of the deterioration of the environment that leads to poor women. Women are seen as the answer to the crisis; women have the solutions; they are privilege knower of natural processes. Agrawal (1989), like Shiva draws on experience in India, but unlike Shiva she asserts the need to contextualize the fact that poor rural women have emerged as main actors in the environmental movements in India because, due to their marginality, they have had to maintain a reciprocal link with nature. For Agarwal, the woman/ nature link has been socially and culturally constructed, not biologically determined. Another analysis of women's experiences of environmental degradation in different regions in South, scholar contests the northern developmentalist myth that the poor are destroying their environment, the population growth is responsible for its deterioration and that local people in the South need to be thought by Northern 'experts' how to recover their environment (Wiltshire, 1992). Nearly 73% of women in Asia concentrate on obtaining basic demand (Fuel, food and shelter), from the nearby forests (United Nation, 2000). When domestic fuel becomes more commercialized; and collection is oriented to large scale organized sale and charcoal making, men's participation increase. But so long as technology and marketing are absent, the task of fuel gathering is regulated to women. In the development process from the very beginning these two classes (Men and Women) vary with have and have not. Environment give the opportunities but it's the accessibility towards its resources vary between male and female due the nature of the society which itself is a complex entity.

CONCLUSION

Traditionally, women have been responsible for management of environment (WEM) subsistence and survival for water, food, fuel, fodder and habit, though they rarely get the credit of nurturing these support systems. Added to these depletion of environment, exacerbates women's problems in a way very difficult from that of men. The challenge is to reestablish the symbiosis between communities, women and natural resources and reverse the trend of the negative impact of existing development paradigms. No doubt poor village women are the worst sufferers of the environmental destruction. Every day they have to go on long march in search of fuel, fodder and water irrespective of their age. Water, fuel, fodder, building materials even food to some extent are gathered freely from the immediate environment but urbanization and advance of cash economy have greatly affected the country's base. Environmental destruction exacerbates women's problems ranging from visible and non-visible in a following way:

- Due to industrialization and very fast growth rate of urbanization again the more sufferer are women of the rural India.
- Changing Landuse is adversely affecting the choices for working pattern of women.
- Deterioration of exhaustible resources as well as reduction of the quality of renewable energy resources is occurring.
- Water scarcity leads to more vulnerability for women.
- It restricted the mobility and adversely affect on choices
- High pollution is influencing mental map that leads to cosmetic industry which grow women's insecurity about their looks, etc.

Keeping in view the inherent capabilities of women in the management as well as the need for women entrepreneurship, empowerment, educational and vocational training in various fields, communication skills, creativity and innovation, quality management and control, inventory and production management need to be strengthed throughout the world. So to achieve this, resource and strength of women need to be channelized to develop their full potential so as to take their rightful place and equal partner in all spheres. Further there is need to readdress the base of assigning roles and responsibility of women for the sustainable development of Environment and focus on distinct and women centered eco-friendly environmental policies are needed. Seriously no development is complete without reference to human rights. Sustainable development must encourage local self reliance including relative self sufficiency for everyone. Such self reliance should be built from local knowledge, traditions, skills and justifying their roles, tasks and control over resources. So that a healthier and more productive environment could develop and produce a sustainable environment for everyone.

REFERENCES

[1] Agrawal, Bina (1989), "Neither Sustenance nor Sustainability: Agricultural Strategies, Ecological Degradation and Indian Women in Poverty", Bina Agarwal (ed) *Structures of Patriarchy*, New Delhi: Kali for Women.
[2] Boserup, E. (1970), *Women's Role in Economic Development*, St. Martin's Press, New York.
[3] Braidotti, R. Charkiewics, E., Hausler, S. and Wieringa, S. (1994), *Women, the Environment and Sustainable Development: Towards a Theoritical Synthesis*, Zed Books, London.
[4] Carson, R. (1950) *The Sea Around Us*, Western Publising, Geneva
[5] Carson, R. (1962) *Silent Spring*, Fawcett Publication, Greenwich
[6] Dankelman, I. and Davidson, J. (1988), *Women, Environment in the Third World: Alliance for the Future*, Landon: Earthscan
[7] ELC (1985), *Women and the Environmental Crisis*, A Report of the Proceedings of the workshops on Women, Environment and Development.
[8] Maria Mies (1986), *Patriarchy and Accumulation on a World Scale. Women in the International Division of Labour*, London: Zed books.
[9] Sarin (1989), "Improved Stoves, Women and Domestic Energy: The Need for a Holistic Perspective", In Vikund, E. (ed.) *Nordic Seminar on Domestic Energy in Developing Countries*, Lund Centre for Habitat Studies, Lund.
[10] Sarin, Madhu (1991) "Improved Stoves, Women and Domestic Energy", in *Environmental and Urbanization*, London, Zed books

[11] Schrijivers, J. (1993), "Motherhood Experienced and Conceptualized: Changing Images in Srilanka and the Neetherland", in Denial Bell, Pat Caplan and Wazir Jahan Kaim(eds) *Gendered Fields: Women, Men and Ethnography*, pp. 111–119, London, Routledge.
[12] Sen, Gita and Grown, Caren (1987), *Development, Crises and Alternatives Visions: Thirld World Women's Perspectives*, Monthly Review Press, New York.
[13] Shiva, Vandana (1988), *Staying Alive: Women, Ecology and Development*, Zed Books, London.
[14] Shiva, V. and Dankelman, I. (1992) "Women and Biological Diversity", *Growing Diversity, Genetic Resources and Local food Security*, A.O. David Cooper (ed.), London Intermidiate Technology Publication.
[15] United Nations (2000), *The World's Women 2000; Trends and Statistics*, Social Statistics and Indicators, Series K, No. 16, UN, New York
[16] Visvanathan, N., Duggan, L., Nisonoff, L. and Wiegersma, N. (1997), *The Women, Gender and Development Reader* (ed.), Zuban Publication, New Delhi.
[17] Ward, B. and Dubos, R. (1972), *Only One Earth: the Care and Maintenance of a Small Planet*, Penguin Books, Harmondsworth
[18] Wiltshire, Rosina (1992), "Environment and Development: Grass Roots Women Perspectives, Development Alternatives with Women for a New Era", (DAWN).
[19] http://www.eolss.net/eolss-sampleallchapters.aspx
[20] Verma, NMP et.al. (2010), Correlates of Poverty and Malnutrition: A Study of Indian Women and Children`, International Journal of Economics and Business Modeling, Vol. 1, No.2.
[21] Verma, NMP (1990), Female Labour and Work Participation: Validity of the Existing Hypothesis`, Manpower Journal, Vol. XXVI, No.4, October-December.
[22] Verma, NMP (1998), Determinants of Women Workers` Participation : Notes on some Interdisciplinary Controversies`, Indian Journal of Industrial Relations, Vol, 34, No.1, July.

Pedagogical Transformation for Teachers in 21st Century

A.H. Rizvi[1]

Abstract—*Of late, students are digital but teachers are traditional. Across the world, smart phones, i7 computers, digital cameras, and MP3 players are revolutionizing the college life. In this paper, the researcher has tried to analyze, firstly, traditional pedagogy, secondly, identified latest pedagogy for new generation teachers of 21st century. The researcher recommends that the teaching would be highly effective if the teachers start to use the recent multimedia technologies with some modifications in the conventional mode of teaching. The use of computers may be very well practiced in present scenario, where the use of such technology is highly possible, but there must be some sort of innovation which can also be practiced in an environment where such use of technology is on its way to growth. In 21st century, the use of humor, role playing, Flander's interaction approach, cooperative learning in hetrogenous society etc. are the latest methods that can be used in classrooms.*

Keywords: *Traditional, Innovative, Pedagogy, Teacher, 21st Century*

INTRODUCTION

Education is a light that shows the mankind the right direction to surge. If education fails to inculcate self-discipline and commitment to achieve in the minds of student, it is not their fault. We have to convert education into a sport and learning process has to generate interest in the students and motivate them to stay back in the institution than to run away from it. Education should become a fun and thrill to them rather than burden and boredom. It is an integral part of their growth and helps them become good citizens. Education is an engine for the growth and progress of any society. It not only imparts knowledge, skills and inculcates values, but is also responsible for building human capital which breeds, drives and sets technological innovation and economic growth. In today's era, information and knowledge stand out as very important and critical input for growth and survival. Rather than looking at education simply as a means of achieving social upliftment, the society must view education also as an engine of advancement in an information era propelled by its wheels of knowledge and research leading to development.

Across the world, information technology is dramatically altering the way students; faculty and staff learn and work. Internet-ready phones, handheld computers, digital cameras, and MP3 players are revolutionizing the college life. As the demand for technology continues to rise, colleges and universities are moving all sorts of student services, from laundry monitoring to snack delivery online. At Columbia

[1]*Maulana Azad National Urdu University, Hyderabad, India*
E-mail: drahrizvi110@gmail.com

University, a real-time Web-based service called Laundry View lets students log on to a Web-based system to see which washing machines are free before they head to the laundry room. They can monitor their wash and can even program the service to e-mail them when their load is done. Technology is also changing the classroom experience. The classrooms at New York University's Leonard N Stern School of Business feature all sorts of conveniences for students and teachers. For instance, the room is wired with cameras for photographing whiteboards, so students can receive the images as digital files. In addition, tablet PCs, compact computers that allow you to write notes directly onto the screen with a special pen, replace the archaic projector. With the tablet technology allow professors to make notes on charts and spreadsheets and send them directly to their students' PCs and he will get a feedback from each student.

From the above, we can make out that the Information and communication technology has made many innovations in the field of teaching and also made a drastic change from the old paradigm of teaching and learning. In the new paradigm of learning, the role of student is more important than teachers. The concepts of paperless and penless classroom are emerging as an alternative to the old teaching learning method. Nowadays there is democratization of knowledge and the role of the teacher is changing to that of facilitator. We need to have interactive teaching and this changing role of education is inevitable with the introduction of multimedia technology and the spawning of a technologically-savvy generation of youths.

WHAT IS PEDAGOGY?

It is the method and practice of teaching, especially as an academic subject or theoretical concept. Pedagogy is leading people to a place where they can learn for themselves. It is about creating environments and situations where people can draw out from within themselves, and hone the abilities they already have, to create their own knowledge, interpret the world in their own unique ways, and ultimately realize their full potential as human beings. It's certainly not about absolutes, but is more likely to be about uncertainties. Good pedagogy is about guiding students to learning. It's about posing challenges, asking the right questions, and presenting relevant problems for learners to explore, answer and solve. True pedagogy is where educators transport their students to a place where they will be amazed by the wonders of the world they live within.

In recent years interest has grown in 'pedagogy' within English-language discussions of education. The impetus has come from different directions. There have been those like Paulo Freire seeking a 'pedagogy of the oppressed' or 'critical pedagogy'; practitioners wanting to rework the boundaries of care and education via the idea of social pedagogy; and, perhaps most significantly, governments wanting to constraint the activities of teachers by requiring adherence to preferred 'pedagogies'. A common way of approaching pedagogy is as the art and science (and

maybe even craft) of teaching. As we will see, viewing pedagogy in this way both fails to honour the historical experience, and to connect crucial areas of theory and practice. Here we suggest that a good way of exploring pedagogy is as the process of accompanying learners; caring for and about them; and bringing learning into life (Verma, 2015, 2016).

METHODOLOGY

The traditional methods of teaching are critically examined; evaluated and innovative teaching-learning methods have been identified.

ANALYSES OF TRADITIONAL PEDAGOGY

In the pre-technology education context, the teacher is the sender or the source, the educational material is the information or message, and the student is the receiver of the information. In terms of the delivery medium, the educator can deliver the message via the "chalk-and-talk" method and overhead projector (OHP) transparencies. This directed instruction model has its foundations embedded in the behavioral learning perspective (Skinner, 1938) and it is a popular technique, which has been used for decades as an educational strategy in all institutions of learning. Basically, the teacher controls the instructional process, the content is delivered to the entire class and the teacher tends to emphasize factual knowledge. In other words, the teacher delivers the lecture content and the students listen to the lecture. Thus, the learning mode tends to be passive and the learners play little part in their learning process (Orlich *et al*., 1998). It has been found in most universities by many teachers and students that the conventional lecture approach in classroom is of limited effectiveness in both teaching and learning. In such a lecture students assume a purely passive role and their concentration fades off after 15-20 minutes. Teaching in classroom using chalk and talk is "one way flow" of information.

- Teachers often continuously talk for an hour without knowing students response and feedback.
- The material presented is only based on lecturer notes and textbooks.
- Teaching and learning are concentrated on "plug and play" method rather than practical aspects.
- The handwriting of the lecturer decides the fate of the subject.
- There is insufficient interaction with students in classroom.
- More emphasis has been given on theory without any practical and real life time situations.
- Learning from memorization but not understanding.
- Marks rather than result oriented.

For more than 150 years a set of pedagogies reflecting the priorities of the Industrial Age has been embedded in the process of mass schooling. The hallmarks of these pedagogies are found in teacher-controlled learning where deconstructed and reconstructed information is presented to same-age of students in standardized classroom settings.

INDUCTION OF INNOVATIVE PEDAGOGICAL TOOLS

The researchers suggest some of the methods can very well be applied by the modern teachers. As the researchers feel that basically the core objective of teaching should never be deviated by the use of an innovative method. The following methods which are suggested are an extension to the traditional methods of teaching.

TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE

It is complex interaction among Pedagogy, Content and Knowledge. The interaction of these bodies of knowledge produces flexible knowledge, essential to integrate technology into teaching.

PERSONALIZED LEARNING

One-size-fits-all approaches to school knowledge and organisation are ill-adapted to individuals" needs and to the knowledge society at large. Personalization can mean adopting a more holistic, person-centred approach to learner development, as well as more demand-driven, market-friendly approaches to system change.

Learning sciences research suggests that more effective learning will occur if each learner receives a customized learning experience. Different learners enter the classroom with different cognitive structures and as we know from neuroscience, individual characteristics are far from fixed. Therefore, students learn best when they are placed in a learning environment that is sensitive to their pre-existing structures and that is flexible enough to adapt teaching strategies to individual needs. Formative assessment can be seen as an essential element of those personalised learning approaches, as it is characterized by the continual identification of and responses to students" needs.

MIND MAP

Mind maps were developed in the late 60s by Tony Buzan as a way of helping students make notes that used only key words and images, but mind map can be used by teachers to explain concepts in an innovative way. They are much quicker to make and much easier to remember and review because of their visual quality. The nonlinear nature of mind maps makes it easy to link and cross-reference different elements of the map. Mind Maps are also very quick to review, as it is easy to refresh information in your mind just by glancing once. Mind Maps can also be effective mnemonics and remembering their shape and structure can provide the cues

necessary to remember the information within it. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes. The key notion behind mind mapping is that we learn and remember more effectively by using the full range of visual and sensory tools at our disposal. Pictures, music, color, even touch and smell play a part in our learning armory will help to recollect information for long time. The key is to build up mind maps that make the most of these things building on our own creativity, thinking and cross linking between ideas that exist in our own minds. As the recent research point that any particular information explained with the help of graph charts make a high impact in the minds of the people and keeping this as the core aspect the teachers may try to picturize the concepts and show the same to the students.

COOPERATIVE AND COLLABORATIVE LEARNING

In global education, when the students of heterogeneous society i.e. of different religion, race and culture takes admission in one institution, the problem of teaching-learning process emerges. Its solution is cooperative and collaborative learning. Eg. Nalanda University and South Asian University in India.

Cooperative and collaborative learning is a teaching-learning process, where students of mixed levels of ability are arranged into groups and rewarded according to the group's success, rather than the success of an individual member. Cooperative learning is sometimes thought of simply as 'group work,' but groups of students working together might not be working collaboratively.

A group of students discussing a lecture or students from different schools working together over the Internet on a shared assignment are both examples of collaborative learning.

In small groups, students can share strengths and also develop their weaker skills. They develop their interpersonal skills. They learn to deal with conflict. When cooperative groups are guided by clear objectives, students engage in numerous activities that improve their understanding of subjects explored.

Cooperative and collaborative learning differ from traditional teaching approaches because students work together rather than compete with each other individually.

Collaborative learning can take place any time students' work together--for example, when they help each other with homework. Cooperative learning takes place when students work together in the same place on a structured project in a small group. Mixed-skill groups can be especially helpful to students in developing their social abilities.

The skills needed to work together in groups are quite distinct from those used to succeed in writing a paper on one's own or completing most homework or "seatwork" assignments. In a world where being a "team player" is often a key part of business success, cooperative learning is a very useful and relevant tool.

Because it is just one of a set of tools, however, it can easily be integrated into a class that uses multiple approaches. For some assignments individual work may be most efficient, while for others cooperative groups work best.

The benefit of positive learning is deeper understanding of content, increased overall achievement in grades, improved self-esteem, and higher motivation to remain on task. Cooperative learning helps students become actively and constructively involved in content, to take ownership of their own learning, and to resolve group conflicts and improve teamwork skills.

HUMOROUS TEACHING

Everyone loves a teacher with an infectious sense of humor. Looking at the lighter side of life not only fosters cordial relations between professors and students, but also provides welcome relief while trying to follow a difficult lecture on a complicated subject. When there is a willingness to change, there is hope for progress in any field. Teaching is a challenge. Learning is a challenge. Combining both effectively is a challenge. Being humorous is a challenge. However, laughing is easy. We are convinced both by experience and research that using humour in teaching is a very effective tool for both the teacher and student. Humor strengthens the relationship between student and teacher, reduces stress, makes a course more interesting and if relevant to the subject, may even enhance recall of the material. Humor has the ability to relax people, reduce tension, and thereby create an atmosphere conducive for learning and communication. Numerous studies in the field of advertising have noted that humor is the most effective tool for enhancing recall of advertisements. It is easy to create a humor in the classroom by reading books of jokes and to listen to professional comics. The students should be encouraged to take notes, especially to learn about the professionals' use of such techniques as exaggeration, pauses, and timing. Observe reality and exaggerate it-much humor lies in observations about real life and truthful situations. In conclusion, humor not only plays an important role in the healing process but is also very important in education.

Z TO A APPROACH

This approach attempts to explain the application part of a particular concept first. The teacher should explain the application of a particular concept first and explain the effects of such applications. For example in management subject-motivation is explained in a manner that the organization get extensive benefits out of using some techniques like promotions and awards. So here the use of promotion is explained first and later students would get interest in knowing what are promotions and awards. The teacher starts explaining what is promotion and explains what motivation theory in management is another example we can try is that in accounting the Income statement and Balance Sheet can be explained first and later drawing their attention to double entry system of book keeping.

MNEMONICS WORDS–WORDS–WORDS APPROACH

Here the teacher is not supposed to talk on a particular concept for a quite long time. But to make it clear to the students he can just go on saying mnemonics or its associated meaning in words. Here he goes on saying only words instead of sentence, and once they come to a basic understanding of the meaning of a particular concept then the teacher will explain in sentences. For example in teaching language courses this technique can be used as an effective medium by the teacher to develop word power.

ROLE PLAYING AND SCENARIO ANALYSIS BASED TEACHING

Role playing and scenario analysis is mostly used in organizations that try to analyze a problem pertaining to the organization, and this is also used in management institutions. But the similar kind of practice can be tried in other specialization too like science and engineering. Science and engineering courses have practical but in support of those practical if students are given a scenario and other options to solve a particular issue, then the students are exposed to decision making in a given environment. For example, in teaching accounting the role of accountant can be explained by role playing technique. Invoice and bills can be given to students and asked them to assume the role of accountant. Here the real entries pertaining to transactions are made by the student and this is more practical approach to teaching where theory is supplemented by proper practical knowledge. Similar kind of technique can be applied in management, engineering and science courses.

CYBER INFRASTRUCTURE

It is integration of computing, data and networks, digitally-enabled sensors, observatories and experimental facilities. It is visionary approach for future.

Gains in computational speed, high bandwidth networking, software development, databases, visualization tools, and collaboration platforms are reshaping the practices of scholarship and beginning to transform teaching Cyber infrastructures developed for research purposes also create intriguing opportunities to transform work and education in ways that parallel the shifts advocated in this study.

Imagine an interdisciplinary course in the design and construction of large public works projects, attracting student-faculty teams from different engineering disciplines, urban planning, environmental science, and economics; and from around the globe. To develop their understanding, the students combine relatively small self contained digital simulations that capture both simple behavior and geometry to model more complex scientific and engineering phenomena.

Computational models from faculty research efforts are used to generate numerical data sets for comparison with data from physical observations of real transportation systems obtained from various locations.

LEARNING THROUGH METACOGNITIVE SKILLS

Metacognition is 'thinking over thinking'. More precisely, it refers to the processes used to plan, monitor and evaluate one's understanding and performance. Metacognition reflects an individual's critical awareness of how they think and learn, and their assessment of themselves as a thinker and learner. Metacognition is not solely an intrinsic talent; it can be taught and cultivated. Teachers can cultivate a metacognitive culture that promotes greater learning by giving learners 'permission' to identify their confusion, asking them what they find confusing and acknowledging their difficulties.

FLANDERS INTERACTION ANALYSIS TECHNIQUE

The teaching-learning situations in the class-room involve interaction between the teacher and the students. The success of a teacher may be judged through the degree of effectiveness of his teaching which may be objectively assessed through his class-room behavior or interaction. Thus a systematic or objective analysis of the teacher's classroom interaction may provide a reliable assessment of what goes on inside the class-room in terms of teaching and learning. Class-room interaction analysis refers to a technique consisting of objective and systematic observation of the class-room events for the study of the teacher's class-room behavior and the process of interaction going inside the class-room.

Flander categorized the process of interaction between teacher and student in following manner:

TEACHER TALK

Direct Influence

Lectures, asking questions, giving directions, criticizing or justifying

Indirect Influence

Praises or encourages student action or behavior. Jokes that release tension. Accepts and clarifies the feeling tone of the students in a non-threatening manner.

Student Talk

Silence or confusion: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

Student talk-initiation: talk by students which they initiate. If 'calling on' student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.

