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YOUTH EMPLOYMENT AND UNEMPLOYMENT IN INDIA: EMERGING TRENDS AND POLICY IMPERATIVES¹

S.K. Sasikumar*

This paper examines the emerging trends in relation to youth employment and unemployment in India. Such an analysis assumes paramount importance as youth will form a very significant proportion of the country's demographic structure at least till 2030. The analysis is grounded in the fundamental proposition that growth of decent employment opportunities, particularly for youth, and economic growth reinforce each other subject to innovative policy interventions. Based on a detailed analysis of the key indicators of youth labour market, the paper highlights some major strategies to promote youth employment, especially in the context of ongoing rapid technological transformations and the evolving future of work, and to situate youth at the centre of development process.

Keywords: *Youth Employment; Youth Unemployment; Not in Employment, nor in Education, nor in Training (NEET); Future of Work*

1. INTRODUCTION

India is at the cusp of a historic demographic transition. The country has the world's largest youth population (15-29 years) of around 360 million in 2019, i.e. one in every five young persons in the world is an Indian. In 2019, youth comprise around 27 per cent of the country's population and account for 40 per cent of the country's working age population (15-64 years). Although the proportion of youth population to the total population, as well as to the working age population, will experience decline in subsequent years due to a decline in India's population growth rate in the last two decades, youth will continue to be extremely significant in the country's demographic structure at least till 2030

1 This paper is based on a larger research study, Youth and the Labour Market Landscape in India: Issues and Perspectives, carried out by the VVGNNLI under the aegis of the BRICS Network of Labour Research Institutes in 2019.

* Senior Fellow, V.V. Giri National Labour Institute. Email: sasikumarsk2@gmail.com

(Table 1). With such immensity in numbers, this inherently dynamic and aspirational segment of the population has a huge potential to catalyse a major upsurge in the Indian economy and transition India into a developed country.

India's demographic bulge around the age cohort of 15-29 years can translate into a demographic dividend depending on the country's capacity to utilise this vital pool of human resources by providing decent, productive employment and income-earning opportunities. The massive implications for India's growth and development process of increasing decent employment and income-earning opportunities for the youth can be gauged from the fact that nearly one-third of the country's gross national income is currently estimated to be contributed by the youth (Government of India, National Youth Policy, 2014). An upswing in decent employment opportunities for youth will further scale up this contribution.

Table 1

India: Youth Population and Working Age Group Population

(in thousands)

	2015	2020	2025	2030
15-29 years	355,834	365,948	371,845	365,351
15-64 years	863,969	928,267	986,147	1,029,135
Total Population	1,310,152	1,380,004	1,445,012	1,503,642
% of Youth Population to Total Population	27.16	26.52	25.73	24.30
% of Youth Population to Working Age Group Population	41.19	39.42	37.71	35.50

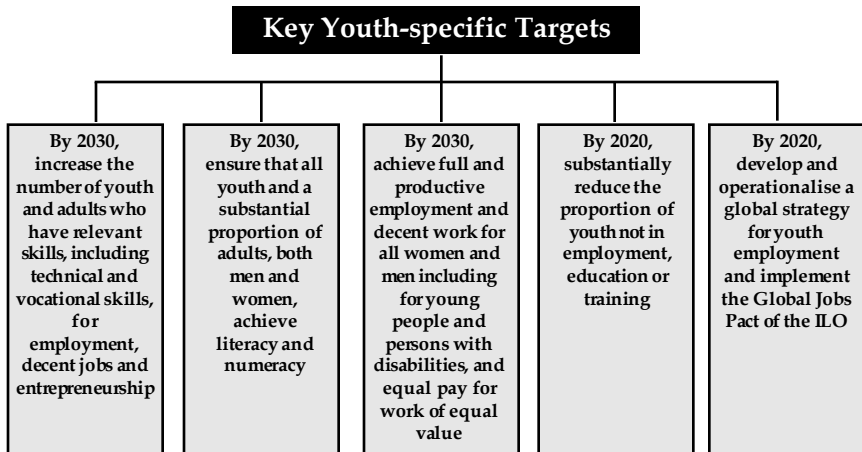
Source: UNDESA, World Population Prospects 2019.