Student talk-responses: talk by students in response to teacher.

CONCLUSION

The researcher recommends that the teaching would be highly effective if the teacher starts to use the new multimedia technologies like usage of computers extensively or some modifications in the conventional mode of teaching. The use of computers may be very well practiced in the environment where the use of such technology is highly possible, but there must be some sort of innovation which can also be practiced in an environment where such use of technology is on its way to growth.

This paper advances a complex conceptual framework for understanding the challenges and opportunities involved in transforming schooling for the 21st century. It also describes an innovative strategy by which new pedagogies based on emerging immersive media can aid all students in attaining sophisticated understandings and performances. Its rationale draws on changes in the global and Indian economies.

In this paper, we hope to confirm the important role these programs play in developing effective, engaged educators that, in turn, can improve outcomes for all students. If educator preparation leaders come together to define and implement approaches that support the teaching and learning of 21st century knowledge and skills in more purposeful ways, will be more beneficial.

REFERENCES

[1] Agnew, P.W., Kellerman, A.S. and Meyer, J. (1996), *Multimedia in the Classroom*, Boston: Allyn and Bacon.
[2] American Association of Colleges for Teacher Education, *Handbook of Technological Pedgagocial Content Knowledge for Educators* (TPCK) (2008), New York: Routledge.
[3] Babu, Ramesh B. (2007), "Schooling for Social Transformation: Need for Critical Pedagogy", *Journal of Indian Education*, Vol. XXXIII(i), New Delhi: NCERT.
[4] Boltman, A. and Druin, A. (2003), "Children's Storytelling Technologies: Differences in Elaboration and Recall", [Online] Available: http://drum.lib.umd.edu/handle/1903/1169 (April 28, 2016).
[5] Boud, D. and Feletti, G. (1999), *The Challenge of Problem-based Learning*, (2nd Ed.), London: Kogan.
[6] Hofstetter, F.T. (1995), *Multimedia Literacy*, New York: McGraw-Hill.
[7] Jonassen, D.H., Peck, K.L. and Wilson, B.G. (1999), *Learning with Technology: A Constructivist Perspective*, New Jersey: Merrill/Prentice Hall.
[8] https://childaustralia.org.au/Documents-(1)/CA-Statement-Pedagogy.aspx. (Oct.23, 2016).
[9] http://education.jhu.edu/PD/newhorizons/strategies/topics/literacy/articles/developing-21st-century-teaching. (Oct.23, 2016).
[10] http://tdhahwiki.wikispaces.com/file/view/Dede_21stC-skills_semi-final.pdf. (Nov. 7, 2016)
[11] http://www.sshrc-crsh.gc.ca. (Nov.7, 2016)
[12] http://www.steve-wheeler.co.uk/2013/11/the-meaning-of-pedagogy.html. (April 28, 2016).
[13] Lindstrom, R., (1994), *The Business Week Guide to Multimedia Presentations: Create Dynamic Presentations That Inspire*, New York: McGraw-Hill.
[14] Srikumar C., John P.J. and Priya V. (2009), "An Evaluative Study on Comparison of Problem based Learning and Lecture based Pedagogy on Self Directed Learning in Undergraduate Medical Education", *In Indian Journal of Science and Technology*, Vol. 2(12), pp. 59–67.
[15] Tapscott, D. (1998), *Growing Up Digital: The Rise of the Net Generation*, New York: McGraw-Hill.
[16] Teo, R. and Wong, A. (2000), Does Problem Based Learning Create A Better Student: A Refelection? Paper presented at the 2nd Asia Pacific Conference on Problem based Learning: Education across Disciplines, December 4-7, 2000, Singapore.
[17] Vaughan, T. (1998), *Multimedia: Making it Work*, (4th Ed.), Berkeley, CA: Osborne/McGraw-Hill.
[18] Verma, NMP (2015), Augmenting Social Science Knowledge in Developing Economies: Challenges and Alternatives`, International Journal of Social Science and Development Policy, Vol.1, No. 1, January – June.
[19] Verma, NMP (2015), Knowledge Inclusion in Social Science: Some Indian Issues`, International Journal of Social Science and Development Policy, Vol.1, No. 2.

Women Participation and Inclusion in XII Plan: An Analysis

Sangeeta Krishna[1]

Abstract—*The importance of the role women in planned development in India had been recognized by the State ever since the First Five Year Plan (1951–1956). However, the thrust towards 'women' as a category in the development process has kept changing from welfare, development, empowerment to inclusive growth. Nevertheless the vision for the 12th Five Year Plan to ensure improving the position and condition of women by addressing structural and institutional barriers as well as strengthening gender mainstreaming seem more synthesizing in creating greater 'freedom' and 'choice' for women that gets epitomised in the web portal of Planning Commission with the 12th Five Year Plan which shows the "let me voice my opinion!" as suggestions of several stakeholders including women. Ending of gender based inequities, discrimination and all forms of violence against girls and women are being accorded overriding priorities in its broader visions and aspirations of Faster, Sustainable, and More Inclusive Growth for enabling women participate fully in the development process, and in fulfilling their social, economic, civil and political rights. The present paper analyses structural and institutional barriers to gender equality in the planned development process. It concludes by pointing out that the several paradoxical trends observed in the past had led the State set up its priority in the present plan by consolidating the existing initiatives and interventions and moving beyond to respond to new challenges. Since the exercise for the Plan is in progress it can be anticipated that the measures could be instrumental in boosting women's participation and inclusion for inclusive growth both in terms of conceptualisation and execution in the long run.*

Keywords: *Women, Planned Development, Structural Barriers, 12th Plan Interventions, Participation, Inclusion*

INTRODUCTION

"Let me voice my opinion!"

(Women's freedom and choice gets epitomised in12th Five Year Plan's web portal of Planning Commission)

The vision for XIIth Five Year Plan to ensure improving the position and condition of women by addressing structural and institutional barriers as well as strengthening gender mainstreaming[2] seem synthesizing in the above quotation of creating greater 'freedom' and 'choice' for women. The 12th Five Year Plan Working Group

[1]*CSSEIP, Babasaheb Bhimrao Ambedkar University, Lucknow*

[2] Government of India.12th Five Year Plan Report of the Working Group on Women's Agency and Empowerment, Ministry of Women and Child Development, Government of India, p 1

(WG) on 'Women's Agency and Empowerment' perceives that development is a process of expanding freedoms equally for all individuals, and considers gender equality as a core development goal in itself[3].

Since independence the Government has been continuously pursuing policies for encouraging women participation and inclusion in the development process which received a renewed focus in 'Towards Equality'. But it has not been a smooth sailing in view of the constraints imposed by the forces of social exclusion. The world, traditional gender roles and deeper structural inequalities related to power imbalances rooted in patriarchal societies continue to place women at a disadvantage relative to men in all spheres of life. Many of these power-imbalances are acted out in the space of the household. Women are subject to social exclusion caused by various issues like poverty, power imbalances, gender-based violence, conflict, restrictions in access to resources and exclusion from decision-making. The question now is how to make the concept of inclusion operational for women, even in the face of resistance to change.

It may be stated that the Constitution provides for fundamental equality, not merely formal, which aims at removing both the structural and organized constraints imposed on the disadvantaged groups including women, though the policies and strategies adopted by the Government over the years are not free from debates and deficiencies. The debates and dissensions has not confined only to the scope and nature of such policies but extend also to the mode and method of their implementation.

WOMEN IN DEVELOPMENT APPROACH

What would be the approach for women in development had always been the issue of debates for feminist scholars, policy makers.

Women in Development (WID) approach, which constructed the problem of development as being women's exclusion from a benign process. Women's subordination was seen as having its roots in their exclusion from the market sphere and their limited access to, and control, over resources. The key was then to place women 'in' development through trying to limit discrimination and by promoting their involvement in education and employment.

The WID approach led to resources being targeted at women and made particularly women's significant productive or income generating contribution, more visible. Their reproductive contribution was less well emphasised. While WID advocated for greater gender equality, it did not tackle the real structural problem: the unequal gender roles and relations that are at the basis of gender subordination and women's exclusion.

[3] Ibid,18

As a critique to WID in the 1980s, the Gender and Development (GAD) approach came up. GAD recognised that gender roles and relations are key to improving women's lives, with the term 'gender' suggesting that a focus on both women and men is needed. More recently, the need to understand how gender intersects with other characteristics such as age, ethnicity and sexuality has been taken into account. The GAD approach recognises that it is not sufficient to add women and girls into existing processes of development but there is also a need to problematise why they are excluded, advocating that the focus should be on addressing the imbalances of power at the basis of that exclusion. GAD also questions the notion of 'development' and its benign nature, implying a need to shift from a narrow understanding of development as economic growth, to a more social or human centred development. GAD projects are more holistic and seek to address women's strategic gender interests by seeking the elimination of institutionalised forms of discrimination for instance around land rights, or ensuring the right of women and girls to live free from violence, for example (Molyneux 1985; Moser 1989)

The WID approach has now largely been replaced by GAD, which has been institutionalised within the notion of gender mainstreaming. Mainstreaming involves ensuring that a gendered perspective is the core to all activities, from planning, implementation to monitoring of all programmes, projects, and legislation.

PLANNED DEVELOPMENT AND WOMEN

The importance of the role of women in planned development in India had been recognized by the State ever since the first five year plan (1951–1956). The Planning Commission defined three major areas for women's development, (a) Education, (b) Social welfare and (c) Health. A planned approach to provide special thrust to the welfare of women was adopted with the launching of the first five year plan in 1951.

SHIFTS IN POLICY DURING THE PLANS

The planning process has evolved over the years from purely "welfare" oriented approach where women were regarded as objects of charity to the development programmes and currently to their "empowerment". However, the thrust towards 'women' as a category in the development process has kept changing from welfare, development, empowerment to inclusive growth which can be seen below in the history of the plans since its inception

The First Five Year Plan (1951–56) considered welfare measures for women. Central Social Welfare Board (CSWB) was established to implement welfare measures to deal with the problems of women. The CSWB recognized and realized the need for organising women into Mahila Mandals or women's club as an approach to community development[4].

[4] Department of Women and Child Development, Ministry of Women Resource Development, National Perspective

The Second Five Year Plan (1956–61) concentrated on overall intensive agricultural development. However, the welfare approach to women's issues was determined recognizing women as workers. Further, protection against injuries at work, maternity benefits and crèches for their children. It also suggested immediate implementation of the equal pay for equal work and provision for training to enable women to compete for higher jobs.

The Third Five Year Plan (1961–66) recognized the greater importance of education for women as a major welfare strategy. This plan allocated the largest share for spending social welfare services and condensed courses of education. As regards to wealth, maternal and child welfare programmes were proclaimed in terms of maternal and child welfare, health education, nutrition and family planning.

The Fourth Five Year Plan (1969–1974) continued with emphasis on education. The basic policy was to promote women's welfare. The outlay on family planning was stepped up to reduce the birth rate through education. Immunization of pre-school children and supplemental feeding, expectant and nursing mothers[5].

The Fifth Five Year Plan (1974–1979) also recommended a strategic programme of functional literacy to equip women with skills and knowledge to perform the functions as a good housewife. The Fifth Year Plan was happened to be during the decade of International Women's decade and the submission of the Report of the Committee on the Status of Women in India (CSWI) "Towards Equality". The CSWI had comprehensively examining the rights and status of women in the context of changing social and economic conditions and the problems relating to the advancement of women reported that the dynamics of social change and development had adversely affected a large section of women and had created new imbalances and disparities.[6]

Besides, it was realized that constitutional guarantees of equality would be meaningless and unrealistic unless women's right to economic independence is acknowledged and their training in skills as contributors to the family and the national economy was improved.

Consequently National Plan of Action (1976) providing the guidelines based on 'United Nations' World Plan of Action for women' came into force. The National Plan of Action identified areas of health, family planning, nutrition, education, employment, legislation and social welfare for formulating and implementing action programmes for women and called for planned interventions to improve the conditions of women in India. The women's welfare as development bureau was

Plan for women 1988–2000 AD, Report of the Core Group, 1986, p. 12.

[5] Ibid. p. 13.

[6] Towards Equality", Report of the Committee on Status of Women in India, op.cit., p. 308

setup in 1976 to act as a nodal point within the Government of India to co-ordinate policies and programmes and initiate measures for women's development[7].

The Sixth Five Year Plan (1980–1985) stressed the need of economic independence, educational advance and access to health care and family planning as essentials for women's development. So the strategy was threefold: of education, employment and health. They are independent and dependent on the total developmental process.[8]

The Seventh Five Year Plan (1985–1990) sought to generate awareness among women about their rights and privileges[9]. The long term objectives of developmental programmes in the Seventh plan were to raise women's economic and social status in order to bring them into the mainstream of national development and recognized the importance of women in contributing to the various socio-economic, political and cultural activities. Another salient and crucial recognition was the need for organisation of women workers and unionization. During the 7th Plan period, the Indian Parliament adopted a National Policy on Education 1986 included a chapter on Education for women's equality[10].

The Eighth Plan (1992–1997) aimed at ensuring that the benefits of development from different sectors did not bypass women and special programmes were implemented to complement the general programmes. The core idea was to extend the reach of services to women both qualitatively and quantitatively. Panchayati Raj institutions are involved in the designing and implementation of women's programmes. The approach of the Eighth Plan made a definite shift from development to empowerment of women.

The Ninth Five Year Plan (1997–2002) focussed on empowerment of women. In planning process, empowerment means choices for women and opportunities to avail of these choices. It was with the realisation that women's choices will be limited unless they are more involved in policy-making. Thus it was an attempt to bring in women's issues within the policy-making spheres.

The Government set up a national resource units for women which acts as an apex body for promoting and incorporating gender perspectives in politics and programmes of the government. To achieve the goals laid down therein, a number of initiatives were launched. It included enactment of legislation to ban sex determination tests so as to prevent female foeticide. Equally important is the fact that the state governments also drew up plans of action to cater to local requirements and ensure the holistic development of the girl child.

---

7 National Perspective Plan for Women 1988–2000 AD, Op.cit, p.13.

8 Neera Desai and Amit Kumar Gupta, "Women and Society in India", Ajantha Publications, Delhi, 1987, p. 333

9 Kalbagh Chetana, "A Better Deal for Women by 2000 AD", in Kalbagh Chetana (ed)., Social and Economic Dimensions of Women's Development, New Delhi, Discovery Publishing House, 1992, p. 124.

10. Kanakalatha Mukund "Women Welfare Programmes in A.P". 1990, CESS, Hyderabad.op.cit 1, p. 204

The 73rd and 74th Constitutional Amendment Acts of 1993 ensured reservation of 1/3 of seats for women in all elected offices of local bodies, in rural and urban areas. In the rural areas, women were brought to the centre-stage in the nation's efforts to strengthen democratic institutions[11].

The Tenth Plan (2002–2007) aimed at empowering women through translating the recently adopted National Policy for Empowerment of Women (2001) into action and ensuring 'survival' protection and development of children through rights based approach.[12]

The Eleventh Plan (2007–2012) recognized women as a heterogeneous category for planned intervention, identifying diversity in castes, classes, communities, economic groups, geographic and development zones. With strategic shifts in policy it affirmed that mapping and acknowledging the specific deprivations which arise from these multiple situations/ locations, can alone determine the success of planned interventions. It aimed to raise the sex ratio for the age group 0–6 to 935 by 2011–12 and to 950 by 2016–17.

The Plan document reads; "An important divide which compels gender special focused efforts was to be made to purge society of this malaise by creating an enabling environment for women to become economically, politically and socially empowered."

The Eleventh Five Year Plan was aimed at inclusive development. Its vision was that every woman in the country should be able to develop to her full potential and share the benefits of economic growth and prosperity. Towards gendered end the approach adopted was to empower women and recognize their agency thereby seeking to make them partners in their own development. This it sought to do by mainstreaming gender in all sectors as well as by undertaking targeted interventions. Towards this goal in a unique move, the government has constituted a committee of feminist economists to ensure gender sensitive allocation of public resources in the 11th five years plan, a step it hopes was to promote gender equality and bring more inclusive growth.

The Plan period saw the introduction of many new schemes and programmes targeted at particular groups or aimed at addressing specific issues. SABLA, for empowering adolescent girls, IGMSY for supporting poor women, Mahila Kisan Sashaktikaran Yojana for women farmers, leadership training of Minority women, Ujjawala for combating trafficking and Dhanalakshmi to tackle the issue of declining sex ratio.

---

[11] Government of India, Country Report Fourth World Conference on Women, Beijing 1995, Department of Women and Child Development, New Delhi, p. 27.

[12] Peerzade, Sayed Afzal and Prema Parnade (2005), 'Economic Empowerment of Women', Theory and Practice' Southern Economist, March–1, pp. 9–10.

Moreover, implementation of Legislations enacted just prior to the XI Plan like the Prohibition of Child Marriage Act, 2006, Protection of Women from Domestic Violence Act, 2005, and Hindu Succession (Amendment) Act, 2005 was followed up with the States and a new legislation aimed at providing women a safe working environment, Protection Against Sexual Harassment at the Workplace Bill was introduced in Parliament.

Against this backdrop, the paper aims to analyse the ongoing XIIth plan which has been consolidating and translating the initiatives for better output to ensure better participation and inclusion of women.

The Twelfth Five Year Plan (2012–2017) strategy of inclusion envisages the engendering of development planning and making it more child-centric. Structural transformation is called for—not only in the women and child related direct policy and programme interventions, but also more generally in the policies and programmes of the many sectors that impact upon women and children especially those from the weaker sections or whose individual circumstances make them the most vulnerable.

It would be worth mentioning here that the Working Group on Feminist Economists, constituted in the Eleventh Plan to review gender equality across sectors, suggested many of the strategic recommendations of the Plan and has been reconstituted to provide recommendations for the XIIth Plan.

DATA SOURCES AND METHODOLOGY

All the data sources are secondary. They are as enumerated below:

1. India Human Development Report 2011
2. Twelfth Five Year Plan (2012–2017), Social Sectors, Volume III Planning Commission (Government of India) 2013
3. An Approach to the Twelfth Five Year Plan (2012–17) Government of India October, 2011
4. Books & Journals

WOMEN AND GOALS FOR THE XII FIVE YEAR PLAN[13]

- Creating greater 'freedom' and 'choice' for women by generating awareness and creating institutional mechanisms to help women question prevalent "patriarchal" beliefs that are detrimental to their empowerment.

[13] 12th Five Year Plan Report of the Working Group on Women's Agency and Empowerment, Ministry of Women and Child Development Government of India,p 1

- Improving health and education indicators for women like maternal mortality, infant mortality, nutrition levels, enrolment and retention in primary, secondary and higher education.
- Reducing the incidence of violence against women and providing quality care services to the victims.
- Improving employability of women, work participation rates especially in the organised sector and increased ownership of assets and control over resources.
- Increasing women's access to public services and programmes through establishing and strengthening convergence mechanisms at multiple levels, creation of physical infrastructure for women and improving the capacity of women's organizations and collectives.
- Ensuring that the specific concerns of single and disadvantaged women are addressed.

The key strategies for women's agency in the XIIth Plan have been identified as: (*i*) Economic Empowerment (*ii*) Social and Physical Infrastructure (*iii*) Enacting Legislations (*iv*) Women's Participation in Governance (*v*) Inclusiveness of all categories of vulnerable women (*vi*) Engendering National Policies/ Programmes.

These strategies were instrumental in bringing out the crucial challenges posed by traditional determinants of women's agency and empowerment such as asset ownership, skill development, financial inclusion, along with new and emerging challenges posed by urbanisation, climate change, energy insecurity, the role of the media and so on. Strategies for the inclusion of vulnerable women such as those belonging to the Scheduled Castes (SC), Scheduled Tribes (ST) and minorities; single women, differently abled women; migrant and trafficked women have also been identified. Specific initiatives for empowering women and engendering development in the Twelfth Plan have been outlined.

BARRIERS TO WOMEN'S PARTICIPATION & INCLUSION

The barriers to women's participation, inclusion and empowerment are manifested in various ways. Deep-rooted ideologies of gender bias and discrimination like the confinement of women to the private domestic realm, restrictions on their mobility, poor access to health services, nutrition, education and employment, and exclusion from the public and political sphere continue to deter women across the country. Other parameters that reflect the status and position of women in society are work participation rates, sex ratio in the age group of 0–6 years and gender based violence which remain heavily skewed against women. New challenges such as increased intra-country migration, changing labour markets that require new skill sets and rapidly changing technologies have also emerged (Verma, 1990, 1998).

THRUST AREAS FOR XIITH PLAN: CONSOLIDATING THE INITIATIVES & INTERVENTIONS

Although numerous steps were taken forward during the 11th Plan but the targets set out could be only partially achieved. Thus, Government's priority in the 12th plan is to consolidate the existing initiatives and interventions relating to women, build upon the achievements and also move beyond to respond to new challenges. The thrust areas for economic, social and political empowerment of women for the 12th Plan are derived from the concerns and barriers outlined.

The renewal of emphasis on inclusive development in policy approach of the 12th plan has specific implications in the context of alarming child sex ratio as reflected in Census 2011[14], which is lowest in last fifty years. The census (2011) has revealed that the ratio of girls to boys up to six years of age has dropped to 914 for every 1000 boys from 927 girls counted in the previous census of 2001 though the overall sex ratio has improved since 1991, rising from 933 females to 1000 men in 2001, to 940 females in 2011. The decline in child sex ratio has been persisting unchecked since the 1961 census and this reflects the failure to stop selective abortion of female foetus despite preventive laws and campaigns, which again indicates the cultural preferences for male child and general attitude of people towards gender socialization. The picture also shows that girls are socialised for household work whereas boys for the outside world which belittles the question of women's empowerment.

Ending of gender based inequities, discrimination and all forms of violence against girls and women are being accorded overriding priority in its broader visions and aspirations of Faster, Sustainable, and More Inclusive Growth which seems essential in enabling women participate fully in the development process, and in fulfilling their social, economic, civil and political rights.

PROVISIONS UNDER XIITH FIVE YEAR PLAN OF INDIA

The access of women to key social services such as health and education is a critical determinant of the status of women and their ability to participate in making society a better place. India's Gender Inequality Index value of 0.617 in 2011 placing the country at 129 among 149 countries globally is reflective of the high gender inequality that is prevalent. The lower attainments of women in key human development indicators are indicative of the sharp disparities in opportunities available to women and men. An extremely disturbing aspect is the deteriorating child sex ratio.

The major components for Gender Equity addressed in the XIIth Plan can be clubbed under the following:

[14] Government of India 2012, *Census of India, 2011*, Provisional Population Tables, New Delhi.

1. Economic Empowerment
2. Social and Physical Infrastructure
3. Enabling Legislations
4. Women's Participation in Governance
5. Inclusiveness of all categories of vulnerable women
6. Engendering National Policies/ Programmes
7. Mainstreaming gender through Gender Budgeting
8. Gender analysis and audit

ENSURING SURVIVAL AND PROTECTION OF GIRL CHILD

The decline in the Child Sex Ratio (CSR) defined as number of girls per 1000 boys between 0–6 yrs of age, from 947 in 1991 to 927 in 2001 and further to 918 in 2011 is alarming. Realising the gravity of the situation the Government announced '*Beti Bachao Beti Padhao'* initiative which has the objectives of—Prevention of gender biased sex selective elimination; Ensuring survival and protection of girl child; and Ensuring education and participation of the girl child.

- Strict implementation of Pre Natal Diagnostics Technology (PNDT) Act
- Educating the girls was to be done through a multi pronged strategy.
- Preventing child marriage through compulsory birth registration and monitoring, economic incentives to encourage girl's schooling and
- Stringent implementation of The Dowry Prohibition Act 1961, were the suggested modus operandi. The Zila Panchayat was to be the focus of BBBP.

At the national level, a media policy was evolved in which wide publicity on the issue was to be given through billboards, campaigns, commercial films and 'nukkad natak'. A policy for incentivizing promotional activities undertaken by citizens was also put in place. BBBP is to be seen in convergence with other national policies that have been recently initiated to protect women and the girl child.

ECONOMIC EMPOWERMENT

The XIIth Plan endeavours to increase women's employability in the formal sector as well as their asset base. It is hoped to improve the conditions of self employed women. The thrust is on women's workforce participation particularly in secondary and tertiary sectors, ensuring decent work for them, reaching out to women in agriculture and manufacturing, financial inclusion, and extending land and property rights to women.

SKILL DEVELOPMENT

One of the major impediments affecting women's participation in the workforce, particularly in secondary and tertiary sectors, is the lack of skills. The Twelfth Plan envisages a major scaling up of skill development from traditional skills to emerging skills, which help women break the gender stereotypes and move into employment requiring higher skill sets. Training of women as BPO employees, electronic technicians, electricians, plumbers, sales persons, auto drivers, taxi drivers, masons, and so on will be incorporated in the skill development programmes. Skill development being seen as a vehicle to improve lives and not just livelihoods of women.

The XIIth Plan strategy focussing on health, education, sanitation and infrastructure development will create many productive jobs, a large proportion of which will be in the formal sector. This must be accompanied by measures to ensure that women have adequate access to these new job opportunities.

STRATEGIES: A THREE-PRONGED APPROACH

Women can be powerful change agents. Empowering poor rural women involves three critical and interrelated dimensions: expanding access to assets such as capital, land, knowledge and technologies; strengthening decision-making and their representation in community affairs; and improving women's well-being and lessening their workloads.

The lack of basic amenities affects women more than men, as women are often responsible for a larger share of time-consuming household activities. Better electricity and access to water and sanitation may reduce the burden of women in providing essential household inputs for their families, and allow for more time to be directed toward entrepreneurial activities.

The XIIth Plan envisages a major scaling up of skill development to promote skill development of women from traditional skills to emerging skills, which help women break the gender stereotypes and move into employment requiring higher skill sets.

Gender budgeting is extended to all Ministries, Departments and State Governments. Steps will be taken to further institutionalise the Gender Budgeting processes by strengthening and empowering the Gender Budget Cells (GBCs.)

Gender Audit as an integral part of Gender Budgeting will be promoted in the Twelfth Plan. Ministries/ Departments will undertake gender audits of major programmes, schemes and policies.

Evaluation and impact assessment of schemes by an external agency are a mandatory requirement for the continuation of existing schemes beyond the plan period. It

ensured that all impact assessment and evaluation of schemes would include a gender assessment/ status of gender mainstreaming. The Ministry of Women and Child Development ensures that the existing schemes are engendered.

GENERATION OF SEX-DISAGGREGATED DATA

Effective Gender Budgeting requires sex-disaggregated data. Hence, it is necessary to put mechanisms in place for mandatory collection of sex disaggregated data. To make this happen, all Ministries/ Departments must ensure that all MIS data generated on number of users/ beneficiaries is classified by sex.

CONCLUSIONS AND POLICY FOCUS

Goals and objectives of the Eleventh Five Year Plan have not translated into better output and outcome indicators and persistence of gender based disadvantages are evident Mishra, Jhamb, (2009). Gender commitments of the plan must reflect budgetary commitments coupled with greater efficiency and effectively targeted and utilized resources for women to guarantee substantive equality for women. Enhancement of public spending on social infrastructure is the only way to gender inclusive growth. Some research findings reveal that 'the budget for 2013–14 … falls far short of what is required to fulfill some of the commitments made in the Twelfth Plan–both in terms of effective implementation of existing programmes/ schemes as well as rolling out the new interventions.... India seems to be trapped in a paradox: while on the one hand it has taken several steps towards gender responsive budgeting, on the other budgetary allocations for promoting gender equality and women's empowerment has actually registered a decline. (Jhamb, Mishra, Sinha, 2013)

More studies need to be initiated to find out the gap between plan outlay and outcome, local and global implications of pro-poor and pro-women budgeting, alternative macro scenarios emerging out of alternative budgets and inter-linkages between gender-sensitive budgeting and women's empowerment (Patel, 2009)

To sum up it can be pointed out that the several paradoxical trends observed in the past had led the State set up its priority in the present plan by consolidating the existing initiatives and interventions, building upon the achievements and moving beyond to respond to new challenges too. Moreover since the exercise for the Plan is in progress it can be anticipated that the measures could be instrumental in boosting women's participation and inclusion for inclusive growth both in terms of conceptualisation and execution in the long run. There is no doubt that 11th and 12th five year plan both have stressed the importance on inclusive growth, so if women are allowed to voice their opinion.

REFERENCES

[1] Government of India (2012), *Census of India, 2011*, Provisional Population Tables, New Delhi.
[2] Government of India (1974), Towards Equality, *Report of the Committee on Status of Women in India*, *op. cit*., Department of Social Welfare, New Delhi, p. 308.
[3] Government of India (1986), Department of Women and Child Development, Ministry of Women Resource Development, National Perspective Plan for Women 1988–200 AD, Report of the Core Group, 1986, p. 12.
[4] Government of India (n.d) Report of The Steering Committee on Women's Agency and Child Rights for The Twelfth Five Year Plan (2012–2017), *Planning Commission*.
[5] Government of India (1995), Country Report Fourth World Conference on Women, Beijing 1995, Department of Women and Child Development, New Delhi, p. 27.
[6] Government of India (2011), Faster, Sustainable and Inclusive Growth: An Approach to the Twelfth Five Year Plan (2012–17) Government of India October, 2011, *Planning Commission*.
[7] Government of India, 12th Five Year Plan Report of the Working Group on Women's Agency and Empowerment, Ministry of Women and Child Development, Government of India.
[8] Jhamb, Bhumika, Mishra, Yamini and Sinha, Navanita (2013), "The Paradox of Gender Responsive Budgeting", *Economic and Political Weekly*, Vol. 48(20), 18 May 2013 pp. 35–38.
[9] Kalbagh, Chetana (1992), A Better Deal for Women by 2000 AD, in Kalbagh Chetana (ed)., "Social and Economic Dimensions of Women's Development", New Delhi, Discovery Publishing House, p. 124.
[10] Kanakalatha, Mukund (1990), "Women Welfare Programmes in A.P", 1990, CESS, Hyderabad. *op. cit*., Vol. 1, p. 204.
[11] Mishra, Yamini and Jhamb, Bhumika (2009), "An Assessment of UPA-I through a Gender Budgeting Lens", *Economic and Political Weekly*, Vol. XLIV(35), pp. 61–68.
[12] Molyneux, M. (1989), "Mobilization without Emancipation? Women's Interests, the State, and Revolution in Nicaragua", *Feminist Studies*, Vol. 11(2), pp. 227–254.
[13] Moser, C. (1985), "Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs", *World Development*, Vol. 17(11), pp. 1799–1825.
[14] National Perspective Plan for Women 1988–2000 AD, *Op. cit*., p.13.
[15] Desaim Neera and Gupta, Amit Kumar (1987), *Women and Society in India*, Ajantha Publications, Delhi, p. 333.
[16] Patel, Vibhuti (2009), http://www.gender-budgets.org/content/view/292/156/United Nations Development Fund for Women (UNIFEM) and The Commonwealth Secretariat.).
[17] Peerzade, Sayed Afzal and Parnade, Prema (2005), "Economic Empowerment of Women", Theory and Practice' *Southern Economist*, March–1, pp. 9–10.
[18] Verma, NMP (1990), Female `Labour and Work Participation: Validity of the Existing Hypothesis` Manpower Journal, Vol. XXVI, No.4, October-December.
[19] Verma, NMP (1998), Determinants of Women Workers Participation : Notes on some Interdisciplinary Controversies`, Indian Journal of Industrial Relations, Vol, 34, No.1, July.

E-Governance: A Challenging Perspective

Rekha Khosla[1]

Abstract—*Public and private sector organizations around the world are facing to reform their public administration organizations and deliver more efficient and cost effective services, as well as better information and knowledge to their stakeholders. E-governance is the effective use of Information & Communication Technology (ICT) to improve the system of governance that is in place, and thus provide better services to the citizens. E-Governance has the potential to benefit India's citizens exponentially and maximize the return on the government's investment in it. The contradiction in India is that the country is rightly recognized a global leader in the delivery of IT services, but it suffers from very little internal IT development in the country.*

Developments in e-Governance provide opportunities to harness the power of Information and Communication Technology (ICT) to make the business of governance inexpensive, qualitatively responsive, and truly encompassing. The purpose of this paper is to explore e-Governance initiatives taken at various government and corporate initiatives. The research findings elaborate on what are the reasons that e-Governance is not properly implemented and what are the challenges faced in implementing the e-governance projects.

Keywords: *e-Governance, Challenges, Initiatives*

INTRODUCTION

The term e-Government came into existence with the advent of government websites in late 1990s. e-Governance or "electronic Governance" refers to the use of Information and Communication Technologies (ICTs) to provide citizens and organisations with more convenient access to the government's services and information. In other words, e-Governance involves ICTs, especially the internet, to improve the delivery of government services to citizens, businesses and government agencies. It is not limited to the public sector only but also includes the management and administration of policies and procedures in private sector as well. The use of internet not only delivers the services faster but also brings more transparency between the government and the citizens. But in developing countries like India, where literacy level is very low and most of the people are living below poverty line, it is very much difficult for the government to provide its services to such citizens via means of internet. Even the e-Readiness Rank of India is very low. E-readiness is defined as the ability to use information and communication technologies to develop one's economy and welfare. According to the Global Information Technology Report 2012, the e-Readiness rank of India is 69 with the score of 3.89 out of 10 that means the use of ICTs in India is very low. Many other factors like privacy and security related to user"s personal information, digital divide etc. are also huge challenges for the implementation of e-Governance in India.

[1]*Assistant Professor, Amity Business School, Amity University, Lucknow*
E-mail: rkhosla@lko.amity.edu

SCOPE OF E-GOVERNANCE

E-Governance is the use of information and communication technologies to support good governance. It has the following main dimensions:

GOVERNMENT TO CITIZEN (G2C)

G2C will aim at connecting citizens to government by talking to citizens and supporting accountability, by listening to citizens and supporting democracy, and by improving public services. It will involve better services to the citizens through single point delivery mechanism and will involve areas like E-Citizen, E-Transport, E-Medicine, E-Education and E-Registration.

The requisites for achievement:

1. ***Information for All***: Keeping the citizen informed, providing him with details of Government activities. The citizen will act as watch dog to Government if the information will be available to him. Certain interest groups like the journalists, opposition will always keep an eye on the expenditure of the Government, status of which will be available on-line bringing accountability amongst Civil Servants. The rationale is to increase the pressure on staff to perform well and to improve public understanding of government.
2. ***Citizen Feedback***: Citizen feedback is must for improving the Government Services enabling the government to find out what does the citizens want. The elected representatives who are said to be voice of citizens also are not the true voice for they get their votes according to their offerings and not their offerings are according to customer wants. In short it is an effort to make the public sector decision responsive to citizens' view or needs.
3. ***Improving Services***: World's best companies have done it, Indian companies have copied them, Governments abroad have followed the suit, why can't the Indian Government. Improving the service delivered to the citizen on dimensions such as speed, quality, reliability, convenience and cost. Information Technology will have a big role to play in the same; the services can be delivered from 24-hour one-stop Government shops.

CONSUMER TO GOVERNMENT (C2G)

C2G will mainly constitute the areas where the citizen interacts with the Government. It will include areas like election when citizens vote for the Government; Census where he provides information about himself to the Government; taxation where he is paying taxes to the Government. It involves E-democracy, which is an effort to change the role of citizen from passive information giving to active citizen involvement.

The requisites for achievement:

1. ***Citizen Participation***: For achievement of the above initiative the citizen has to participate in the Government Business and therefore spreading awareness becomes the responsibility of the State. Market research programs should be carried out using the Information Systems to determine the needs of the citizens and ways to use tools to find out potential gaps in the services offered.
2. ***Citizen Feedback***: Citizen feedback is must for improving the Government Services. Unless the Government listens to its customer, it will not be able to find out what does the citizens want. The elected representatives who are said to be voice of citizens also are not the true voice for they get their votes according to their offerings and not their offerings are according to customer wants. In short it is an effort to make the public sector decision responsive to citizens' view or needs.
3. ***Improving Services***: Improving the service delivered to the citizen on dimensions such as speed, quality, reliability, convenience and cost. Information Technology will have a big role to play in the same; the services can be delivered from 24-hour one-stop Government shops.

GOVERNMENT TO GOVERNMENT (G2G)

This can also be referred as ***e-Administration.*** It involves improving government processes by cutting costs, by managing performance, by making strategic connections within government, and by creating empowerment. It will involve networking all Government offices so as to produce synergy among them. The major areas are: E-Secretariat, E-Police, E-Court and State Wide Networks.

GOVERNMENT TO BUSINESS (G2B)

E-Taxation is the major step towards improving the government functioning and governance for Taxation. This will constitute the various services a business house needs to get from the Government, which includes getting licenses etc. In a similar scenario, it can also flow from a business house to the Government as in the case of procurements, from such business houses by the Government. This will become a B2G service.

The requisites for achievement:

1. ***Standards:*** Standards for Electronic Transactions or E-Commerce needs to be built. The standards will also include standards on content etc.
2. ***Payment Mechanism:*** A secure payment mechanism needs to be built to enable payments over the electronic medium.
3. ***PKI:*** PKI or Public key Infrastructure is required for secure and authentic transactions.

ISSUES FOR E-GOVERNANCE

a. ***Funding:*** Funding is the foremost issue in e-Governance initiatives. The projects that are part of the e-governance initiatives need to be funded either through the Government sector or through the private sector. For the private sector to step into the funding activity their commercial interests needs to be ensured. The projects can be built either on BOO (Built Own Operate) or BOOT (Built Own Operate Transfer) basis. Also the Government interest of Value Addition in services also needs to be taken care of while transferring the services to private sector. Advertising, sharing of Government information etc could be a few revenue generators for the Government.

b. ***Management of Change:*** The delivery of Government services through the electronic media including EDI, Internet and other IT based technologies would necessitate procedural and legal changes in the decision and delivery making processes. It demands fundamental changes in Government decision management. The employees need to be delegated more authority. De-layering of the decision-making levels leads to re-engineering and appropriate sizing of the decision-making machinery. These changes need not only be accepted by the Government and citizens but also be accepted by various interests groups like Employees unions. Under such circumstances bringing in a change will involve changing the mindsets of the people, and a complete Reengineering process needs to be carried out for the same. This will involve training of the personnel at all levels, more so, at the lower rung of Government management organizations. There will also be a loss of vested interests and power amongst the legislature and the executive, which may lead, to resistance to change.

c. ***Privacy:*** The privacy of the citizen also needs to be ensured while addressing the issues. Whenever a citizen gets into any transaction with a Government agency, he shells out lot of personal information, which can be misused by the private sector. Thus, the citizen should be ensured that the information flow would pass through reliable channels and seamless network (Verma *et al*., 2010).

d. ***Authentication:*** Secured ways of transactions for the Government services are another issue of concern. The identity of citizens requesting services needs to be verified before they access or use the services. Here digital signature will play an important role in delivery of such services. But the infrastructure needed to support them is very expensive and requires constant maintenance. Hence a pertinent need still survives, compelling the authorities to ensure the authenticity in their transactions thereby gaining absolute trust and confidence of the citizen.

e. ***Interoperability*:** A major design issue for integrated service delivery sites is, how to capture data in a Web-based form and transfer it to an agency's systems for processing and sharing that information in a common format. Infact the interoperation of various state Governments, the various ministries within a state Government is a critical issue. Further how the various islands of automation will be brought together and built into one is another key issue of e-Governance.

f. ***Delivery of services:*** The ability of citizens to access these services is another major issue. Since the penetration of PCs and Internet is very low in the country, some framework needs to be worked out for delivery of the e-Services that would be accessible to the poorest of the poor. What will be the Government's network to deliver those services? Could we have something like a single stop shop of the Government? A proposed mechanism is delivery of the same through the Government Post Offices, for they already have the brick and mortar support and the most extensive network in the nation.

g. ***Standardization:*** Defining the standards for the various Government services is another issue that needs to be addressed. The standards need to be worked out not only for the technologies involved but also for issues like naming of websites to creating E-Mail addresses.

h. ***Technology Issue****:* A number of organizations, both in the Centre and the States, have taken commendable initiatives to develop hardware and software platforms to address the challenges offered by e-Governance. At the central level in particular, the C-DAC, CMC and a number of others are noteworthy. The e-Governance initiative would have to address these Technology Issues/ Objectives by identifying the appropriate hardware platforms and software application packages for cost-effective delivery of public services. This knowledge repository should be widely available through appropriate Demo-Mechanisms. Offering a basket of these models to the State departments, both in the Center and the State, could be suitably customized as per location and work specific requirements.

i. ***Use of Local Languages:*** The access of information must be permitted in the language most comfortable to the public user, generally the local language. There do already exist technologies such as GIST and language software by which transliteration from English into other languages can be made.

j. ***Low IT Literacy:*** Literacy level of India is very low which is a huge obstacle in implementation of e-Governance projects. Illiterate people are not able to access the e-Governance applications; hence the projects do not get much success.

k. ***User Friendliness of Websites:*** Users of e-Governance applications are often non-expert users who may not be able to use the applications in a right manner. Therefore, websites must be user friendly to be more effective.

l. ***Services are not Accessible Easily:*** The concept of e-Governance is claiming for increased efficiency and effectiveness of the government, but these goals will be achieved only if the service will be accessible to the 100% of the citizens. Even if the users of Internet are growing but still there is a major part of Indian population which is not able to access e-Governance activities for variety of reasons.

SOME SUCCESSFUL E-GOVERNANCE PROJECTS IN INDIA

PROJECT AKSHAYA

'Akshaya', an IT dissemination project, was launched on 18th November 2002 as a pilot in Malappuram, a district in Kerala. The project envisaged development of 5000 networked Multi-purpose Community Technology Centers-Akshaya e Kendras-to provide ICT access to the entire population of the state. The objective of this project, was to make at least one person in each of over 65 Lakh (6,500,000) families in the state e-literate. Akshaya is a social and economic catalyst focusing on the various facets of e-learning, e-transaction, e-governance, information and communication. The success in Malappuram has led to a state wide roll out of the project. Akshaya e-pay has recently touched 4 crore (40 million) transactions in Malappuram.

MCA21

The Ministry of Corporate Affairs (MCA) is responsible for administration of the Companies Act, 1956, other allied Acts and Rules & Regulations framed for regulating the functioning of the Corporate Sector in accordance with law. The programme was implemented in a record time of 78 weeks. This project is India's 1st mission mode project (the highest priority rating assigned by the Indian government) under the National e-Governance Plan (NeGP), enabled 100% electronic filing, electronic payment mechanisms, use of Digital Signature Certificates for all transactions, etc.

The programme has phenomenal success with more than 90% of e-filing being done by stakeholders (as against the target of 25%), total transparency for service delivery to stakeholders through online reports, more than 40% electronic on-line payments, very high level of stakeholder satisfaction. The implementation of such a large-scale transformation project, in the shortest possible time, is a landmark and has established a benchmark for such a program not only in India but across the world.

APONLINE

APOnline (www.aponline.gov.in) is a digital gateway of the Indian state of Andhra Pradesh to provide multiple government services through multiple channels, anytime and anywhere to citizens and businesses through a single window. The

bi-lingual portal has redefined government-citizen interface and government-business interface by providing information, interactive and payment services to the citizens. APOnline has a self-sustaining delivery model and is currently working through 1300 kiosks and franchises. The model had generated employment for over 2000 people in the state. APOnline has developed a host of applications for the benefit of rural citizens and farmers. It has also helped bridge the digital divide to a great extent and has resulted in greater transparency, convenience, accountability and responsiveness for citizens and businesses and lower overall costs for citizens and businesses. It has also helped governments enjoy an improved image and cost-savings by reduced delivery cost.