Any discussion of issues related to youth employment should also be situated within the context of rapid technological developments occurring across the world and their impacts on and implications for skills, work and work relations. Several scholarly studies on technology and work show that the pace and depth of technology

transformations are dramatically altering the necessary skill sets for future jobs (ILO, 2019a; NASSCOM, FICCI & EY, 2017; WEF, 2018; World Bank, 2019). The technological changes are also enabling new forms of work (such as the economic activities associated with gig economy) and paving the way for new forms of employment relations (such as one to many, many to one and many to many). These tendencies are challenging the already declining space of standard forms of employment. Such a scenario calls for evolving appropriate policy interventions to prepare the youth to respond to the challenges of change.

Sustainable Development Goals (SDG) 2030 clearly emphasise the catalytic power of youth employment in poverty alleviation, economic growth and prosperity for all. Figure 1 captures the key youth-specific targets of SDG 2030.

Figure 1
Sustainable Development Goals (SDG) 2030



It is within this broad framework of demographic transition, technological transformations and desired development trajectories that this paper examines the key and emerging trends in the context of youth employment and unemployment in India and charts out major pathways to support the youth to become a major catalyst of development processes, particularly in the context of ongoing technological transformations and the future of work. The approach to this paper is grounded in the fundamental proposition that economic growth and the growth of decent employment, particularly for youth, reinforce each other, subject to innovative policy interventions. These policy measures should be evolved with an integrated and multidimensional approach, striving to achieve a balance between the quantitative and qualitative dimensions of both economic development and employment.

The employment and labour market characteristics are analysed based on the data generated through the Employment and Unemployment surveys of the National Sample Survey, Government of India. These surveys were conducted quinquennially from 1972-1973 to 2011-2012, and they are a primary source of labour market data at the national and state levels in India. Considering the need and significance of labour force and employment data at more frequent intervals, the Ministry of Statistics and Programme Implementation subsequently decided to produce annual estimates of employment and unemployment characteristics for both rural and urban areas, along with quarterly estimates for urban areas through Periodic Labour Force Surveys (PLFS). The first such report, based on the data collected under the first Periodic Labour Force Survey in India during July 2017-July 2018, was published in May 2019. This data set, including its unit level data, has also been used extensively in this report.

2. KEY INDICATORS OF INDIA'S YOUTH IN THE LABOUR MARKET

In this section, we analyse the basic features of the Indian labour market particularly in relation to the youth. The labour market

characteristics are analysed mainly in relation to the youth labour force (15-29 years) and rest of the labour force in order to provide a comparative perspective. For important variables, analysis pertaining to the 15-29 age cohort is further disaggregated into 15-19, 20-24, 25-29 age groups. All the indicators are evaluated during the period 2004-2005 to 2017-2018 and across gender.

Youth population presently constitute 37.2 per cent of India's population in the age group 15+. The total labour force of youth numbering to 142.1 million accounts for 28.5 per cent of the work force above the age group 15+ in 2018. However, youth workforce constitute a relatively lower proportion of 24.9 per cent of the total workforce in the age group 15+. The absolute size of India's unemployed is estimated at 29.9 million in 2017-2018 and what is significant is to note that nearly 87 per cent of the unemployed (i.e. 25.3 million) are constituted by the youth. It is very evident that creation of more employment opportunities for the youth and reduction of unemployment among youth should achieve paramount significance in terms of labour and employment policies.

We now analyse the trends relating to the general and vocational education of India's labour force. Analyses of general educational attainment of youth and of the labour force as a whole (15+ age cohort) provide important insights. It is quite clear that the overall level of educational attainment has improved significantly across women and men both in rural and urban areas (Table 2). While the proportion of persons of below middle school-level education has declined substantially over the last two decades, the proportion of those with secondary education and above has risen sharply. It is equally important to note that the improvements in education have been substantial for the relatively more vulnerable categories. For instance, the proportion of rural female youth with educational attainment above the secondary level has recorded an increase of nearly 25 percentage points during 2004-05 to 2017-18. On the flip side, a major area of concern relates to women: even today, a very large proportion of women, particularly in the rural areas,

belong to the Not Literate category. In fact, one in seven young women in the rural areas falls in this category. Continued emphasis on providing general education, particularly in rural areas, and simultaneously improving the overall quality of general education are important from the perspective of preparing new job entrants to respond to the emerging labour market requirements.