E-CHOUPAL

The E-Choupal model, http://www.itcportal.com, is centered on a network of 'e-Choupals' which are information centers armed with a computer connected to the Internet. The e-Choupals, information centers linked to the Internet, represent an approach to seamlessly connect subsistence farmers with the mandis, the international markets as well as the final consumer at much reduced transaction costs. The e-Choupal initiative; one of the largest information technology-based intervention in rural India has transformed the Indian farmer into a progressive knowledge-seeking netizen. It has enriched the farmer with knowledge and elevated him to a new order of empowerment with improved decision-making ability, thereby better aligning farm output to market demands; securing better quality, productivity and improved price discovery.

E-GOVERNANCE IN MINISTRIES/ DEPARTMENTS AND STATE GOVERNMENTS

The website of the Ministry of Information Technology (MIT), Govt. of India lists briefly the E-Governance Initiatives undertaken by the various Ministries/ Departments and States Governments.

Gyandoot

Gyandoot is an Intranet-based Government to Citizen (G2C) service delivery initiative in Dhar district of Madhya Pradesh, connecting rural cybercafes catering to the everyday needs of the masses. The web site is an extension of Gyandoot intranet, for giving global access. The site has these services to offer: Commodity/ mandi Marketing Information System; Copies of khasra and maps; On-line registration of applications; Income Certificate; Domicile Certificate (mool niwasi); Caste Certificate; Landholder's passbook of land rights and loans.

Project Friends in Kerala

FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Government. It was launched in

Thiruvananthapuram in June 2000 and replicated in other district headquarters during 2001–02. The services are provided through FRIENDS Janasevana Kendrams located in the district headquarters. This project thus tries to avoid the complex issues involved in business process re-engineering in the participating departments.

eSeva (Andhra Pradesh)

This project is designed to provide 'Government to Citizen' and 'e-Business to Citizen' services. Originally, it was implemented in the form of the TWINS (Twin Cities Integrated Network Services) project in 1999 in the twin cities of Hyderabad and Secunderabad. The highlight of the eSeva project is that all the services are delivered online to consumers/ citizens by connecting them to the respective government departments and providing online information at the point of service delivery. Presently, eSeva is providing 'One-stopshop' for over 66 G2C and B2C services in 46 eSeva centres in the twin cities and Ranga Reddy district. Centres have also been opened in 20 other districts. The services include online payment of utility bills, issuing certificates, issuing licenses & permits, e-forms etc. Payments can be made by cash/cheque/DD/credit card/Internet.

Warana

The primary objective of the recently launched Wired Village project is to demonstrate the effective use of IT infrastructure in the accelerated socio-economic development of 70 villages around Warana Nagar in the Kolhapur and Sangli districts of the state of Maharashtra. The existing cooperative structure has been used in concert with high speed VSATs to allow Internet access to existing cooperative societies. The project aims to provide agricultural, medical, and education information to villagers by establishing networked facilitation booths' in the villages.

e-Governance in Noida City

Compaq India has joined hands with Electronics Research and Development Centre of India (ERDCI), Noida, to set up a competence centre that would enable e-governance in Noida city and various other states. Residents will be able to pay electricity and phone bills, file I-T returns, register marriages and deaths, among other things at information kiosks located in the city. Once the project becomes fully operational citizens can pay utilities, get grievance redressal and a variety of other essential jobs through these info kiosks.

"RajNidhi": Information Kiosks

"RajNidhi" is a web enabled information kiosk system developed jointly by Rajasthan state's Department of Information Technology and Rajasthan State Agency for Computer Services (RajComp). Earlier on March 23, 2000, Nayla became the first village of Rajasthan to have a "Raj Nidhi Information Kiosk" when the US President, Mr. Bill Clinton visited this village to observe the functioning of a Gram Panchayat.

"Raj-swift": Rajasthan Government's Intranet

The Rajasthan State Department of Information Technology (DoIT) has developed Government's own Intranet called as "raj-SWIFT". SWIFT here stands for Statewide Intranet on Fast Track. This system which has been built using Internet technology and tools would facilitate online data, text and e-mail communication between the office of the Chief Minister and all the 32 District Collectors on one-to-one basis, thus bringing the Chief Executive of the State and the district administration close enough to be just a mouse click away.

Mechanism of Single Window Clearance System

To overcome the inordinately long time required to obtain the statutory approvals/ licences etc. from various government departments/ agencies, the Bureau of Industrial Promotion & Office of the Commissioner (Investment & NRIs), Government of Rajasthan, has introduced a Single Window Clearance System through a Single Composite Application Form.

Lokvani Project in Uttar Pradesh

Lokvani is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services. As 88 per cent of the District population resides in villages and the literacy rate is only 38 per cent, the programme had to be designed in a way which was user-friendly and within the reach of the people both geographically as well as socially. To achieve this, the programme format uses the local language, Hindi, and is spread throughout the district to a chain of 109 Lokvani Kiosk Centres. These Kiosks have been established by licensing the already existing cyber cafes.

E-mitra Project in Rajasthan

This e-Governance initiative builds upon the experiences gained through the LokMitra and *JanMitra* pilot projects launched in 2002. While LokMitra was centred in the city of Jaipur, *JanMitra* was piloted in Jhalawar district to provide information and services under one roof to urban and rural populations. e-*Mitra* is an integration of these two projects in all the 32 districts using PPP model. There are two major components–'back office processing' and 'service counters'. Back office processing includes computerization of participating departments and establishing an IT enabled hub in form of a mini data centre at the district level (e-*Mitra* data centre). All participating departments and the service centres hook up to this data centre. It is managed by the Facility Management Service Provider on behalf of the district e-Governance Society (under Chairmanship of the district collector). Private partners (Local Service Providers) run the kiosks/ centres. In case of collection on account of payment of utility bills and government levies, the Local Service Provider

does not charge the citizen, but gets reimbursement from the concerned organization through the e-*Mitra* Society. In case of other services, the transaction fees is prescribed by the Society.

Bhoomi Project in Karnataka: Online Delivery of Land Records

Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of purposes: from documenting crop loans and legal actions, to securing scholarships for school-children. These records were hitherto maintained manually by 9,000 village officials. Through this project, computerised kiosks are currently offering farmers two critical services-procurement of land records and requests for changes to land title. About 20 million records are now being legally maintained in the digital format.

Khajane Project in Karnataka

It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. The project was implemented to eliminate systemic deficiencies in the manual treasury system.

Admission to Professional Colleges Common Entrance Test (CET)

With the rapid growth in the demand as well as supply of professional education, the process of admission to these institutions became a major challenge in the early 1990s. Recourse was then taken to ICT to make the process of admission transparent and objective. One of the pioneering efforts was made by Karnataka. The State Government decided to conduct a common entrance test based on which admission to different colleges and disciplines was made. The allocation of seats in different colleges/ disciplines is done through a process of 'computerized counseling' where the student can choose the discipline he/ she wants–based, of course, on merit.

Smart Gov. (Andhra Pradesh)

The Andhra Pradesh Secretariat comprises a number of departments. The processing of information in the Government is predominantly workflow intensive. Information moves in the form of paper files from one officer to another for seeking opinions, comments, approvals etc. SmartGov has been developed to streamline

operations, enhance efficiency through workflow automation and knowledge management for implementation in the Andhra Pradesh Secretariat. The solution automates the functioning of all levels of Government entities and provides a well defined mechanism for transforming the "hard copy environment" to a "digital environment". It enhances productivity through use of IT as a tool. SmartGov replaces the paper file with an e-file. SmartGov provides the features of creation, movement, tracking and closure of e-files, automation of repetitive tasks, decision support system through knowledge management, prioritization of work, easy access to files through an efficient document management system and collaboration between departments. This project is being extended to more departments.

Khajane Project in Karnataka

It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. The project was implemented to eliminate systemic deficiencies in the manual treasury system.

Package for Effective Administration of Registration Laws Project in Kerala

THE Government of Kerala has launched a project titled PEARL (Package for Effective Administration of Registration Laws) for computerisation of the Registration Department in the State.

The **broad lessons** from these initiatives undertaken at various levels are as follows:

1. Political support at the highest level is a *sine qua non* for successful implementation of e-Governance initiatives;
2. Major e-Governance projects bear fruit only when application of IT is preceded by process re-engineering;
3. Successful projects require an empowered leader with a dedicated team who can conceptualise and implement e-Governance projects with the help of officials at all levels and technological solution providers;
4. Initiatives which save the citizens' time, money and effort are able to succeed even when back-end computerization is not done. However, these successes are generally limited to cases where payment of bills for public/ private utilities is involved but for complete transformation of governance there has to be an end-to-end ICT enablement coupled with process re-engineering;

5. Scaling up should be attempted only after the success of pilot projects. Systems should have the flexibility to incorporate changes mid-way;
6. In rural areas, issues of connectivity and electricity supply are of paramount importance; and
7. In case of complex projects, all components need to be identified and analysed at the outset, followed by meticulous planning and project implementation.

CONCLUSION

For e-governance to succeed in India 'e-readiness' must be built. This means strengthening infrastructural inadequacies, reducing the barriers to e-governance, and strengthening the drivers to E-Governance. The priority for is therefore to build e-readiness in areas like Infrastructure, Institutions, Laws, Leadership and commitment, Human capacities, Technology, etc. Thus from above discussions we conclude that a long term and a short-term strategy for E-Governance implementation is the need of the hour. For successful implementation Standards, Infrastructure, Legislations, Strategy all needs to be in place. It also requires establishment of various institutions under the Ministry of Information Technology. It requires a Global Vision and local implementation. And above all it requires e-readiness in the minds of citizens and the Government employees.

REFERENCES

[1] Bhatnagar, Subhash (2004), *E-government from Vision to Implementation*, Sage Publications, New Delhi.
[2] Dey, Bata K. (2000), "E-governance in India: Problems, Challenges and Opportunities–A Futures Vision", *Indian Journal of Public Administration*, Vol. XLVI, No. 3.
[3] Diwedi S.K. and Bharti A.K. "E-governance in India–Problems and Acceptability", *Journal of Theoretical and Applied Information Technology,* Available at www.jatit.org.
[4] E-Readiness Ranking (2012), *The Global Information Technology Report* (2012), by Economist Intelligence Unit.
[5] Gupta, M.P. (2004), *Towards E-Government Management Challenges*, Tata McGraw-Hill Publishing Company Limited, New Delhi.
[6] Kaushik, P.D. (2004), E-Governance: Government Initiatives in India, in Bibek Debroy, *Agenda for Improving Governance*, Academic Foundation in Association with Rajiv Gandhi Institute for Contemporary Studies, New Delhi.
[7] Prabhu, C.S.R., "Cost Effective Solution for Effective e-Governance/ e-Panchayat (Example of Exemplary Leadership and ICT Achievement of the year)", available at http://www.csi-sigegov.org/3/28_284_3.pdf
[8] Report of the Working Group on Information Technology Sector Twelfth Five Year Plan (2012–17), available at http://planningcommission.nic.in/aboutus/committee/.../cit/wgrep_dit.pdf.
[9] Singh, S.K. (2008), "Panchayati Raj and Good Governance", Centre for World Solidarity, Hyderabad.
[10] Verma, R.K. and Kumari, A. (2010), "E-Governance at Grassroots Level in South Asia: A Study of Citizen-centric e-Panchayats in India", *Asia-Pacific Journal of Rural Development*, Vol. XX, No. 1.
[11] http://www.tcs.com/SiteCollectionDocuments/White%20Papers/tcs_government_idealegovernanceindia.pdf
[12] Verma, NMP *et al*. (2010), "A Data Mining Technique for a Secure Electronic Payment Transaction", International Journal of Economics and Finance, Vol. 2, No. 4, November.

Pt. Deen Dayal Upadhyaya and his Economic Philosophy of Integral Humanism

Choudhary Anamika[1]

Abstract—*The Sanskrit word for philosophy is 'darsana', which means direct vision. The words symbolize the difference between modern Western philosophy, which mainly relies on intellectual pursuit and Indian philosophy that relies on direct vision of truths and pure Buddhi (reasoning).*

Many Indian thinkers have contributed extensively for bringing about a change in the course of development in the Indian economy so as to bring about a solution to the existing problems that the economy has been confronted with. Their deep thoughts served as alternatives to the pattern of development. Of the many Indian economic thinkers, like Gandhi, Nehru, Lohia,etc. Deen Dayal Upadhyaya is a name that is considered as one who had worked for humanity and whose mission was to establish a society free from all kinds of exploitation. An attempt is to explain, analyse and evaluate the humanism of Deendayal Upadhyaya. The present paper not only reflects upon the economic ideas of Pt. Deen Dayal Upadhyaya but also puts forth the relevance of such ideas in the present context of internationalization of Indian economy, its suitability and aptness and authenticity in the changing economic phenomenon.

Keywords: *Integral Humanity, Economic Ideas, Indianisation, Visionary*

In the words of Dr. Shyama Prasad Mukherjee, **"If I had two Deendayals, I could transform the political face of India."** This reflects the sheer acumen, organizational ability and meticulousness of his personality which left an indelible impression in the mind of Dr. Mukherjee, so much so that when he founded Bhartiya Jan Sangh, Deendayal was made the first General Secretary of its U.P. Branch as well as All India General Secretary.

His philosophy of Integral Humanism, which is a synthesis of the material and the spiritual, the individual and the collective, bears eloquent testimony to this. Whether it is the field of Politics or Economics, his approach was very much practical and pragmatic.

He started a monthly magazine "Rashtra Dharma", a weekly 'Panchajanya', and a daily 'Swadesh'. His vision for India was a decentralized polity and a self reliant economy. The nation should not forget its roots and the roots of India lies in its villages. According to Deendayal, this base should be properly nurtured. The modern technology is welcomed but not at the cost of nation's dependence. His approach was constructive and he favoured what suited India's requirements. He

[1]*Associate Professor, Dept. of Economics, DSMNR University, Lucknow*
E-mail: choudhary.anamika15@gmail.com

insisted that his followers should cooperate with the Government when the issue was justified and boldly oppose it when it erred.

As right to vote measures political democracy, similarly work for everyone measures the extent of economic democracy. But this work should be based on the choice of the person, just not confining him in providing a source of livelihood. What is more important is his share in the national income which should be adequate enough for him to be considered as employed. Thus, a minimum wage, an equitable distribution and a social security system is what is required for each worker.

Reviewing his political and economic ideas, it is evident that he attempted to bring about a national reconstruction because the national chaos that existed in the Indian society moved him from inside. His economic philosophy of Integral Humanism is strongly based on it. He led a strong crusade against the prevailing system of the Indian economy and gave precedence to national reconstruction because he firmly believed that the Indian economy should have its own course of development that aptly suits its socio-economic environment. The economy is endowed with resources and a judicious use of it would bring about a healthy and enriching development of the nation.

Integral Humanism or more specifically, "Ekatma Manav Darsana", he considered to be a benign act not only for the society but for the whole humanity, if solemnly followed.

Deen Dayal Upadhyaya had basic socialistic instincts which propelled him to make his first economic exposition in 1953 with *Bhartiya Jana Sangh ki Arthniti.* He mentioned in one of his statement that the inequality of income and expenditure existing in the society needs to come to an end. For this the infrastructural industries should not only be nationalized but monopolistic tendencies should also be brought under control. His guiding principle was ***decentralization of economic and political powers.***

On modernization, Deendayal Upadhyaya commented that this is a complex issue to deal with. It is no doubt at the root of the establishment of big industries and a capitalist economy which brings maximum automation with minimum employment. So where there is paucity of labour, but a huge market, this becomes a boon, but in a country like ours, such new inventions only brings an increase of unemployment with the retrenchment of the workers.

INDIANISATION OF ECONOMIC POLICY

In the views of Deendayal Upadhyaya, dependence on foreign aid is injurious to the economic health of the nation. Imitating the foreign trends may be devastating in the economic arena. Explaining his view, he has written, *"There cannot be two opinions, that poverty should be eliminated. But today, the question is how it should be done. Should we follow the American Model, or the Russian model or that of the European countries?"* He continued to state that though the economies of these

countries differ, yet they share commonness. All have accepted machine as the means of economic development which has the inbuilt feature of bringing in bulk production with meager labour. It now becomes a necessity to adopt Indianisation of the economic policy which is in the larger interest of the nation. The path of India's development lies not in mechanization but in the development of cottage industries and decentralization which is considered to be the backbone of the Indian economy. This is the apt path of economic development, as viewed by Deendayal Upadhyaya. Our socio-economic conditions do not allow the building of the economy on the basis of big industries.

In the present context, this idea of Deendayal holds a definite relevance. Giving precedence to self employment and promoting vocational training to the manpower of the country so that they learn some kind of skill is the need of the hour. It shall develop their potential and pave a path to make them viable in the market where they can generate some employment opportunities for themselves. What we need today is a policy which suits our Indian environment. As our Prime Minister rightly said that we have a high demographic dividend and so we need to build its potential. He said 65 percent of the people are under the age of 35 and with the IT ability of Indians "there is no need for such a country to turn back and look". Modi said it is *"important to recognize our strengths and mobilize them to go forward fast".*

Dependence on foreign aid is not the road to progress and development. We should maintain our individuality; else the day is not far off when we may again become virtual slaves. Thus we need to emphasize upon "Swadeshi" and make it the cornerstone of our reconstruction. *"Make in India"* slogan rightly gives a reflection that instead of importing from countries like China, what we require is to focus on our own resources and emphasize upon our roots. It will surely maintain our economic independence.

COOPERATIVE FARMING

For Upadhyaya, *the idea of cooperative farming is a utopia* and is against the spirit of human freedom. He believed that the concept of cooperative farming will deprive the cultivators of the ownership of the land and it is this ownership which is in accordance with the spirit of democracy and is economically viable too. He was against this plan as it would only promote autocratic nature of the bureaucracy. DeenDayal Upadhyaya took the example of Japan, Poland and other such countries who have utilized the restructuring of cultivation units on the basis of ownership, thereby considering it to be more practical and pragmatic to the economy as it also maintains the democratic system. Moreover, cooperative institutions should be set up for financial assistance. Though Upadhyaya's views on cooperative farming was highly criticized by the then government and was looked upon as supporter of capitalist, calling by various names like 'orthodox' and 'obscurantist', he replied by stating that the success of cooperative farming depends upon the public-psyche and not on the management. Only by understanding others' outlook can this atmosphere

change. The political influence of Nehru with the support of the Communist party helped in passing the resolution for cooperative farming though several leaders like Morarji Desai, Munshi, Ranga and Charan Singh vehemently opposed it too.

Further, Deendayal Upadhyaya maintained that institutions of gram panchayats should be set up in a democratic manner so as to initiate a decentralized political system. In his words, ***"Gram Panchayats should become manifestation of the philosophy of our ancient organized rural life."*** Our Constitution has adequate provisions for it.

FOOD GRAIN MECHANISM

Another attack after cooperative farming that Deen Dayal Upadhyaya made was on the *nationalization of food grain trade* through control over production and distribution. This was impractical in his opinion. He adhered to then opening of the fair price shops in huge numbers along with the issuance of the licenses to the experienced wholesale merchants and dealers. A proper supervision on the distribution at these fair price shops is essential. He believed that it is public psyche that works in cooperative farming, depending on its management does not work for long. Even today, h*ow we procure the food has an impact on how we release the food, and vice versa. Inspired by the sight of foodgrain going waste, it is often made out to be that our central problem is that of poor foodgrain storage.*

The well known ***Abhijeet Sen Committee (2002)*** rightly tried to put in place a mechanism where ready reserves of food could be made available at subsidized prices for the poor, yet the problem still persist even today. Large procurement of foodgrains by the State can also lead to backdoor nationalization of foodgrains trade. Various new resolves like right to food campaign or the food security bill that preserves the right of people to a basic amount of food as their legal right is an opportunity in the right direction which fairly improves our food distribution system. Thus what Deendayal emphasized upon on proper supervision on such distribution is acceptable even today (Singh & Verma, 2013).

DEEP CRITIQUE OF THE ECONOMIC CENTRIC EVENTS AND POLICIES

During his most active period in politics, nearly of two decades, Pandit Deendayal presented his deep critique of the economic centric events and policies in the most constructive manner. His review on following three occasions: PL 480 (196), Gold Control Order (1963), and devaluation of rupee (1966).

PL.480 (1960)

Indians had to face a huge shortage of food grains during the Chinese aggressions to such an extent that foreign aid was the only recourse left. It so happened that the economic planning gave more emphasis to rapid industrialization and neglected agriculture. An agreement was signed with USA under the Public Law 480 for wheat on loan which valued at Rs. 607 crore. For USA, it was a win-win situation whether

judged from economic, diplomatic or political front. India, which kept an anti capitalist outlook, had to extend the help from US. In the backdrop of this entire event, Deendayal Upadhyaya wrote in his regular Political Column, ***Political Diary*** in the "Organizer", "...it would be wrong to conclude that the agreement was a simple act of compassion or diplomacy and US does not gain much from it." Upadhyaya alarmed the nation to be cautious on the over dependence of the economy on the foreign powers. Rather we should view the situation only with a realistic and purposeful outlook only. Along with the purchase of wheat and rice from America, India was forced to purchase a huge quintal of wheat from Canada and Australia.

The respite was undoubtedly immediate but it should be at the same time alarming too. Deen dayal mentioned in one of his statement, "With the passage of time, we have been increasingly becoming dependent on foreign aids." He added that this help may make the government so sluggish in its efforts to raise its domestic production. The slogan of *"freedom from foreign food"* thereby came in.

ON THE GOLD CONTROL ORDER

Upadhyaya stated that in the interest of the economic development of the nation, hoarding gold has no justification as it is not only unproductive but is also creating a pressure on our declining foreign exchange reserves. It is the attraction of gold that is causing inflation. As a remedy, the internal value of the currency should be made stable by the government and the banking and financial facilities should be made available in the rural sector as well which could enable the rural sector to save money in accounts rather than in investing in gold for the rainy day. It is only the economic security which makes the people to get attracted towards gold. Corruption which promotes black money needs to be controlled. In a nutshell, Deen dayal Upadhyaya was clear in its approach to think holistically while framing the economic policies with a visionary action plan. The Gold Control Order could not bring out even that much gold by the people as during war time. The mission was not accomplished and the economy's situation, foreign exchange reserves and inflationary situation was beyond control. As a result the economy had to face the devaluation of the Indian rupee. Upadhyaya did regret this decision taken by the government. He made the US pressure responsible for this devaluation. In his book, he writes, "it cannot be denied that this decision was taken under pressure." This devaluation led to an unexpected increase in the loan and our foreign debt increased to two times just the next day of this devaluation.