Table 2
General Educational Level in India (15-29 Years and 15+ Years), 2004-05 to 2017-18
 (in per cent)

Year	Not Literate						Literate & Upto Primary						Middle						Secondary & Above													
	Rural		Urban		Urban		Rural		Urban		Urban		Rural		Urban		Rural		Urban		Rural		Urban									
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female								
15-29 Years																																
2004-05	17.4	37.7	7.8	14.4	27.4	24.4	18.5	17.2	26.9	19.4	25.0	21.6	28.3	18.5	48.7	46.7	10.0	21.9	5.4	9.3	20.7	23.3	14.2	12.8	26.3	22.5	19.8	18.4	43.1	32.3	60.6	59.5
2011-12	5.9	13.4	3.7	5.6	12.8	16.0	10.0	9.1	28.7	27.2	20.5	19.9	52.6	43.4	65.8	65.4	5.9	13.4	3.7	5.6	12.8	16.0	10.0	9.1	28.7	27.2	20.5	19.9	52.6	43.4	65.8	65.4
15+ Years																																
2004-05	32.0	58.5	12.1	27.9	27.7	19.9	20.2	19.7	19.1	11.3	19.4	16.8	21.1	10.2	48.3	35.6	25.3	47.5	9.9	22.6	24.7	21.3	16.5	17.0	19.7	13.8	16.9	15.1	30.3	17.4	56.6	45.3
2011-12	22.5	41.8	9.3	20.8	17.9	17.7	14.0	14.5	23.8	17.8	19.9	18.3	35.8	22.7	56.7	46.4	22.5	41.8	9.3	20.8	17.9	17.7	14.0	14.5	23.8	17.8	19.9	18.3	35.8	22.7	56.7	46.4

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

Formal vocational training is considered one of the core strategies to improve the employability of jobseekers and entrepreneurship skills of the potential self-employed people. Accordingly, a large number of initiatives have been taken in India over a period of time to strengthen the skill development and vocational training system. However, in spite of such enormous efforts, India still faces a major challenge in terms of formal vocational training. According to the latest available national estimates, only 2.5 per cent of youth and 2 per cent of those in the 15-59 years age cohort have acquired formal vocational/technical training in India (Table 3). This is quite low compared to the advanced and large and emerging economies where nearly 60-70 per cent of the youth on an average have received some formal vocational/technical training.

The expansion of formal vocational/technical training needs to be located at two levels: (i) in terms of those who are expected to enter the labour market in the coming years and (ii) in relation to those who are already in the workforce but do not have the requisite formal vocational training. The National Skill Development Policy estimated that nearly 104.62 million new entrants to the labour force during 2015-2022 have to be provided with formal skill training. Additionally, nearly 300 million existing farm and non-farm workforce also needs to be skilled, re-skilled and up-skilled. The biggest challenge related to skill development in the country, particularly from the perspective of skilling the existing workforce, is that an overwhelming proportion of the workers are engaged in informal sector activities. Given the wide heterogeneity associated with the informal economy, it is difficult to map the existing skills as well as gauge the emerging skill requirements. Massive skilling up of formal vocational training and skill development, especially through a decentralized approach in order to respond to the ground-level situation, is thus imperative to improve the job prospects as well as labour market outcomes of youth in India.

Table 3**Percentage of Persons (15-29 Years & 15-59 Years) who Received Formal Vocational/Technical Training, 2011-12 to 2017-18**

(in per cent)

Year	15-29 Years			15-59 Years		
	Male	Female	Persons	Male	Female	Persons
2011-12	2.7	2.1	2.4	2.6	1.6	2.2
2017-18	2.8	2.2	2.5	2.3	1.7	2.0

Source: NSS on Employment Survey (2011-12) and Periodic Labour Force Survey (2017-18).