DEVALUATION OF INDIAN RUPEE

In June 1966, the then Finance Minister S. Chaudhary announce the devaluation of rupee amidst such inflationary situation. It got devalued to 0.118516 gm of gold. Pt. Deendayal critically reviewed the scenario and penned a booklet titled, "***Devaluation-A Great Fall"***. The book reviewed all the four Five Year Plans and

concluded that the overdependence on foreign aid and the building US pressure had been the chief cause of this situation. The erroneous economic policies forced the authorities to devalue the currency. The Indian economy abjectly surrendered to the imperialistic rivalry of the US. He himself wrote, *"it cannot be denied that this decision was taken under pressure…Had the people been taken into confidence, the decision would have been more honest and democratic."* Deendayal held many reasons responsible for this devaluation, viz. an increasingly deficit economy, attraction for dollar rules, unclear foreign exchange rules, incessant increase in black money, heavy industrialization, heavy dependence on foreign aid, decline in exports, Swadeshi not being promoted, etc. Of all the reasons that he stated, he focused more on Swadeshi and the feeling of self respect and self confidence that we should inculcate in ourselves to stand to the West. ***Swadeshi and Swavlamban are the two magical slogans that can strengthen the Indian economy.***

A DECENTRALIZED ECONOMY

Pt. DeenDayal Upadhyaya wrote an article titled, Vikrendita Arthvyavastha, i.e. a decentralized economy. "We do need a decentralized economy…we shall have to develop a self employed sector…such a decentralized economic model can be given to the world by India alone…we must examine all their pros and cons before we make up a step forward in the dawn of national reconstruction." He stressed on 'Work to Every Hand'. Insisting on the development of the small scale industries, cottage industries, he stated that it needs less capital and aims at solving the problem of unemployment at a massive scale. He quoted Mahatma Gandhi, "I want mass production but production by masses as well." Such development will reduce the dependence on foreign aid and the nation will actually progress in a democratized manner.

Skill India, Start up India, Make in India, emphasizing upon Skill Developmemt Programme, etc are such efforts that the present government has initiated to hone up the skills of the existing demographic dividend of the nation. It will not only help in generating self employment avenues but also will create work opportunities to every working hand.

BHARTIYA ARTHANITI: VIKAAS KI DISHAAYEN

Pt. Deendayal Upadhyaya expressed his thoughts regarding economy in an elucidated maaner very effectively in his ***book***, Bhartiya Arthniti: Vikas ki Dishaayen. In this book, he dealt with the economic aspect of an 'integral individual'. He termed it "Arthyam", which is concerned with the entire system of economics, without being affected with the scarcity or abundance of capital. In context of Indian economy, he believed the words of Chanakaya, *"Sukhasya Moolam Dharma, Dharmasya Moolam Arthya"*. The root of happiness is in dharma which itself has its roots in artha. In his first treatise on economy in 1953, he stated that an economy

should be built on the tenets of Dharma. He candidly mentioned that the importance of labour should be very well realized and emphasized upon. As the basic role of an individual is its duty to work, similarly, the fundamental role of state is to ensure right to work to every individual. Without making any form of distinction, the state should provide work to each and every one according to his/her ability. Thus the objective that he focused upon was ***"Work to everyone"***.

For him, money should not become the only basis for judging the progress of an economy because both the scarcity and abundance of it brings adharma. Acute poverty due to paucity of money encourages one to do theft and excess of it encourages greed, making the society money-minded. It is difficult to evaluate *shram* in terms of money. The labour owns a sense of duty for which he is appreciated and thus honorarium is only a symbolic. What he stressed upon was the social and psychological values of human life. An uncontrolled competition among individuals should be avoided as it is not sustainable. He did not believe in Darwin's theory of survival of fittest. An economic cycle with social harmony and moral code is what sustains in the long run. A self propelling economy is not possible to maintain. For building a sustainable and sound economy, the aspirations of an individual should not lie in artha but in earning respect in the society and cordial environment at the family front. Overemphasis on consumption leads to increasing class struggle, and creates a consumerism environment giving way to competition. The West believes in the principle of maximum consumption which creates class conflicts and initiates the problem to humanity. People have lust for more consumption and in this race they suffer with more worries. What Deendayal believed was that the Indian economy should not believe in the same principle. They should give precedence to humanity which is the ultimate solution of all worries and emerging class conflicts. Instead of maximum consumption, we should go in for minimum consumption and maximum production and should promote fair distribution at the same time. If these are set in equilibrium, the problem is resolved. He was not a communist and also did not believe in capitalistic society. He was more of a sociologist and an anthropologist who gave due importance to human values and social system. He advocated decentralization of power which may answer the problem of unemployment. Heavy industrialization leads to concentration of power while establishment of small scale industries is an apt solution for an economy like India.

Society is represented by Individuals and so they hold their own significance which should not be underestimated. He called them the 'Trustee of the Society'. For him, a decentralized economy is the most preferred economy. Making state a monopoly was not welcomed nor concentrating the power in few hands. Rather than a complete control of the State, he advised a partial control of the state over planning, regulation and an alternative of not letting the concentration of powers in few hands. For this, nationalization is apt.

PRINCIPLE OF TRUSTEESHIP

Upadhyaya believed that neither the state should encroach upon the rights of the individual nor the individual should overlook the interests of the society. A principle of trusteeship is what needs to be maintained in the individual mindset. A healthy social system is where there is no slackness of the responsibility on the part of the state. In the coordination and harmony of individual and society lies the happiness of the humanity. Upadhyaya's Integral Humanism aims at cooperative ownership of property. He had a deep contrast of views. While he preferred a democratic set up where individuals were given a due place and freedom of views as per Western philosophy, he did not favour the capitalistic form of economy where competition and class struggle let the place only for the survival of the fittest. In his words, *"if the freedom of production granted to one person obstructs the freedom of another, it should be disallowed."*

Upadhyaya was completely against the heavy mechanization and industrialization as the labours become the ultimate sufferers. He abhorred lustful consumption and the concept of economic man, who just thinks of himself at the cost of others. For him, the development of the individual should be made in a healthy environment, and that could take place in a harmonious system. An individual should be conscious of his duty towards the state and the state should not become a monopoly in itself. For him, both capitalism and socialism are the extremes, while the former first establishes its hold on the economic field and then on the state, the latter makes the state the owner of all products. It is the ***democratic set up*** that promotes the healthy development of the individual. What goes with our culture is the decentralization rule. He therefore advocates economic democracy and decentralize economic policy based on "Integral Humanism". He stated that political democracy cannot stand without economic democracy. Just like vote to everyone is the major tenet of political democracy, work to everyone is the tenet of economic democracy. More so, the work should be vocation oriented and also of the individual's choice. For him, an economy is undemocratic, if it does not cater to the individual's production-liberty and creativity.

As far as heavy industrialization is concerned, Upadhyaya believed that it is in contrast to the Indian model as it crushes the Indian craftsmanship and their uniqueness. 'Work to every hand' target would seem to get unfulfilled. A common Indian does not have the capacity to be capital equipped. Heavy mechanization would only increase unemployment and overdependence on imports for technology and machines would also be on the rise thereby affecting the trade balance. The worse thing that it will promote will be the formation of mechanized labour instead of a labour with humanitarian values that will be healthy for the economy as a whole. He went on to the extent of stating that industrialization based on the foreign investment will be ill-boding not only politically but also economically. In his opinion, foreign capital exploits *Swadeshi* labour. He firmly believed that the newly

independent nations should not blindly follow the models of capitalists and communists nations; rather they should base their future policy in their own social traditions and customs. The cut throat competition in the West would paralyze the Indian economy's values and culture. What he proposed was a self employed sector which would assert in building human progress, refining the path to development by being mutually cooperative.

Upadhyaya should not be misunderstood that he did not accepted industrial development; he was in favour of healthy industrial development. His production policy emphasized upon: providing work to every hand, promoting decentralization instead of concentrating of powers in few hands, protecting the ingenuity of the Indian craftsmen, artisans and workmanship, making it complementary to the agriculture and rural sector, dependency on imported machinery should be prevented, Swadeshi goods industries to be promoted, efforts should be made to make the industrial policy labour oriented, rather than machine oriented for a long run development.

HIS VIEWS ON MAN AND MACHINE

Upadhyaya believed that machine should not supersede man; domination of man by machine should be strictly avoided. Machine should act as a supplement to increase production. He was neither against machines nor advocated mechanization. Instead, he proposed that overshadowing of machines on man distorts the basic structure of an economy. For Indian economy, such an unnatural state should not be promoted. He was in favour of a traditional decentralized setup keeping in harmony with the establishment of small scale industries. He was of the belief that the continuous 'brain drain' of the Indian economy will make it deserted. The increasing inequality and rural-urban differences will undermine the nation's integrity. India can represent a model for the world, whereby a decentralized economy with a self employed sector, where the development is based on humanitarian values with mutual cooperation can move the economy on the path to progress. The large scale industries should have their basis on the small scale industries. While consumer goods can be manufactured through small scale industries, production aids can be dependent on the heavy industries. In a nutshell, he strongly voted for decentralization.

In a nutshell, Pt. Deendayal Upadhyaya was clear in its approach to think holistically while framing the economic policies with a visionary action plan. He is undoubtedly considered as a man of high idealism and a deep thinker.

RELEVANCE OF DEEN DAYAL UPADHYAYA IDEOLOGY OF INTEGRAL HUMANISM IN PRESENT CONTEXT

To build a modern Welfare State is just impossible without a coherent and rational economic policy. The nation should progress in the right direction and for this a right blend of cultural, religious and traditional ideals with appropriate socio-economic philosophy in accordance with the need of the nation are required.

While Rajasthan Chief Minister Vasundhara Raje[2] rightly stated that Deendayal Upadhyay's ideologies are relevant even today, Union Minister of State for Information and broadcasting Rajyavardhan Singh[3], emphasized on Upadhyaya's ideology that the policies and programmes of the government should reach every person of the society.the government whether State or Central is making schemes and programmes keeping his philosophy in view. What is crucial is the fact that when doctrine of secularism, socialism, communism, capitalism, regionalism and communalism has culminated in bringing violence in the society, it is time to take a fresh look at the philosophy of Integral Humanism which may correctly provide a basis of a system of governance aptly suited for Indian nation and its people regardless of its caste, creed, religion or region. It shall provide a sound base for all round development of the nation. Only when the nation realizes its national identity, the seed of progress can be sown and subsequently reaped.

Vivaswan Shastri[4] who recently authored a book on the 'The Relevance of Integral Humanism in Modern Times' clearly favours Deendayal philosophy 'Integral Humanism' which presents an alternative model for development both integral and sustainable in nature, after the nation has tried many development models with mixed results. Aiming to provide a life of dignity, balancing the needs of the individual with those of society and countries, the philosophy of Integral Humanism also advocates that the natural resources should be used in a way as they can be replenished too. He also states that it is an ideal model for a country like India which has its unique history, diversity and cultural ethos.

Deendayal's philosophy is to be lived in present times. The philosophy of Deen dayal in respect to the development of nation was not just confined to politics or in economic policy making but he goes beyond Rajneeti and Arthneeti and made Samajshastra and Rashtraneeti also significant in the nation building process. His philosophy thus stands to the test of time. He has given appropriate guidelines on how to build and grow a political party, how to fight elections, form alliances and code of conduct when in opposition. To every human being, a life of dignity must be provided with the balanced use of labour, capital and natural resources. The concerned guidelines in making of budget are also embedded in the philosophy of Panditji. Family and society build the nation and this is unique. His philosophy on Samaj shastra is relevant still today, wherein the policies are formulated in pursuance of strengthening the family institution. Panditji highlights the role and responsibilities of a state in building a strong nation. Panditji calls out the difference between a state and nation and calls for the state to pursue policies that

Strengthen the nation. Pandit Deen Dayal's work provides us with a philosophy and principles on which polices can be formulated.

2 PTI, September 25, 2015
3 ibid
4 Vivaswan Shastri: The Relevance Of Integral Humanism In Modern Times, Swarajya Staff,2016

In his presidential address at Calicut in December 1967, Panditji's Idea of India can be ideally distilled. For him, a nation should have power to protect its citizens, enough produce to feed them, natural resources to be utilized in a way so as to replenish them and such knowledge to bring about all round development for itself and the world.

RELEVANCE OF HIS PHILOSOPHY IN GLOBALIZED ERA

Upadhyaya's philosophy seeks a middle path between capitalism and socialism. He has assessed merits of both systems and has been quite critical on their excesses. In the words of Stiglitz, *"Development is about transforming societies, improving the lives of the poor, enabling everyone to have a chance at success and access to health care and education."* It is development that makes a nation progress by building a strong foundation. This foundation must be amicable with the needs of the poor and their existence. The philosophy of Integral humanism of Upadhyaya which has its firm roots in the Indian tradition calls for not only reduction in poverty and providing them with social security but also emphasizes upon building up of a nation where development of small scale and cottage industries gets a prime place. Emphasizing on the principles of decentralization and Swadeshi, one may say that it stands in the present circumstances as the nations are unknowingly falling into the grip of dependency and suffering because of monopolization. What needs to be taken care of is the poorest of the poor which can contribute to the economic well being of the human being.

In this globalized era, the mantra of Integral Humanism of Upadhyaya can become a guiding principle where the government aspires to provide every Indian a life of dignity, opportunity and aspiration. For a developing economy like India, where the percentage of poor has still not declined, the progress of the nation depends on the alleviation of poverty and reducing the inequalities. The government is taking herculean measures to bridge this gap of rich and poor. The key initiatives taken by the Government from Jan Dhan Yojana to Swachh Bharat Mission ensures that inclusion has taken place and a qualitative difference can be brought about in the lives of the poor. The scope and scale of these initiatives is wide and unprecedented but the strong principles embedded behind them would certainly bring desirable and effective results.

The concept of Swadeshi retains our individuality and can effectively become the cornerstone of our economy. It cannot be denied that though the world has become a global village, the nation has to protect its identity, and for this the *'Make in India" approach* seems to become an adequate measure for it. The "Make in India" approach has boosted the spirit of our demographic dividend who is ideally suited to make India a hub for manufacturing, cutting edge research and innovation. The Bhartiya conditions calls for bhartiya technology as advocated by Upadhyaya and so he asks for reducing the dependence on foreign capital and technology. Though

Upadhyaya advocated reducing dependency on foreign capital and technology, today's era cannot restrict the transferability of technology and capital, especially human capital. Business outsourcing in the present times has reduced the distance among the countries and has facilitated more production. Though it cannot be denied that it has increased dependency too, which Upadhyaya has alarmed in his philosophy. So, the upliftment of small scale and cottage industries will enhance more employment opportunities and thus the lamp of progress and prosperity will shine in the lives of the Indians. For Upadhyaya, his philosophy can be the only remedy to the imbalance that may be created by the modern industrialization. This traditional culture stresses putting restraints on one's desires and advocates contentment rather than ruthless pursuit of material wealth.

The contrasting view of Upadhyaya in present globalized era is his non-acceptance of mechanization. Though his concept of development of cottage industries is remarkable as Indian economy must support its rising population in terms of employment but it cannot be denied that high technology and rapid mechanization throughout the globe poses a challenge for the Indian economy as well. To remain competitive and to gain an advantageous position in the world economy, the nation must focus not only on its small scale units but also keep pace with the up-gradation in technology taking place around the globe. It will give immense opportunities for more research and development and opening new vistas for employment opportunities. As indicated by the present Prime Minister of India, our demographic dividend has high potential which can be used judiciously to fulfil the dream of a developed and just India. Upadhyaya affirmed that our socio-economic conditions do not allow the structuring of economy on the basis of basic industries. The start-up industries is an answer to it. Pandit Deendayal Upadhyaya always said, '*Charaiveti, Charaiveti.*' it is an inspiring call to pursue the mission by overcoming all the obstacles that comes the way.

REFERENCES

[1] Upadhyaya, Deen Dayal (2014), *Integral Humanism*, sixth ed. Hindi Sahitya Sadan Publishers.
[2] Sharma, S.R., *Life and Works of Pandit Deen Dayal Upadhyaya*, Book Enclave Publishers.
[3] http://deendayalupadhyay.org/economics.html.
[4] http://avap.org.in/Uploads/Publication/Integral%20Humanism3.pdf.
[5] http://www.salagram.net/VWH-Indianame.html
[6] http://deendayalupadhyay.org/vibrant_humanist_text.html
[7] http://indianexpress.com/article/india/india-news-india/ Published: April 10, 2016
[8] http://www.business-standard.com/article/news-ians September 28, 2014.
[9] The Relevance Of Integral Humanism In Modern Times-Swarajya Staff http://swarajyamag.com/ideas/ April 01, 2016.
[10] http://indiafacts.org/pandit-deendayal-upadhyay-tribute-gentle-giant-2.
[11] Kesava (2012), Revisiting Integral Humanism.
[12] Press Trust of India, September 25, 2015.
[13] Verma, NMP (2013), "Food Security, Inflation and Fiscal deficit in India", International Journal of Economics and Business Modeling, Vol. 4, No. 2.
[14] Singh, Anshu and Verma, NMP (2014), "People`s Perceptions on the Performance of Public Distribution of Goods: A study of Capital City of biggest state of India", Journal of Empirical Economics, Vol. 3, N0. 5.

Study of Growth & Challenges of e-education in Raising the Standards of Education in UP

Jayanti Srivastava[1]

Abstract—*The particular paper analyses the dynamics of e-education and it's far reaching impact in the coming era of all-schools-broadband, free wi-fi and complete digitalisation. To attain higher level of socio-economic satisfaction the quality of education at primary, secondary and higher level must focus on the electronic ends and means. This is, therefore, the paper would focus on the importance of protecting the intellectual capital/property and the flow of circulation and distribution pertaining to content and material in order to minimize the degeneration of education standards. A thorough study has been undertaken about the Education system in Uttar Pradesh and its on-going efforts to transform traditional education to e-education. Secondary data is the main source of information and exploration. The proposed study expects to come out with an assessment of the outreach and promotion programs in the area of digital education and relevance of course materials for online and distance learning programs for maximum users.*

There are several verticals of e-education where benefits could be drawn upon while creating, protecting, enforcing and commercializing intellectual property. E-literacy, e-commerce, e-business, strengthening and expansion of digital infrastructure and transforming education into e-education may be some of the important ones that could provide the digital environment in utilizing intellectual property in the best way. It would also be explored that students brought up via system of e-education would definitely be ready to face the challenges of competitive world and be employable at the global level.

This study would help all educationists and policy makers to better understand while framing and introducing number of digital educational policies to attain the optimum goal of making India digitally educated.

Keywords: *E-education, Digitalisation, Education Standard, E-commerce, Policy*

INTRODUCTION

The enactment of Right to Education Act has all the good intentions of providing free and compulsory education to children of India. The very basic essence of the Act is to make education a fundamental right of every child of India. In this journey somewhere the focus of quality has been compromised and rather it came out as if schooling could be witnessed but where was the learning. And a new debate started which brought all educationists together to brainstorm about the theory of "schooling without learning". It is now realized that perhaps soon we might need to introduce Right to Quality Education Act.

[1]*Assistant Professor, Amity University, Uttar Pradesh, Lucknow*
E-mail: jsrivastava@lko.amity.edu

As a matter of fact if India has to compete on global standards the pattern of conventional education has to give way to non-conventional pedagogy of providing education. In order to achieve the objectives of imparting quality education the States have to incorporate the changes that could synchronize the Center's policy of making India "Digital" in the field of Education too.

GOVERNMENT'S INITIATIVE TO INTRODUCE E-EDUCATION

Education sector can be the biggest driver in achieving our aim of becoming super power in this century. The launch of Make in India and Digital India campaign has all the more instilled the right confidence amongst the youth. The government who aims to build the platform for education sector has projected about it in the Digital India campaign and also its plans to introduce the Right to Broadband. This right enables the toddlers to have the access to the technology from the tender age.

The project e-kranti who has numbers of widespread plans also incorporates the e-education plan as one of its pillars. The plan aims to connect all schools connected with broadband and free wifi in all schools. Digital Literacy program with the help of MOOCs (Massive Online Open Courses) is one of the forms. The idea behind this aims to improve is to improve the quality of education with the help of technology. The government having one of its foremost agendum as implementation of e-education is a sign of enhanced vision for the country.

EDUCATION IN UTTAR PRADESH

When we look at the states such as Uttar Pradesh we need to understand that a lot of areas need to be worked upon before getting the plan to execute efficiently. The Uttar Pradesh government has yet to show its interest level to execute in such a diverse state. With the election round the corner in the state, the parties are expected to line up with the national agenda and put the same in their manifesto. The central government plan has clearly laid down the road map but it becomes imperative for the state governments to align the infrastructural requirements with it.

Illiteracy in UP is widespread not only among older age groups, but it is also prevalent among the young population. A large number of children either do not enter primary school or drop out before completing the five year cycle. The enrolment figures indicate great disparity between rural and urban, boys and girls and children who are not exposed to education via audio, video and internet.

For the attainment of the goal of universal elementary education "Education for All Project" gets additional financial assistance of external agencies. It is also being realized that in spite of the instructions issued by the Government for the effective implementation of internet and installation of computers at school level the expected results are not coming. What is needed is a deep analysis and review of the entire system of supervision. This aspect cannot be ignored.

E-LEARNING DEVELOPMENTS

E-learning can raise the level of education, literacy, employability and economic development. The adoption of e-learning in all the spheres of society is relatively low at present. E-learning in India is more successful in the corporate segment where it is seen as a means of achieving business goals and motivating employees. The government of India has always considered the use of information and communication technologies as means of mass education. For example the use of satellite started in early 1970s and has transformed to its present state in a dedicated satellite for education (EDUSAT). India is progressed in information technology sector, the first online education enterprise with private initiative, when the National Institute of Information Technology (NIIT limited) started Netvarsity in 1996. However, the National Association of Software and Services companies (NASSCOM)'s Market Intelligence Service Reports that e-learning is in an infant stage.

The e-learning came into existence from National Task Force on Information Technology and Software Development constituted by the Prime Minister of India in 1998. In 1999 the Indira Gandhi National Open University (IGNOU) started Virtual Campus Initiatives (VCI) with two programs:

1. The Bachelor of Information Technology (BIT)
2. Advanced Diploma in Information Technology (ADIT) in collaboration with Edexel, UK and the Government of India, Ministry of Information Technology.

The Yashwantrao Chavan Maharashtra Open University (YCMOU) used e-learning for its Electronics Engineering Diploma Programme (EEDP) in 2002. Tamil Virtual University established in 2000, to provide Internet-based resources for the Tamil Communities living in different parts of the globe and others those who are interested in learning Tamil. Indian Institute of Management, Bangalore (IIM-B) used e-learning to supplement face-to-face teaching. The University Grants Commission (UGC) organized a dialogue on "Enhancing Higher Education through E-learning" in collaboration with the Common Wealth of Learning (COL) Vancover from 17–19, November 2003 at New Delhi.

ROLE OF E-EDUCATION IN RAISING THE STANDARDS OF EDUCATION

At the first instance it appears that E-learning can increase retention or achieve and there could be limited relationship between e-learning use and the end-point outcomes in the schools as a whole. However e-learning does appear to be having a noticeable impact on some intermediate learner outcomes and on some aspects of teaching practice.

The teaching tasks where e-learning can be introduced would be largely affected where it amounts to effective planning, preparation and sharing materials. It could also be more effective in meeting learners' needs, tracking progress or being more efficient.

This could be more effective at presenting work, usage patterns and also that e-learning would help in reinforcing the knowledge and developing understanding. The learning skills can have various dimensions due to e-learning.

Impact of e-learning on teaching is bound to be effective with the most common impacts being on planning, preparation and sharing materials with lesser effects on aspects of the teaching-learning interface and the smallest impacts on administration or efficiency. Teachers would be able to prepare for teaching, through researching and creating materials, more effectively as a result of e-learning. The presentment of information in front of the class and in making course materials available to students due to e-learning use would definitely develop students' understanding.

E-education can track learners' progress in a better and faster way and it can save time too.

The students' motivation increases because of e-learning use and becomes more effective in working in collaboration with their peers either inside or outside the classroom.

Use of e-learning also has a positive impact on some aspects of students' ability to independently manage their own learning. Independent working can be a result of e-learning and students may better able to work at their own pace, finish home-work and contact teachers with queries.

Learning and teaching experiences can have different dynamics altogether as a result of e-learning. The level of retention and achievement would also be high with effect of visual impact.

Overall, the positive and proactive approach in deciding the role of e-learning could readily identify opportunities for using e-learning and an expectation is raised that e-learning would be used in the majority of schools. E-education may be regarded as complementing other aspects of teaching practice tools in providing more congenial environment for teachers and students both.

The students learning outcomes is the basic aim of right to education offered to children and e-learning can work as a catalyst with higher attainment and helpful in making the teachers' effort meet the set target of education policy.

NEED TO PROTECT E-MATERIAL

Some precautionary measures are necessary to protect the e-material from abusive use. The major challenge in publicizing/ implementing e-education in UP is fight against the data theft and piracy. Some of the proposed initiatives to protect the intellectual capital may include;

- Protecting IP rights by making it mandatory for including trademarks and its availability on limited portals.
- The curriculum which gets developed needs to be addressing a common curriculum which can also be used across the nation without downloading option and have full encryption to have it confidential.
- All the materials must be copyrighted from the national copyright office before making it public.
- IP insurance policy that should also be done.
- Letting people know that the content is protected - Many people assume that material on websites can be used freely. Viewers can be reminded of IP rights.
- Use trademarks with the trademark symbol ®, TM, SM or equivalent symbols. Also a copyright notice (the symbol © or the word "Copyright" or abbreviation "Copr."; the name of the copyright owner; and the year in which the work was first published to alert the public that your copyright material is protected.
- Controlling access and use of website content-Technological protection measures to limit access to the works published on websites only to those visitors who accept certain conditions upon the use of the works and/or have paid for such use.

THE TECHNIQUES FOR BETTER PROTECTION

1. Online agreements are frequently used to grant visitors only a limited license to use content available on or through your website.
2. Encryption-Typically, software products, phonograms and audiovisual works may include encryption to safeguard them from unlicensed use. When a customer downloads a content file, a special software contacts a clearinghouse to arrange payment, decrypts the file, and assigns an individual "key"-such as a password–to the customer for viewing or listening to the content.

3. Access control or conditional access systems. In its simplest form, such systems check the identity of the user, the identities of the content files, and the privileges (reading, altering, executing, etc.) that each user has for each file. Electronic content may be accessed in numerous ways. For example, a document might be viewable but not printable.

SECURITY PROTECTION MEASURES

The security protections have to be studied from the users' side and management's side as well. From the user side, protection motivation theory (PMT), a theory originally from social psychology, is introduced into the field of information system security. Based on this theory, information is perceived and evaluated, and then provides supports for users to take actions (Crossler, 2010). This theory explains the cognitive mediating process and coping modes when users encounter information sources. The PMT theory is helpful for understanding security protection measures adopted by online learning users.

From the management's side, general deterrence theory (GDT), a theory from criminal justice, is adopted by information system security scholars to explain how security countermeasures can increase the perceptions of members in an organization regarding the severity and certainty of punishment for any misuse of information (Straub, 1990; Verma, *et al*. 2010).

Security policies and mechanisms in online learning must support authentication, authorization, confidentiality, and accountability (Cardenas & Sanchez, 2005; Agulla, Rifon, Castro, & Mateo, 2008). Authentication refers to the validation of a person's identity before the access is assigned. Authorization defines what rights and services a person can access after the authentication process is passed. Confidentiality means that some specific information or data cannot be disclosed to anyone who is not authorized. Whereas accountability refers to the methodology by which users' resource consumption information is collected for billing, auditing, and capacity-planning purposes (Song, Lee, & Nam, 2013).

To mitigate security threats and risks in online learning it can be proposed that information security management (ISM) for online learning providers in order to build an effective security architecture that can fight existing and emerging information security threats. The ISM should include policies, process, procedures, organizational structures, and software and hardware functions, in order to enhance the execution of security measures.

Five points could be highlighted as follows:

1. Authentication and accountability
2. Access control

3. Protection of communications
4. Non-repudiation issues
5. Learning resource provider server protection.

The information security professionals improve their security knowledge and skills by using the Virtual Training Environment (VTE), a web-based knowledge library.

CONCLUSION

TRANFORMATION OF SCHOOLS INTO SUCCESSFUL SCHOOLS

The firm resolution of Hon'ble Prime Minister to transform education system has to be supported by all States and its executives. Uniting like-minded people of indomitable spirit and conviction in the field of education are bound to navigate in a positive direction. Uttar Pradesh has long witnessed apathetic community, bossy supervisory staff, burnt-out teachers, bored kids, low level of learning, high drop-out rate, poor enrolment of girls, children caught in the care of younger siblings and other house hold chores etc.

The changes what we are expecting with the change of changed generation now has to be dealt with a way which suits them the most. Digital way for Digital generation should be the motive to achieve the unachievable. The need is to change the way we look at the education system and plan non-conventional methods for future of children of India as whole. Our schools have to transform into successful schools. The infrastructure support for wi-fi, internet facility and providing computers must come from the states open heartedly. As it is the challenge of fighting the disparity between our own students of cities and rural areas is a herculean task. The city students are techno-savvy and on latest smart phones whereas the other side of students have not seen/ used computers as yet. We must fight this out and make the coming generation to be ready to face the fast changing socio-economic scenario on a global platform.

REFERENCE

[1] Verma, NMP *et al*. (2010), "A Data Mining Technique for a Secure Electronic Payment Transaction", International Journal of Economics and Finance, Vol. 2, No. 4, November.

The Role of Talent Management in Human Resource: A Critical Review

Jaya Shahi[1]

Abstract—*In today's global economy, companies must continually invest in human capital. In the role of business partner, HR leaders work closely with senior management to attract, hire, develop and retain talent. Yet the skills shortage presents both socio-economic and cultural challenges as talent crosses borders. Thus, in view of workforce trends such as shifting demographics, global supply chains, the aging workforce and increasing global mobility, forward-looking organizations must rethink their approach to talent management to best harness talent. By doing so, they will be positively positioned to succeed in a highly competitive marketplace. In addition, organizational culture, employee engagement and leadership development have a significant impact on talent retention. Taking these factors into consideration, an integrated approach to talent management offers a pathway toward sustaining outstanding business results.*

Managing talent in a global organization is more complex and demanding and the current business and economic environment is exposing a host of weakness in the talent management practices of many organizations, as well as the lack of a comprehensive understanding of skills, capabilities, key workforces and top talent. The objective of the present paper is to retain the employees by managing, developing their talent and skills in the organization.

Keywords: *Talent, Employees, Downturn, Strategy, Skills*

INTRODUCTION

In a competitive marketplace, talent management is a primary driver for organizational success. Broadly defined, talent management is the implementation of integrated strategies or systems designed to increase workplace productivity by developing improved processes for attracting, developing, retaining and utilizing people with the required skills and aptitude to meet current and future business needs.[1] The single greatest challenge for HR executives in workforce management is creating or marinating their companies ability to compete for talent.[2] Without question, effective talent management provides one of the most critical points of strategic leverage today. Offering enormous business value, talent management is complex and continually evolving. Influenced by external factors such as the economy, global expansion and mergers and acquisitions, critical success factors for effective talent management include alignment with strategic goals, active CEO participating and HR management. Over time, common themes around talent management are emerging, such as the role of line leaders in the development of talent.[3]

[1]*Assistant Professor, Maa Sheetla Devi T.N. Mahavidyalaya, Arual, Kanpur*
E-mail: drjayashahiibm@gmail.com

This paper is organized as follows: The first three sections briefly review the talent management and its role in an organization and different rules to manage talent management. Section fourth and fifth, examines, drawing on employees relationships to talent management and how employees skills can be developed through talent management. The sixth section reviews the impact of downturn in talent management and how can be talent strategy increase the organization performance and retain employees in organization. This paper concludes by suggesting that talent management may lead to better HR relationships and better organizational performance.

TALENT MANAGEMENT

The profession that supports talent management became increasingly formalized in the early 2000s. While some authors defined the field as including nearly everything associated with human resources, the New Talent Management Network (NTMN) defined the boundaries of the field through surveys of those in corporate talent management departments in 2009–2011. Those surveys indicated that activities within talent management included succession planning, assessment, development and high potential management. Activities such as performance management and talent acquisition (recruiting) were less frequently included in the remit of corporate talent management practioners. Compensation was not a function associated with talent management.[4] The issue with any companies today is that their organizations put tremendous effort into attracting employees to their company, but spend little time into retaining and developing talent. A talent management system worked into the business strategy and implemented in daily processes through the company as a whole. It cannot be left solely to the human resource department to attract and retain employees, but rather must be practiced at all levels of the organization. The business strategy must include responsibilities for line managers to develop the skills of their immediate subordinates. Divisions within the company should be openly sharing information with other departments in order for employees to gain knowledge of the overall organizational objectives.[5]

Talent management implies that companies are strategic and deliberate in how they resource, attract, select, train, develop, retain, promote, and move employees through the organization. The mindset of this more personal human resource approach seeks not only to hire the most qualified and valuable employees but also to put a strong emphasis on retention.

DRIVERS FOR TALENT MANAGEMENT

To gain competitive advantage, the demand for human capital drives talent management. Talent management strategies focus on five primary areas: attracting, selecting, engaging, developing and retaining employees. Although pay and benefits initially attract employees, top-tier leadership organizations focus on retaining and

developing talent (see Figure 1).[6] Workforce trends drive talent management strategies. Factors such as an increasingly global and virtual workforce, different generations working together, longer life expectancies and an empowered and autonomous workforce have forever changed the workplace. Due to demographic changes, the workforce is also increasingly diverse—from age, gender and ethnicity to lifestyles, migration patterns and cultural norms. Organizations are already taking advantage of these workplace trends. Talent management strategies also provide the context for diversity and inclusion. Proctor and Gamble, for example, feels that getting the right mix of people is a major part of talent management and hires many of its leaders as university recruits.[7]

Figure 1	Seven Hallmarks of Distinction of Top-Tier Leadership Organization

1. Senior executive commitment to development.
2. Organizational reinforcement of development (through manager incentives and recognition).
3. Hiring for organizational compatibility.
4. Culture of meritocracy.
5. Offering rising executives a full exposure to the business.
6. Selecting successors based on leadership ability.
7. A succession management system focused on skills scarce in the labor market and emphasizing position fit above general skill development.

Fig. 1

Source: Corporate Leadership Council (2003), High-impact succession management: From succession planning to strategic executive talent management.

Talent management is also driven by the anticipated skills shortage in the coming years. While not all organizations, industries and professions will experience a lack of skills, organizations are already competing for talent. For example, customer service, health care, computer support and technology repair are areas where there is an anticipated acute talent shortage.[8] Finally, key business strategies also drive talent management. For example, with the growing need for global technical expertise, Ford Motor Company links competency development to its organizational strategic goals. Corporate branding, a key organizational strategy, is another business strategy that drives talent management. Increasingly, firms are linking their brand to employees and corporate behavior. At JPM Morgan Chase, for example, the concept of leadership for all employees is part of its corporate branding: "One Firm, One Team, Be a Leader."[9]

SIX KEYS TO EFFECTIVE TALENT MANAGEMENT

1. ***Develop an Integrated, Proactive Talent Management Strategy*:** View "employer of choice" status as an outcome of coherent corporate culture rather than ad-hoc programs.

2. ***Know the Company's Business Environment and Plans-the Competitive Climate*:** Know plans for growth, merger, divestiture, new products or technologies and project their impact on immediate and longer-term talent needs.
3. ***Know What Factors Contribute to Difficulties in Attraction and Retention*:** Base initiatives on the real concerns of employees. Raw numbers on turnover can show where retention problems are but not what they are.
4. ***Keep Various Retention Factors in Balance*:** especially the mix of compensation and non-financial motivators.
5. ***Track Turnover*:** Know its costs and where they are the greatest and convey them to management to support the business case for retention.
6. Market the company and its brand to current employees as vigorously as to the outside talent pool.[10]

EMPLOYEES ENGAGEMENT AND ITS RELATIONSHIP TO TALENT MANAGEMENT

Effective talent management policies and practices that demonstrate commitment to human capital result in more engaged employees and lower turnover. Consequently, employee engagement has a substantial impact on employee productivity and talent retention. Employee engagement, in fact, can make or break the bottom line. Employees who are most committed perform 20 percent better and are 87 percent less likely to resign. In addition, the foundation for an engaged workforce is established by the quality, depth and authenticity of communication by HR and senior management to employees, as well as the quality of supervision. The role of the manager as the most important enabler of employee commitment to the job, organization and teams cannot be overemphasized. Furthermore, when done well, practices that support talent management also support employee engagement (e.g., work-life balance programs—flex time, telecommuting, compressed workweeks, reward programs, performance management systems).[11]

Rewards and recognition also help both to retain talent and to improve performance. A Carlson/ Gallup study on employee engagement and business success showed that employees who were extremely satisfied at work were four times more likely than dissatisfied employees to have a formal measurement process in place as well as receive regular recognition. Further, 82 percent said recognition motivated them to improve job performance.[12] Increasingly, organizations are putting formal and informal reward programs in place. For example, according to Society for Human Resource Management (SHRM) *2005 Reward Programs and Incentive Compensation Survey Report*, 84 percent of companies offer some form of monetary and/ or non-monetary reward programs to

employees. To be most effective, however, organizations must regularly communicate to employees about reward programs. Discussing reward programs as early as during the interview process demonstrates that the organization values its employees.[13]

The process of building employee engagement is ongoing. Beyond compensation and benefits, employee engagement is best fostered through a meaningful and emotionally enriching work experience. Effective employee engagement—a mixture of tangible and intangible factors—fosters an environment of stimulation, development, learning, support, contribution and recognition. However, a recent study found that less than one-fifth of employees were highly engaged, one-fifth of the workforce was disengaged and about two-thirds were moderately engaged. The impact of employee dissatisfaction varies, depending on work experience (e.g., overwhelming workloads, distant and non communicative senior leadership, few developmental opportunities). The risk is that moderately engaged employees may move toward being disengaged. The opportunity and challenge for HR, working with senior management, is to increase the strength of employee engagement. Focus on engagement demands strong leadership, a sense of shared destiny, autonomy, accountability and opportunities for development and advancement. To better engage workers, companies must work harder to inspire people and provide a sense of passion, pride and mission.[14]

DEVELOPING SKILLS THROUGH TALENT MANAGEMENT

An important starting point is to understand some of the consequences of applying the notion of talent management. One is to identify and 'label' as such talented individuals among the workforce. A corollary of this is that those not so identified and labelled are seen as 'not talented'. In most cases this means that current performance is satisfactory or perhaps good but not excellent. It also implies that their future potential is deemed to be low if not zero. Another consequence is that among those identified as talented there may be some who do not value the identification. This can be for many reasons, including loyalty to colleagues who are not so identified.

Another common reason is that development programmes designed as part of talent management processes often require geographic mobility. This or other features of development programmes such as organizational rather than geographic mobility may not suit personal circumstances at a particular point in time and so some individuals may either resent or refuse engagement in a development programme. Such an associated consequence of both 'non talent' and 'reluctant talent' is that talent is written off. It may be that the 'non-talented' are in fact talented in other areas. For example, a common focus of talent management is identification and development of leadership potential. Individuals who do not demonstrate talent or

potential for leadership roles and are therefore identified and labelled as 'not-talented' may in fact have other talents and potential that is of equal importance and significance. This is an argument for not adopting too narrow a focus in identifying talent. Those who fit the label 'reluctant talent' are reluctant because of personal circumstances prevalent at particular times and so may become enthusiastic talent at a different time in the future. But, as with 'non-talent', such individuals could be forgotten and written off. This is an argument for knowing the personal circumstances of individuals and for making talent identification as continuous as possible–or at least repeating identification exercises on a regular basis and without permanently excluding anyone.[15]

An additional consequence is the potential negative effect on staff motivation and engagement of adopting what is referred to as an 'exclusive' approach to talent management. This means that only some employees are defined as talented and are able to engage with talent development processes and programmes. The alternative approach, referred to as 'inclusive', is one which views all employees as talented in some way or at least potentially so. The issue of exclusive versus inclusive is a big question in talent management and one with which many organization decision makers struggle. There are of course pros and cons, but on balance inclusive approaches seem to bring more positive and fewer negative results than exclusive approaches. It is now clear that the programmes associated with talent management work best when directly linked to development more widely available. It is also clear that any development programmes specifically designed and intended for 'talented individual employees' should have open and transparent entry criteria and selection processes if the worst of the potential negative consequences are to be avoided. Investing in skills through the development stage of the talent management pipeline has potential disadvantages as well as clear benefits. These disadvantages centre on missing out on potential and increasing the performance of some individuals at the expense of decreasing the performance of others through adverse effects on motivation. Developing skills as part of talent management therefore needs careful thought in both planning and implementation.[16]

- Development Methods

Organizations utilize a vast array of development methods in talent management. There is clearly a connection between the kinds of skills being developed and the methods adopted–such as technical versus leadership versus professional. Methods also vary according to the stage of career development of those to whom they are applied. A useful categorization of different approaches is the degree of formality. Some talent development approaches rely on very formal methods while others are very informal, and this is often related to different focuses and different stages in careers as illustrated below:

CAREER STAGE	TALENT DEVELOPMENT APPROACH
New or rising talent	Education and training for core technical/professional role
Emerging leader	Management education and training sponsors and/or mentors
Next generation leaders	Leadership development programmes both external and internal
Corporate next generation	One to one coaching Mentoring
Exceptional talent	As above plus shadowing and secondments

Fig. 2

Source: CIPD (2006), Talent Management, London: CIPD

This table is based on one in the CIPD research report. What it suggests is that formal methods such as qualification-based approaches for professional competences such as accountancy or marketing, and for management competence such as MBA programmes, are more likely at lower hierarchical levels and in early career. Informal methods such as coaching and mentoring are more likely at higher organizational levels and in later career. There is some merit in this, but it is important to recognize that it is a generalization and there will be exceptions. For example, one public sector organization in the study was as likely to use shadowing, secondments and mentoring for lower level employees as for senior staff. Equally, some senior staff are supported for qualifications such as an MBA as well as lower level managers.[17]

This organization also provides an interesting and useful exception in relation to leadership. In most cases leadership is a synonym for management, and what is meant is development for middle and senior level positions in organizational hierarchies. Thus they seek to develop leadership skills across the organization and apply the terms 'clinical leadership' and 'service leadership' to employees in non-managerial roles. Opportunities to develop leadership skills are not confined to those in or identified for management positions but are available to all employees–those able to exercise leadership in their non-managerial roles are actively sought, identified and supported in developing leadership skills for the benefit of themselves, their colleagues and the organization.[18]

Other methods used to develop skills by the various organizations include:

- In-house short courses
- Individual work projects
- Allocation to project teams
- Sabbaticals
- Action learning sets
- E-learning resources
- External seminars and conferences

- External secondments
- Self-directed learning
- Reading journals and magazines

The CIPD-commissioned research enabled a number of lessons to be drawn about skills development as part of talent management:

- Developing the skills of talented individuals requires both formal and informal methods to be utilized.
- Particular methods are likely to be more or less appropriate depending on the career stage of individuals and the nature of the skills to be developed.
- Innovative and creative methods such as sabbaticals and external secondments can be of value in developing a range of skills.
- Individual aspirations and circumstances must be taken into account and it must be recognized that these change with time.
- Confidence can be an issue for some individuals and may explain for some the phenomenon of 'reluctant talent', so the need where necessary to develop confidence as well as skills must be taken into account.
- Employers of all sizes and in all sectors will need support and guidance on maximizing the benefits of adopting talent management. However, any guidance must help employers analyze, identify and manage talent in their particular context. Sector Skills Councils could make a valuable contribution by working with employers in their sectors.
- Development of skills is a key component of talent management but needs to be part of a coherent strategy of talent management.
- Identifying potential is an essential part of talent management, and policies aimed at developing skills need also to include mechanisms for talent identification and deployment.
- Developing skills in the workforce can be achieved by a variety of methods, informal as well as formal. Policy that is flexible in recognizing a variety of methods is more likely to be effective in encouraging employers to realize employees potential and develop talent.