The skill development strategies should also take into utmost consideration the on-going technological transformations and its implications for skill demand in the future. Studies on future of jobs clearly reveal that a significant proportion of the workforce that would be deployed in coming years will be in jobs that have radically changed skill sets. NASSCOM, FICCI and EY (2017) notes that such a tendency is more pronounced in certain modern and growing sectors like IT/BPM and BFSI (Table 4).

Table 4**Future of Job in the Organised Sector in India, 2022**

Sectors	Workforce that would be deployed in new jobs that do not exist today (projected for 2022)	would be deployed in jobs that have radically changed skill sets (projected for 2022)	will face an existential threat to their jobs (for 2017)
IT/BPM	10%-20%	60%-65%	20%-35%
Automotive	5%-10%	50%-55%	10%-15%
Textiles and Apparel	5%-10%	35%-40%	15%-20%
BFSI	15%-20%	55%-60%	20%-25%
Retail	5%-10%	20%-25%	15%-20%

Source: NASSCOM, FICCI and EY, 2017.

As regards the specific skill sets, studies note that while there is an increase in demand for non-routine cognitive and socio-behavioural skills, these in a perceptible decline in demand for routine specific skills. It is also reported that possessing combination of skills, like technical skills along with problem solving skills, will continuously scale up employability.

The dynamics of labour force participation rates (LFPRs) in India, particularly for youth, have shifted significantly in the last two decades. At the national level, there has been a persistent decline in the proportion of persons/youth in the labour force, i.e. those who are either employed or unemployed. As regards the overall participation rates (15+ age cohort), this has declined by nearly 14 percentage points between 2004-2005 to 2017-2018, with the drop in the female LFPR being much sharper (19.4 percentage points) compared to the male LFPR (8.2 percentage points) (Table 5). A similar trend is visible in terms of the youth LFPR (15-29 years) with a decline of 18.4 percentage points in the overall rate, and drops of 20.7 percentage points and 15.8 percentage points for male and female participation respectively. Such a plunge in LFPRs for youth is in consonance with the global trends where this rate has slumped by 9.3 percentage points during 1997-2017, from 55 per cent in 1997 to 45.7 per cent in 2017 (ILO, 2017).

Table 5

Labour Force Participation Rates in India, (UPSS)

Age Group	2004-05			2011-12			2017-18		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-19	48.8	28.1	39.3	31.1	14.3	23.5	24.1	5.7	15.7
20-24	85.4	38.5	61.9	74.7	26.5	50.9	68.8	18.3	43.8
25-29	97.4	45.8	71.5	95.9	33.2	63.9	94.1	26.2	59.8
15-29	74.6	37.1	56.4	63.6	24.4	44.6	58.8	16.4	38.2
30-64	95.7	50.5	73.2	95.8	38.4	67.2	94.0	30.2	62.0
15+	84.0	42.7	63.7	79.8	31.2	55.9	75.8	23.3	49.8

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

Similar trends are also visible across different sub-groups within the youth and also the age cohort 30-64 years albeit with differing levels of participation rates. While decline in participation rates in lower age cohort like 15-19 years and 20-24 years could partly be explained in terms of improved educational attainment, what is of utmost concern is that the participation rates are falling sharply for the higher age cohort like 20-25 years and 30-64 years where one is generally expected to be within labour force.

While male participation rates in the upper age cohort are declining marginally, they are still relatively very high (nearly 94 per cent), the female participation rates even in the upper age cohort are declining very sharply and remain at relatively very low levels. Consequently, the gender gaps have persisted and widened across all age cohort. In fact, in the case of one of the most productive age groups 25-29 years, the male-female participation gaps is as high as 68 percentage points.

Persistently low female participation rates and the consequent gender gap have been noted as key factors in hampering a country's growth potential. According to the McKinsey report, *The Power of Parity: Advancing Women's Equity in India Gender Parity (2015)*, merely by halving the gender gap in the LFPR between 2012 and 2025, India can add US \$ 700 billion to the GDP and 1.4 per cent to the annual GDP growth rate.