THE CURRENT DOWNTURN BECOMES A CHANGE OPPORTUNITY FOR TALENT MANAGEMENT

We are now all experiencing the effects of the global economic downturn. Organizations are inevitably under pressure to generate cost savings: reducing manpower, introducing salary freezes and cutting budgets for training, coaching and entertainment. CEO's everywhere have to confront these issues and make announcements that keep analysts, shareholders and investors happy. Costs saving

measures are often used as window-dressing in harsh times. However, the quick announcement and implementation of cost-cutting measures can cause valuable talent to leave a company. It is not unknown for entire departments, management layers or business units to disappear through restructuring operations. For the remaining talents in the business units which were not affected by the measures, everything becomes less attractive; they believe they will receive little personal attention and less personal development.

Now in these days' organizations making widespread redundancies and reducing the investment allocated for training and development. Business during a downturn is very much focused on the short term with the numbers being given priority. During such times, managers will be even less interested in the soft aspects of their role such as coaching. Once the downturn has ended, business will have learned lessons from the single focus on short-term revenue that brought excessive bounces to managers. Some say this actually led to the credit crunch. Values and controls will change. By then, other measures like retention rate and the number of promotions will influence the level of bounces and-as a result–the behaviors of managers will change.

But that could be too late. A downturn leads to an attitude of survival and people seek to hang on the jobs that they have. When the downturn is over and the tide has turned, the most talented and employable staff will leave the ship. Most likely, these individuals will belong to Generation X* and Y**. They are simply very employable and–by nature–very willing to change. There is already evidence that graduates of generation Y tend to decide to leave companies on average after 2 years of employment. What a difference from the past, especially if we compare this to the life–long employment mentality of the Body Boomers and late X generation.

The downturn now actually presents us with a great talent management opportunity. During a downturn it is vital for organizations to allocate their development investment and management attention to the real talents in their business. It is a necessity and an opportunity to redefine the talent identification processes and to find out who the real talents in the organization are. Companies should open up their talent management processes and systems to a much wider audience of good performers in all layers of the organization. This will ensure access to a wider supply of talented people. By providing individuals with this level of attention, this could also prevent them from leaving the company.[19]

TALENT STRATEGY

Talent management is a complex discipline, encompassing a wide array of programs and processes. For such initiative's to be successful, a concrete talent strategy must serve as a constant guide, providing direction for how the organization will acquire, develop, and retain employees, while always reflecting the key business goals of the organization. Successful companies embed their talent strategy into the overall

strategic planning process, integrating individual programs and practices to ensure they are all driving toward the same set of objectives.

No strategy can be effective without the support of senior leadership - and talent management is certainly no exception. In the past, HR struggled to convince business leaders to invest their time and money in talent management. Today, the challenge is not just whether to invest resources in talent management, but also how to identify what talent practices provide the greatest return; where leaders can most effectively spend their time developing people; and how to drive greater consistency, integration, and alignment of talent practices with the business strategy. Without a doubt, senior leadership plays a key role in creating a culture that supports talent development. At Humana, for example, CEO Michael McCallister clearly demonstrates the importance of aligning the company's consumerism strategy with human capital. He is credited with fostering a culture of growth and development. By providing visible support and commitment, he instills a "talent mindset" throughout the organization—that is, a deep conviction that the best and brightest will create shareholder value.[20]

Many more CEOs today are active champions for talent management and they and their leadership teams try to foster talent cultures within their organizations. At McDonalds, a Hewitt *Top Companies for Leaders* winner, CEO Jim Skinner has designated talent management and leadership development as one of his top three priorities. It's a commitment he embraces in his everyday actions. At every opportunity, he espouses the importance of talent and leadership development, both in regular communications and when speaking publicly.[21]

The companies with more mature talent practices are driving better integration and consistency through a combination of approaches including:

Leading organizations have clearly defined employment brands that include a strong focus on diversity and corporate social responsibility. As part of their brands, these companies also clearly define the values and behaviors that they expect from people in the organization. Recognizing that a compelling employment brand is critical to becoming an employer of choice, organizations are building employment brands as a long-term solution for attracting the best quality applicants. Increasingly, employers are coming to understand that a winning strategy includes a compelling employment brand, an inclusive work environment, and the foundation

*Generation X employees are those born in the early 1960s to the early 1980s.

**Generation Y also called "Millennial Generation" are those employees born in the early 1980s to the early 2000s.

- Investing in robust talent management technology solutions coupled with process redesign;
- More clearly defining corporate and field HR roles for designing and delivering talent solutions, including greater use of talent specialists (in some cases business partners) in the field to help improve integration; and
- Implementing global centers of excellence for talent management to improve the coordination and consistency of practices across regions and businesses.

of strong values. Without these key components, it will be nearly impossible to succeed in today's talent market.[22]

CRITICAL EVALUATION

The unfavorable economic environment and job insecurity that fueled the recent spike in employee loyalty, compelling many employees to put their job search temporarily on hold, is now rapidly improving. It is inevitable that good talent will quickly start to be more open to career changes as soon as they perceive that market conditions are recovering. It is therefore crucial for businesses, now more than ever before, to take a long-term view of their talent management strategies and take proactive steps to set retention plans in place. A critical starting point for employers is to consider which employees or groups are most at risk of resigning, by being fully tapped into the mood of their workforce. Businesses should encourage their managers to prioritize employee needs, sentiments and aspirations to not only retain their talent but further prepare them for ongoing change. Indeed, our experience reveals that many managers are out of touch with their employees or lack the skills to effectively lead them through change. Reviewing selection processes for leaders and ensuring there is appropriate emphasis on people leadership change management and empathy must take precedence. Organizations should also identify the business critical roles that will help drive recovery, review existing profiles for these roles and look to develop these skills internally, or establish a plan to upgrade their talent by ensuring the external talent pipeline is geared to meet demand. Organizations should also re-evaluate their Employee Value Propositions and consider how they can emphasize job security, training and development.[23]

SUGGESTIONS AND CONCLUSION

Anticipated workforce changes and cost-effective ways to access talent are key to the next generation of talent management. Predictive workforce monitoring will lead to effective strategic talent decision-making. Factors such as flexible talent sourcing, customized and personalized rewards, distributed and influential leadership, and unified and compassionate workplace cultures will be important for successful talent management. Companies will increasingly utilize different types of employment relationships, and nonstandard employment models will continue to evolve. Free agency employment relationships—contracting for the best talent on an as-needed basis—will become more common. To benefit from the knowledge, skills and corporate memory of mature workers, phased retirement will become prevalent. Keeping workers engaged—particularly the next generations—may call for HR to redesign the workweek, benefits packages and reward programs. Scenario planning and talent-match databases will become essential planning tools.

It is management, therefore, not HR, who should feel responsible for ensuring that the company defines clear job roles–outlining necessary skill levels and competencies for each and determine the appropriate incentive, rewards and compensation and set the metrics by which success will be measured. In many

leading organizations, management establishes the necessary parameters which ensure that the organization has the right person with the right skills in the right job at the right time to reach strategic goals at all levels.

In closing, to sustain outstanding business results in a global economy, organizations will rethink and reinvent their approaches to talent management. Effective talent management calls for strong participatory leadership, organizational buy-in, employee engagement and workplace scorecards with talent management metrics. Companies that master talent management will be well-positioned for long-term growth in workforce performance for years to come.

REFERENCES

[1] Lawler, III, E.E. (2005), "Human Resource Management to Organizational Effectiveness", *Human Resource Management*, Vol. 44, pp. 165–169.
[2] Aberdeen Group Inc., Human Capital Institute (2005), "Retaining Talent: Retention and Succession in the Corporate Workforce", Boston: Author.
[3] Morton, L. (2004), *Integrated and Integrative Talent Management: A Strategic HR Framework*, New York: The Conference Board.
[4] NTMN (2011), "State of Talent Management Survey Report, *Green Wich, CT*: JAI Press, pp. 99–122.
[5] Tucker, E., Kao, T. and Verma, N. (2005), "Next-generation Talent Management: Insights on How Workforce Trends are Changing the Face of Talent Management, Retrieved January 26, 2006.
[6] Towers Perrin (2003), "Working Today: Understanding what Drives Employee Engagement", Retrieved February 14, 2006.
[7] Morton, L. (2005), "Talent Management Value Imperatives: Strategies for Execution", New York: The Conference Board.
[8] Dell, D. and Hickey, J. (2002), "Sustaining the Talent Quest", New York: The Conference Board.
[9] Towers Perrin (2002), "Talent Management Powers Performance at Leading Companies", Retrieved January 23, 2006.
[10] Corporate Leadership Council (2004), "Driving Performance and Retention through Employee Engagement", Retrieved January 27, 2006.
[11] The Gallup Organization (1998), "Employee Engagement: Business Success", Retrieved March 7, 2006.
[12] Burke, M.E. (2005), "March 2005 Reward Programs and Incentive Compensation Survey Report", Alexandria, *VA: Society for Human Resource Management.*
[13] Chartered Management Institute (2006), "Measures of Workforce Capability for Future Performance", London: CMI.
[14] Giambastita, R.C., Rowe, R.G. and Riaz, S. (2005), "Nothing Succeeds Like Success: A Critical Review of Leader Succession Literature Since 1994", *The Leadership Quarterly,* Vol. 16(6), pp. 963–991.
[15] CIPD (2006), *Talent Management: Understanding the Dimensions*, London: CIPD.
[16] CIPD (2006), "Reflections on Talent Management", London: CIPD.
[17] Wolldridge, Adrian (2006), "A Survey of Talent: The Battle for Brainpower", *The Economist, London, The Economist Group,* Archived from the Original on 2010–12–20, Retrieved 2010–12.20.
[18] Porter, M.E. (1996), What is Strategy? *Harvard Business Review*, Vol. 6(6), pp. 61–78.
[19] Fegley, S. (2006), "2006 Talent Management Survey Report", Alexandria, *VA: Society for Human Resource Management.*
[20] Ray, G., Barney, J.B. and Muhanna, W.A. (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-based View", *Strategic Management Journal*, Vol. 25, pp. 23–37.
[21] Handfield-Jones, H., Michaels, E. and Axelrod, B. (2001), "Talent Management: A Critical Part of Every Leader's job", *Ivey Business Journal*, Vol. 66(2), pp. 53–58.
[22] Verma, NMP (2015), "Augmenting Social Science Knowledge in Developing Economies: Challenges and Alternatives", International Journal of Social Science and Development Policy`, Vol. 1, No. 1, January–June.
[23] Verma, NMP (2015), "Knowledge Inclusion in Social Science: Some Indian Issues`, International Journal of Social Science and Development Policy, Vol. 1, No. 2, July-December, 2015.

Employment, Export and Sustainability of Indian Software Industry

N.M.P. Verma[1], Aakansha Verma[2] and Dolly Singh[3]

Abstract—*Software industry is among the fastest growing sector of the Indian economy. It is considered as the largest sector providing huge employment and export. It is proven as a powerful sector. Its growth is export driven and basically dependent on the export of services. Its export performance is something very impressive as it contributes about 65 percent of the total revenue. It is found that India is ranked number one as per the choice for software outsourcing. There is a gap between the exports and domestic market expansion of software industry and it gives causes and suggestions to the problem of low level domestic market of software industry mismatch. A strong and self-reliant domestic base is needed for the success of the industry as the domestic market of software in India is low in comparison to its export market. It is believed after reviewing much literature on the Indian software industry that growth of the industry will only be sustainable when the exports will converge with the domestic market base. Indian software industry represents one of the most successful business models that can help to sustain the growth and competitiveness of the country. It has been observed that with software (export) as the driving engine, since early 90's, the Indian IT industry has been growing at a phenomenal rate. Moreover, software driven IT industry is today at the top of India's national agenda as an instrument and a model, for the modernization of India's economy. The objective of the present paper is to examine the employment and export of Indian software industry. The study uses secondary data and basic statistics for trend analysis.*

Keywords: *Software Industry, Export Trend, Employment, Domestic Market, Sustainability*

INTRODUCTION

Policy makers have begun believing that the tremendous growth of the software industry is an unexpected boon for the Indian economy. Growth reflected in the industry is alone due to its export performance but at the same time hardware sector and the dynamics of its growth should also be a matter of concern as software also depends upon it. Software exports speed up the growth of the software industry. And hardware story is depicting something else like it is totally dependent on imports of components and other things. It just functions as an assembling industry.

The historical performance of the hardware sector, however, had not been less commendable before. Many authors had shown how successive policy regime helped the Indian computer hardware industry to achieve maturity in terms of

[1,2,3]*Department of Economics, Babasaheb Bhimrao Ambedkar University, Lucknow, India*
E-mail: [1]nmpverma@gmail.com

technological competence. The domestic IT industry which was earlier dominated by the hardware sector has been rapidly shifting towards software. The share of hardware, which was about 60 per cent in 2004–05, has dipped to 46 per cent in 2010–11. This has been accompanied by a sudden spurt in growth of software industry. According to many industry observers, Indian software industry represents one of the most successful business models that can help to sustain.

Software industry is showing tremendous performance and emerging as the superpower. It is now proven as a powerful sector. Its growth is export driven and basically dependent on the export of services. Its export performance is something very impressive as it contributes about 65 percent of the total revenue. With the publication of a World Bank funded study in the US, India is known as software expertise and in the study it is found that India is ranked at number one as per the choice for software outsourcing (Morris, 2003) is concerned. This paper enunciates the gap between the exports and domestic market expansion of software industry and it also gives causes and suggestions to the problem of this mismatch. A strong and self reliant domestic base is needed for the success of the industry, the domestic market of software in India is low in comparison to its export market. It is believed after reviewing literature on the Indian software industry that growth of the industry will only be sustainable when the exports will be converged with the domestic market base. If we look at the history of the industrial success then we find that no country get success in the absence of the domestic market base and solely dependent on international market. For India it is needed that a strong and robust indigenous market of software should emerge. An efficient domestic software industry is a pre-requisite for the sustainable growth of software exports. All the developed exporting nations had made a vibrant domestic base first and then they promoted exports. For national image of the industry strong domestic market base is needed a lot (NASSCOM, 2008). In Indian context it is needed a lot where the industry is flooded with small software houses. Computer policy of 1984 and Software policy of 1986 reflect that exports success will not sustain alone. It should be matched with the growth of domestic market base. They are interlinked together. One can't work without another. This is felt nationally too by the scholars that export led growth will not work in the long run sustainability of the industry especially in the context of skill and manpower intensive items like software. Weak domestic market is a big concern for the sustainable growth of the software industry. Well, software exports is growing and developing so fast but still domestic market is not keeping in pace with that. For a sustainable robust growth of the industry it is needed that domestic market should also grow with that pace. There are many differences between the growth of the software exports and software's domestic market: 1) IT Enable Services 2) Support and Maintenance 3) Training 4) Turnkey Projects 5) Product and Package 6) Professional Services.

REVIEW OF LITERATURE

Chakraborty *et al.* (2001), Arora *et al.* (2001), indicated the vulnerability of the industry arising out of lack of diversification of export that is mainly constituted by mundane services such as low level programming and maintenance. However the possibility of being trapped at the low-return end of the division of labor was already echoed by the Indian sector in the early 90's.

D'Costa, A.P. (2002) observed that large companies already have access to finance and can undertake low value-added activities that are not research intensive. In order to position India in context of paradigm shift to 'hub for globally competitive value services' as against "talent provider", most visible policy intervention from government of India and few state governments has been in the form of setting up Software Technology Parks (STP) to sustaining India's advantage and protecting future earnings. This is in addition to various fiscal and other regulatory incentives for attracting new investment and making the process of setting up new ventures easier within and outside the country. **Patibandla (2000)** identified the critical role of government's import substitution policy and argued that India's software industry was the by-product of import substitution facilitated by certain supply side policy support with trade-openness by the government. Here also author shows the support of government policies for the industry's facilitation.

Indian software industry has been characterized as low value-low risk-low investment activities. Given this characteristic of the Indian software industry, the primary aim of our research is an in-depth study of the industry in the light of the present export boom of the software service sector. The study seeks to examine the growth sustainability of Indian software industry. Or, in other words, this study finds out conditions under which: 1. The growth of software sector will sustain in future. 2. Global supremacy of software industry can be achieved. With this it is also noticeable that the industry is having very less domestic potential as described earlier which is not good for its sustainability of growth in future or it leads to NO INNOVATION which is again a problem for development. So, the study is relevant in this context (Sridharan, 2002). The objectives of the study are to find out the conditions under which the growth of software industry will sustain in future. Secondly, to study the domestic profile of the Indian software industry. Thirdly, to study the structure of the Indian software industry. Lastly, to study the manpower issues in the Indian software industry. The hypothesis of the study is Indian software industry operates on low value chain. Second, industry's whole growth is dependent on low and cheap manpower. Third, the structure of the present Indian software industry is the result of the industry's export centric feature (Verma & Awasthi, 2005).

METHODOLOGY

The study is based on secondary data. The data sources used in this study are NASSCOM, Dataquest, Department of Electronics and & Information (www.diety.gov.in) and CSO. We took theoretical understanding of the sustainable growth of Indian software industry by reviewing deep rooted studies on the concept of sustainability. Then we took understanding of the required factors for long term sustainability of the industry and give 28 industries a position of superpower in the global market. The various issues of the Indian software industry have been examined in the light of the conditions of sustainability. We felt it necessary for a better understanding of the software industry and also for deciphering the missing link between software and hardware segment of IT industry of India. With this understanding we also discuss the features of the products and services offered by the Indian software industry. Then we use regression analysis for understanding the technological capability of the firm. The dependence of technological capability on different variables is tested through regression and correlation analysis. A relationship between capability of technology and different independent variables that can explain our proxy will also establish relations between the export volume of the firm (percentage share of total export of the software industry) with some explanatory variables which are: degree of competition (DC), productivity (P) and employee (E). We will examine which one of them better explains the technological capability of the firm. Degree of competition is measured in terms of competition faced by a new entrant from the existing firms' after entering into the market.

It is expected that there is a direct relationship between the productivity (calculated as the ratio between annual turnover & quantity of employed labour within a firm) and capability in technological terms. Technologically superior firms are anticipated to be more fruitful than the inferior one. If a firm is technologically sound we can infer that there is a strong linkage between the degree of competition & technological capability of the firm. Second, firm should own high expertise labour. Lastly, there is a direct relationship between productivity and technological capability. Total number of firms taken is 479 (listed in NASSCOM 2013). Regression analysis is carried for market share & export separately.

To examine the variable that can better explain the technological capability of individual firm market share as well as export data is taken for ten years (2004 to 2013). Model is expressed below in equation form.

$$MKS = K+B1DC+B2E+B3P+\mu$$

$$Ex= L+C1DC+C2E+C3P+ \mu$$

LABOUR SUPPLY AND DEMAND

Industry survey says that the private institutions are faster in introduction of new courses on new technology as well as basic training than that of government institutions (Patibandla, EPW 2001). As a result these private institutions seem to

fill the gap of demand and supply to better than that of government institutions. But it is also thinkable that private training institutions can meet the short run needs of the market. The long run needs of the market take basic theoretical knowledge and generation of knowledge through research and development as important ingredients. This is the place where 79 government aided institutions trained professional workers nicely. It is crystal clear that approximately 75% of technical manpower is having the degree of B.Techs, diploma and ITT. Share of PhDs is very low that is only 0.14%. This surely indicates the need of skill set required supporting growing demand of this service industry. It has been said in a survey article by Arora (Research policy 2001) that although software sector is manpower centred it does not need high and different skills beyond training of first degree level in college. To produce software, a non technical sort of knowledge is sufficient. It only needs logical and methodological work and somewhat familiarity with tools and language of software development. Another important thing is the capability of learning fast. Fresher of good college after having some focus in this segment can easily get programming assignments. Indian software firms do not need highly talented professionals for their activities as they require low skills only. Mostly firms hire graduates for them. In bulk engineering graduates who are differently trained from software sector are absorbed by software industry because of marked preferences for engineers of all types, not just software engineers. An estimate says that as of March 2005, India had it's own 410410000 working professionals. Out of 12,200 trained engineers each year approximately 75,000 new software engineers are available presently to join the industry. Others go for brain-drains or join end user organizations. Principal source of IT professionals are educational universities and prestigious IITs (Bajpai, N. and N. Radjou, 2000).

Excess demand shows a rise in wage rate with approx. 25–30% in 1990s. This is capable of paying more than average wage; reason is relatively high private rates of return to investment in the software sector. The greed for high wage, travel, (for body shopping) and nice work environment explain the existence of highly trained young professionals in the sector, many of whom may be over deserving and over qualified. notwithstanding, the increment in rate of wage is still lower than that of international. Low wages underutilize the expertise of Indian professionals by outsourcing for lower end services for export market. Resulting from these other firms which require technical manpower are suffering from lack of trained labour, reflecting the high social opportunity cost of human capital employed in software sector. By other sector we mean good producing sectors like hardware, communication, and control-instrumentation, research in training and manufacturing sector as well. Effect of wage rise we find in all these sectors is due to labour movement. Since, these sectors don't have a fabulous indigenous market, curtailing the output of this sector, on the other hand, given the boom in the global market, the employment and output of the Indian software industry increases. This phenomenon often called as "Dutch Disease" as detailed by Lorden Wan Wijnberjn

in 1984. It argues that windfall booms of external income can cause problems. It can result in de-industrialization of the economy. Here the Dutch diseases explained in terms of present export boom in the Indian software industry. India is emerging as a leader in the field of software services. It is often said that India's advantage actually depend upon its abundant technically skilled manpower, just like Gulf countries having crude oil as natural resource and South Africa has diamond in abundance. The fabulous export performance as discussed earlier of Indian Software industry has fructified such view. It is true that India has been producing more of IT professionals. But a comparative look may not be so realistic. In the view of some researchers while the US produces astounding 1000 Master degree holders and over 800 Ph.D degree holders in Computer Science every year, India produces merely 300 M.Tech degree holders and 25 PhD degree holders in Computer Science (Hindustan Times).

RESULTS

Results are presented in Table 1 & 2. It is found and can be seen clearly that value of t and F are significant at 5 percent level and R^2 value is also high that shows robustness of the results.

Table 1: Results of Regression Analysis

Dependent Variable	Constant (t value)	Degree of Competition (t-value)	Employee (t-value)	Productivity (t-value)	R^2 (F value)	Adjusted R^2(F-Value)
MS	-0.23948 (-70857)	0.098320 (3.455)	0.785600 (27.389)	0.298418 (10.785)	0.73910 (355.832)	0.73287 (332.832)
EXP	-0.37914 (-7.259)	0.085912 (3.896)	0.906876 (38.798)	0.141988 (6.259)	0.84079 (545.336)	0.83915 545.339

Table 2: Results of Correlation Analysis

Dependent Variables	Degree of Competition	Employee	Productivity
Market Share	-0.19	0.80	0.42
Export	-0.25	0.90	0.30

KEY OBSERVATION

- R^2 obtained from the regression analysis indicates the best explanatory power of market share as well as export.
- There is low correlation between market share and degree of competition.
- There is very high correlation between market share (export as well) & employee (labour market share).
- There is low correlation between market share and export with productivity.
- Statistically the relationships between revenue market share and labour market share exists only if labour market is more or less homogenous.

- The jobs undertaken are of low skill or low knowledge intensive employing low expertise of manpower.
- High expertise manpower is being used for low skill based job.

Table 3: Domestic Market & Export of Different Products of Software Industry

Activity	Domestic Market		Export Market	
	Rs. Billion	Percentage	Rs. Billion	Percentage
IT enabled services	4700	9.5%	5970	5.48%
Support & Maintenance	2000	4.0%	4650	4.25%
Training	2300	4.5 %	1880	1.72%
Turnkey Project	14100	28.5 %	39950	36.50%
Product & Package	23900	48.5%	8650	7.90%
Professional Services	2500	5.0 %	48300	44.15%
Total	49500	100 %	109400	100%

Source: NASSCOM Report of 2010.

Table 4: Sector Wise IT Workforce Employed Over the Years

Category	2007–08	2009–10	2011–12	2013–14
Software Export Sector	1,10,000	1,62,000	1,70,000	2,20000
Software Domestic Sector	17000	20,000	22,000	35,000
Software- Captive in User organization	1,15,000	1,78,114	2,24,250	3,50,000
IT enabled Services	42000	70,000	1,06,000	2,25,000
Total	2,84,000	4,30,114 5	5,22,250	8,30,000

Source: NASSCOM report of 2013–14, CSO

Numbers have increased from 2,84,000 in 2007 to 8,30,000 in 2013. But the maximum workforce has increased in IT enabled services which is considered as low level professional services whereas there is negligible increment in domestic sector.

Table 5: India's New Software Industrial Labour

Category	2009–10	2010–11	2011–12	2012–13	2013–14
IT professionals from degree and diploma colleges	74364	90867	99959	110495	115533
Non-IT professionals from degree & diploma colleges	32025	35612	38423	43261	55877
IT labour from non-engineering fields	26597	31620	34595	38439	42853
New IT labour	132986	158099	172977	38439	214263
Total number of engineering seats	290088	333094	361076	401791	464743
IT professionals from degree & diploma colleges as a proportion of engineering seats	26	27	28	28	25
IT graduates as aproportion of graduates	33	35	35	35	31

Source: NASSCOM and Dataquest.

Industry survey says that the private institutions are faster in introduction of new courses on new technology as well as basic training than that of government institutions (Patibandla, EPW 2001). As a result, these private institution seem to fill the gap of demand and supply better than that of government institutions. But it is

also thinkable that private training institutions can meet the short run needs of the market. The long run needs of the market take basic theoretical knowledge and generation of knowledge through research and development as important ingredients. This is the place where government aided institutions trained professional work nicely. It is crystal clear from Table 5, that approximately 75% of technical manpower is having the degree of B.Techs, diploma and ITT. Share of PhDs is very low that is only 0.14%. This surely indicates the need of skill set required supporting growing demand of this service industry.

Table 6: Demand for Professionals

Category	2014–15	Optimistic (2016)	Minimum (2016)
Software export sector	170000	1060000	641000
Software domestic sector	22000	48500	38000
Software – captive in user organization	224000	300000	260000
Total demand	416000	1408500	939000
Total supply	428000	875000	875000
Shortfall		533500	64000

Source: NASSCOM report 2014.

Balakrishnan, P (2006) says the export oriented nature of software industry which enables one to earn high percentage of return on investment may serve to be misallocated given human resource in the economy and social opportunity cost of such manpower is being very high. He said that since software is human resource intensive, a human resource endowment of an economy is used to produce software and generate employment and foreign exchange. But the use to which the resources of human capital are put destructs jobs elsewhere in the country's economy. Had the highly expertise human capital employed in manufacturing sector could create large which creates large volume of linkages (forward and backward), economies and diseconomies, the economy would have yielded greater amount of foreign exchange.

CONCLUSION

The purpose of this study is to examine the growth sustainability of the Indian software industry in the light of the present export boom of the software service sector. This study tried to find out conditions under which the growth of software sector would sustain in future and in turn ensure the global supremacy of software industry. In order to examine the growth sustainability, we have looked at the theoretical issues of sustainable growth. The literature of growth theory within various frameworks has been discussed to find out long run growth sustainability conditions.

The regression analysis in this context has helped us getting insights regarding the source of inter firm differences of growth of Indian software firms. We have found an interesting result from the regression analysis. This has suggested that inter firm differences in the market share is not being explained by the level of productivity or

degree of competition, but the number of manpower employed by the firm. The result has helped us to state that even if there is skill differentiation, the low skill job done by the Indian software firms standardizes the labour market. In other words, a homogeneous structure of labour market has emerged. It has been shown that software firms are unable to undertake high-tech innovation or product development not only for their engagement in low skill/ low value activities, but also due to virtual non-existence of social structure of innovation in the economy. Venture capital financed innovation, which overcomes financial, technological and organizational barriers and accelerates the process of technological change, might have played a critical role here. However, in the Indian software industry, hardly any new ideas or innovation has been observed that requires a different investment environment. As a result, the dynamics of venture capital industry has emerged more or less as equity investor as opposed to risky venture. From policy view point it may be said that:

1. Indian software industry can do well when government focuses on the key issues which are identified by the study. The study finds out that the long run sustainability can be attained by the choice of high quality activities which focus on creation of knowledge based industry for competitive advantage.
2. The issue of production of embedded software is most crucial in all the issues. India should focus its investment in the area of the production of embedded software. Embedded software manufacturing can work as an engine of growth for it.
3. Industry operates in low value chain, which can be improved. Industry's focus should be on the missing link between software and hardware. As the industry is categorized as the low risk, low value oriented, government should focus on the transformation of this sort of quality. Here the transformation can take place with the adoption of the creation of a knowledge based industry.
4. Government should focus on the adoption of high value activities by the industry so that it can also improve its domestic profile.
5. Automation based innovation can be a threat for employment growth in software industry. This shall be a problem for labour surplus economy of South Asia.

REFERENCES

[1] Anchordoguy, M. (2000): "Japan's Software Industry: A Failure of Institutions?", *Research Policy* 29, pp. 391-408.

[2] Arora, Ashish, V.S. Arunachalam, Jai Asundi, Ronald Fernandes (2001): "The Indian Software Service Industry, *Research Policy* 30, pp. 1267-1287.

[3] Bajpai, N. and N. Radjou (2000): "Raising Global Competitiveness of Tamil Nadu's IT Industry", *Economic and Political Weekly,* February 5, pp. 449-465.

[4] Balakrishnan, P (2006) 'Benign Neglect or Strategic Intent?: Contested Lineage of Indian Software Industry', Economic and Political Weekly, September 9.
[5] Business India (2002): "Will Software Sizzle Again?", Jan 21 to Feb 3.
[6] CSO (2010) New Series of National Accounts Statistics (Base Year 2004-05), Central Statistical Organisation, Government of India, New Delhi.
[7] Chakraborty, C and Jayachandran, C, (2001): "Software Sector: Trends and Constraints", *Economic and Political Weekly,* August 25, pp. 3255-3261.
[8] Cortright, J. (2001): "New. Growth Theory, Technology and Learning: A Practitioners Guide", *Reviews of Economic Development Literature and Practice:* No. 4, U.S. Economic Development Administration.
[9] D'Costa, A. P. (2002) "Export Growth and Path Dependence: The Locking-in of Innovations in the Software Industry", *Science, Technology &Society,* Vol. 7, No.
[10] Joseph, K J and K N Harilal (2001) 'Structure and Growth of India's IT Exports: Implications of an Export-Oriented Growth Strategy', Economic and Political Weekly, August 25.
[11] Krishnan, R. T. and G. N. Prabhu (2002): "Innovation in the Indian Information Technology Industry: A Study of the Software Product Development process", *Science, Technology & Society,* Vol. 7, No. 1, pp. 91-115.
[12] Morris, S (2003) "Competition, Regulation and Strategy: The Information Technology Industry", Economic and Political Weekly, August 16.
[13] NASSCOM (1999-2000): *"Indian IT Software and Services Directory",* New Delhi. *Organizations",* NISTADS, New Delhi.
[14] NASSCOM (2014),"*Report on Software Industry*", New Delhi.
[15] Nath P. and Hazra A. (2002) "Configuration of Indian Software Industry", *Economic and Political Weekly,* February 23, pp. 737-742.
[16] Patibandla, M; D Kapur and B Petersen (2000) "Import Substitution with Free Trade: Case of India's Software Industry", Economic and Political Weekly, April 8.
[17] Sridharan, E. (2002) "The Capacity for Innovation and the Trajectory of the Indian ITI, Industry", *Science, Technology& Society,* Vol. 7, No. I, pp. 1-11.
[18] Verma, NMP and Awasthi, IC (2005) Contractual Employment in Indian Labour Market, Concept, Delhi.
[19] Verma, NMP (2013) Recession and Its Aftermath, Springer.

BOOK REVIEW

R.K. Srivastava (Sashakt)
A New Economics of Population, Pollution & Poverty *vs.* Peace & Prosperity
Price Rs. 1500
Page 258
Publisher: Partridge India (order.india@partridgepublishing.com)

As the title of the Book indicates, this book has been written to focus on the problems of India's poverty and growing pollution levels. The author attributes to the burgeoning population of India for these evils and portrays a real picture of sustainable growth which he termed as green growth. The book deals with the problem of over-population of India and its by-products such as abject poverty, mass unemployment and growing pollution level in India. It takes up the impact of over-population on our environment, causing global warming, in addition to creating a threat to our environment & biodiversity. The author, in the 'Introduction', raised some pertinent questions like; how can an economist remain oblivious of and as well as unconcerned with the dangers of unbridled population growth over and above the optimum level in India, its unchecked and irreparable damaging consequences on India's environment and biodiversity, apart from the existence of abject poverty? Is Economics isolated from and unconcerned with the harmful effects of mad-raced 'physical growth' not only of humans but other co-habiting species on this earth also? Is there any relevance in economic growth along with growth of dreaded diseases and other serious death problems due to pollution simultaneously? Does concept of optimum population have any relation with the avoidance or limitation of wars and conflicts within a country and among the countries?

The author has himself addressed these issues in his book and has offered a scientific explanation thereto. In chapter one, the author has established a close relationship between the conflicts and wars among groups of humans and the scarce resources for existence since human history. The humans fight with each other for occupation and ownership of limited resources available in the form of land, water, cattle etc. He draws the inference; "thus we observe that, though the human population from the dawn of its civilization to the feudal age was not large, can be termed as under-populated and could easily be sustained with a rich supply of necessities of life, yet a peaceful, prosperous and scarcity- free life for commoners was as illusive as it is today."

In the second chapter, he analyze various prevalent theories of population in economic theory and points out their shortcomings. He himself put forward a new theory of optimum population by linking it to the availability of natural resources, such as land, forest, mining, water bodies, fisheries and monsoon etc. He further linked economic growth to the existence of healthy environment for all and

preservation of biodiversity for the existence of not only humans but all the species of the earth too. This is an essential condition for a sustainable growth which he termed as 'green growth'.

In the third chapter, the author has calculated optimum population for India, keeping in view the availability of agricultural land, necessary forestry, and water bodies and occurrence of monsoon. He informs us that this optimum number is between 50–55 crore only and all the people over and above this number are in the category of surplus and this surplus population is the main cause of most of the troubles in our country, like massive unemployment, under-employment and abject poverty. As the author correctly analysed, "now, the position of our economic development has reached to such a level where environment and development are clashing with one another. If we move ahead for industrial development our environment is in acute danger, and if we do not develop this sector, then country shall be stagnant."

In chapter four, he discusses the consequences of over–population in detail and finds large scale industrial effluents all over the world as the main source of air and noise pollution. To satisfy the growing needs of over-population of humans, these industries have been set-up and now causing global warming and damaging the environment. War industry has been a big contributor in this wide-spread pollution. Our over–population instrumented in the fragmentation of agricultural land in the villages on the one hand and destruction of forests on a large scale on the other. Today, the Indian agriculture sector shoulders the burden of 65 percent surplus people who are not needed in this sector at all, but cannot be diverted towards industrial and services sectors due to their over-manned nature already.

Chapter 5 deals with the problems of agriculture in India. He tells us that 'India is poor because its agriculture is poor'. Small and tiny land holdings are the main cause of poor agriculture in our country. In subsequent chapter, he brings home the point as to how our over-population is responsible for our huge unemployment/ under-employment, appalling poverty, high prices of goods and services, heavy taxation (both direct& indirect), heavy dependence on deficit financing and a huge internal and foreign debt. India's foreign trade deficit also resulted due to heavy demand for foreign capital and consumer goods at home and also because exports were less in comparison to imports.

The author has also discovered a new 'law of conservation of life–matter' which is akin to the' 'law of conservation of energy' in natural sciences. According to this new law, the quantity of 'life-matter' which sustains life on the earth is constant and owned by various species of the world, constituting animal world and botanical world both. This 'life-matter' is the *sin-qua-non* for all the species on the earth; in the water, air and on the land. Each species depends on the other for this 'life-matter' and a cyclical movement of life takes place among all the species of the world. In this

process of circular movement, life-matter never vanishes but transforms into various species and remains constant. It can neither be created afresh nor destroyed. All the species of the earth acquire and relinquish life-matter through a system of checks & balances. No one species sustains beyond a certain period and then either gets eaten away by some other species or gets decomposed in the earth to release its life-matter for plants. But the case of humans is different. By virtue of having a conceptual brain, humans managed to succeed in safeguarding themselves from getting eaten away by some other species, thus successfully increased their numbers exponentially all over the world, leaving far behind all other species. As their numbers grew, they amassed a very large volume of life-matter at the cost of other species, resulting in the extinction of several species on the one hand and disturbing the eco-balance of the nature on the other. Here lies the crux of the problem not only for the humans but for all the species of the world as well. Until this imbalance is rectified by contracting the human population to the level of optimum throughout the world, the problem of poverty, unemployment & under-employment, pollution, threat to biodiversity, global warming etc. shall not only persist, but also turn more dreadful with every passing year.

The book is an innovative endeavour and must be read by students, teachers, policy planners and all those concerned about the future of mankind, our environment and ecology.

Asha Srivastava
Faculty
Isabella Thoburn College
Lucknow

RAPPORTEUR`S REPORT

R.K. Sinha

National Conference on Socio-Economic Progress during 12th Five Year Plan

December 15-16, 2016
Organised by

Babasaheb Bhimrao Ambedkar University, Lucknow

and

Association of the Socio-Economic Development Studies

The 3rd Annual Conference of the Association of Socio-Economic Development Studies (ASEDS) and supported by Babasaheb Bhimarao Ambedkar University (A Central University) Lucknow is organised by ASEDS at Department of Economics, School for Ambedkar Studies (SAS) BBAU Lucknow. It witnessed exhaustive academic exercise and gave audience an opportunity to hear galaxy of men of excellence and acumen. The broad theme of the conference was "Socio-Economic Progress during XII Five Year Plan: An Appraisal". It was very wide and broad in its approach and focussed in its penetration. The Technical Sessions held were oriented on the sub-themes: i). Contemporary Demonetization, Currency Contraction, and Strategic Monetary Sector Reform: Implementation and Implications, ii). Growth, Unemployment and Poverty: Indian Perspective with XIIth Plan, iii). XIIth Five Year Plan and Inclusive Growth and iv). Service and Social Sectors Progress in the 12th Plan

The inaugural session of the two day conference was graced with the presence of prominent distinguished intellectuals-Honourable Professor Masood Khan, Vice-Chancellor Urdu, Farsi Arbi University Lucknow, as Guest of Honour and Honourable Professor S.C. Sobti, Vice-Chancellor BBAU. Welcoming the delegates and scholars, Professor NMP Verma, introduced the core idea behind the theme of the conference highlighted the achievement and gaps during the 12th Five Year Plan (TFYP) regarding poverty, unemployment, inequality and structural development.

Professor P.K. Choubey, from IIPA New Delhi, emphatically emphasised that the main impediments in the way to achieve higher growth and development are poverty, regional disparity, inequality, illiteracy and unemployment was hinder growth to become more inclusive.

Professor Khan Masood Khan, Vice-Chancellor, threw an insight on the different dimensions of the challenges confronted in the matters of higher education that

needs immediate attention like resource allocation to higher education, disparity prevalent in higher education, issues related to faculties etc. He also dwelt on the various solutions to the problems.

Professor S.C. Sobti, Vice-Chancellor, in his presidential address, highlighted the relevance and significance of the theme of the conference. In his address he emphasised on the need of effective inclusive policy and for the matter a sound economic policy.

The inaugural session was concluded with the vote of thanks presented by Dr. Preeti Choudhary.

The two day marathon deliberated on the whole gamut of issues falling under the umbrella of the aforestated broad themes. In all there were 5 technical session. On day one, i.e., 15-12-2016, 3 technical sessions were scheduled and today, i.e., 16-12-2016 two technical sessions were organised. In all, day one and day two, papers were read in different technical sessions.

Apart from the technical session Lead Lectures were organised.

1. Department of Economics, Dr. Sakuntala Mishra National Rehabilitation University, Lucknow

Lead Lecture

Professor R.S. Guhman, CRRID, Chandigarh in his address surfaced the state of the lower economic strata of the economy and emphasised that there is an intense need to include them in the whole process for the socio-economic inclusion to be successful and to meet this end the policy should focus on this itself.

Professor Ghanshyam N. Singh, Executive Director NIRUS Mumbai dwelt on the core issue of the remote areas in India which still yearn for the fruits of it to reach up to them. He stressed the need for the policy programmers to take into cognisance these issues and focus. Professor Himanshu Shekhar Singh, who coordinated the session, gave an insight on the managerial aspects of the policy of inclusive growth and development.

Technical Session I, was on Sub-theme "Contemporary Demonetization, Currency Contraction, and Strategic Monetary Sector Reform: Implementation and Implications" was chaired by Professor NMP Verma. The prominent Speakers in this session were Professor A.K. Singh, former Director GIDS, Professor Manoj Agarwal, Lucknow University and Mr. K.P. Singh from Delhi. Coordinator to the session was Dr. Nandita Kaushal, Lucknow University and Report presentation was by Dr. Vinod Kumar Srivastava.

Professor A.K. Singh focussed on the pitfalls of the demonetization process and cautioned the policy makers and the executors in this regard of its long term implications. He elaborated on the cost of demonetization and it is important,

according to him that because of the minority majority and the poor has to suffer. He concluded that this will have negative implication for the economy. Professor Manoj Agarwal elaborated that process of demonetization constructively and used Bamoul and Tobins approach to strengthen his arguments. He elucidated the whole process by using multiplier principle and analysing the relation between economic growth and money supply. Mr. K.P. Singh from New Delhi highlighted the state of affairs in day today transactions, our preparedness for the execution of such a significant initiative.

Technical Session II, was on **Sub-theme "Growth, Unemployment and Poverty: Indian Perspective with XIIth Plan.** It was an Open discussion of the sub-theme in which the Lead Lecture was delivered by Professor P.K. Choubey, discussant was Professor Nar Singh, Lucknow University and the coordinator to the session was Dr. C.S. Verma, GIDS Lucknow.

Technical Session III, was on **Sub-theme "XIIth Five Year Plan and Inclusive Growth".** It was chaired by Professor D.K. Madaan, the discussant was Dr. Venkatesh Dutta from BBAU and the coordinator was Dr. Anamika Choudhar, DSMNRU Lucknow.

Technical Session IV, was on **Sub-theme "Service and Social Sectors Progress in the 12th Plan".** It was chaired by Professor A.K. Mittal, AMU Aligarh, the discussant was Professor D.K. Bajpai from GIDS Lucknow and the report presentation was done by Dr. A.K. Tomar, Aligarh and Coordinators were Dr. Ram Vilas/ Dr. Geetanjali Srivastava.

Technical Session V, was on **Sub-theme "XIIth Five Year Plan and Inclusive Growth".** It was chaired by Professor Alpana Srivastava, Amity University Lucknow. The discussant was Professor I.C. Awasthi, GIDS Lucknow.

The Valedictory Session was chaired by Prof. P.K. Sinha, Prof. Surinder Kumar delivered the keynote address.