It is important to note that the gender differentials in the youth LFPR are increasing in India, with the gender differentials in the overall labour force participation increasing from 37.5 percentage points in 2004-2005 to 42.4 percentage points in 2017-2018. The decline in the female LFPR and the widening gender differentials have attracted considerable scholarly attention in recent years. Rising family incomes and the resultant withdrawal of women especially from subsidiary employment, increasing educational participation, mechanisation in agriculture and the resultant fall in employment in agriculture have been identified by different studies as major factors in the decline of women's participation in the labour force (Dasgupta and Verick, 2016; Mehrotra and Parida, 2017).

There is a clear relationship between rising educational attainment and falling LFPRs, particularly among younger age cohorts. Though the increased emphasis on primary and secondary education may have an adverse impact on the female LFPR in the short run, it is expected to usher in new labour market prospects for women with higher educational attainment in the longer run. Focusing on higher educational attainment among women and imparting relevant vocational training and education will be crucial for ensuring a rise in women's LFPR.

Some studies note that the mechanisation of agriculture taking place in India in recent years - particularly in activities favoured by women workers (threshing, winnowing, etc.) - have resulted in loss of work for women. Considering that women generally have lower educational attainment and also lower levels of skills, they are not in a position to compete for job opportunities emerging in the manufacturing sector. Rising family incomes have also resulted in women, especially those engaged in subsidiary employment, withdrawing from the labour force and focusing solely on domestic duties.

The worker population ratios (WPRs) exhibit a declining trend across different age groups and gender over the period 2004-2005 to 2017-2018 (Table 6). However, the rates of decline across age groups as also between males and females are significantly different. From a comparative perspective, the WPR for all age groups (15+) and 30-64 age cohorts are significantly higher than that for the youth. However, an overall decline in the WPR for all age groups is a clear indication that the employment absorption capacity of the economy is diminishing over time. The rate of decline is a more serious concern in the context of women as it is falling from an already low WPR level. Decline in WPR for younger women also indicates that among those who enter the labour force, the possibilities of obtaining employment are decreasing. It is of paramount importance to put strategies in place to stimulate the employment intensity of growth processes in India. Lack of adequate employment opportunities for those seeking work may cause the discouragement effect to set in and could lead to a further fall of LFPRs.

Table 6
Worker Population Ratios in India (UPSS)

Age Group	2004-05			2011-12			2017-18		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-19	45.3	26.8	36.8	28.1	13.4	21.4	17.4	4.8	11.6
20-24	79.8	35.3	57.5	69.2	24.1	46.9	52.9	13.5	33.4
25-29	94.9	43.7	69.1	93.0	31.7	61.7	84.5	23.0	53.4
15-29	70.7	34.9	53.3	59.8	22.8	41.9	48.3	13.5	31.4
30-64	95.3	50.0	72.8	95.4	38.2	66.9	92.8	29.8	61.1
15+	82.2	41.6	62.2	78.1	30.5	54.7	71.2	22.0	46.8

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

Table 7 presents the unemployment rates across different age cohort in India during 2004-05 to 2011-12. It is quite evident that the unemployment rates which were relatively stable during 2004-05 to 2011-12 has risen significantly during the subsequent period i.e. 2011-12 to 2017-18. Such a rise is visible across all age cohorts. The overall unemployment rates (15+ years) have almost tripled from a very low level of 2.1 per cent in 2004-05 to 6 per cent in 2017-18.

Table 7
Unemployment Rates in India (UPSS)

(in per cent)

Age Group	2004-05			2011-12			2017-18		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-19	7.2	4.6	6.4	9.8	6.3	8.9	27.6	16.1	25.7
20-24	6.5	8.1	7.0	7.2	9.2	7.8	23.0	26.2	23.7
25-29	2.6	4.6	3.3	3.1	4.6	3.5	10.2	12.3	10.6
15-29	5.2	5.9	5.4	5.9	6.6	6.1	17.8	17.9	17.8
30-64	0.4	0.9	0.6	0.3	0.6	0.4	1.3	1.4	1.3
15+	2.1	2.6	2.3	2.1	2.3	2.1	6.1	5.6	6.0

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

The youth unemployment rate which was almost double the overall adult unemployment rate in 2004-05 have tripled in 2017-18 with the youth unemployment rate registering a steep increase from 5.4 per cent in 2004-05 to 17.8 per cent in 2017-18. While the overall youth unemployment rate and the unemployment rate among different sub-groups of the youth had remained in single digits till 2011-12, the rates have all moved to double digits in 2017-18. The highest unemployment rate within the youth are reported in 20-24 age group, where almost one in four youth report unemployment. The lowest unemployment rate, as expected, is reported in the age group 30-64 years with the rates (1.3 per cent) being 14 times lower than the unemployment rate for youth (17.8 per cent).

As regards the gender differentials, the female unemployment rates are almost the same as male unemployment rates in most age groups, and even higher in certain age groups like 20-24 years and 25-29 years. The high levels of unemployment rates among females presents a paradoxical situation. On the one hand, labour market is characterised by a lower labour participation rate, while on the other, those who enter the labour market are finding it difficult to secure jobs.

Among the youth, while the rural male youth unemployment is higher than the rural female youth employment, urban female unemployment (which has the highest rate amongst the different categories) is significantly higher than urban male unemployment (Table 8). In fact, among different categories, the highest youth unemployment rate is recorded by urban females, with more than one-fourth of those seeking work not obtaining it. Such high rates of youth unemployment are a serious policy concern as they can trigger social instabilities.

Table 8
Unemployment Rates among Youth (15-29 Years) (UPSS)

(in per cent)

Year	Rural Male	Rural Female	Urban Male	Urban Female
2004-05	3.9	4.2	8.8	14.9
2011-12	5.0	4.8	8.1	13.1
2017-18	17.4	13.6	18.7	27.2

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

Considering that improving the labour market participation rate of women is very important objective in the development process of India, it becomes extremely important to provide adequate employment opportunities for young women to ensure gender equality in the labour market.

Table 9 presents the unemployment rates across different age cohorts of jobseekers according to educational attainment during the period 2004-2005 to 2017-2018. It is evident that the unemployment rates among the youth population and the different age-cohorts within the youth is rising with higher levels of educational attainment. Consequently, the unemployment rates reported are the highest among those with educational attainment, graduate and above and those with diploma/certificate courses.

Table 9
Unemployment Rates according to Educational Attainment, 2017-18

(in per cent)

Age Group	Illiterate	Below Primary	Primary	Middle	Secondary	Higher Secondary	Diploma/Certificate Course	Graduate & Above	Total
15-19	19.5	19.7	22.8	25.6	27.1	35.6	56.0	40.7	25.7
20-24	7.7	3.6	9.9	16.0	17.7	26.1	44.4	49.3	23.7
25-29	2.2	0.7	2.9	5.4	6.8	12.1	25.6	26.4	10.6
15-29	7.1	5.3	9.3	13.7	14.4	21.1	37.3	35.9	17.8
30-64	0.4	0.7	0.8	1.2	1.2	2.2	4.3	4.0	1.3

Source: Periodic Labour Force Survey (2017-18).

The development experience of the advanced economies had clearly indicated that higher levels of educational attainment lead to better employment prospects and reduction in unemployment. However, in the context of developing countries like India, we see a trend contrary to this historical experience. The rise in unemployment rates among those with higher educational attainment could be attributed to a host of factors. Higher educational attainment will obviously scale up the labour market aspirations of the youth and this may influence youth to wait for a longer period to secure desired job options. Second, though the general educational attainment may be rising, employability may not be scaling up. Hence the employers may not be finding the requisite qualities in everyone with higher levels of education. Reorienting the educational curricula and infusing a greater synergy between general and vocational education will be pivotal to improve employability. The restructuring of the curricula should also aim to achieve the right blend of cognitive and behavioural skills to improve the employability of new jobseekers.

Additionally, counseling based on appropriate aptitude assessments should start at the middle level of schooling in order to facilitate effective school to work transition and improving labour market opportunities for the youth.

The share of youth who are not in employment nor in education nor in training in the youth population (NEET rate) is emerging as a critical indicator in labour markets across the world. An analysis of the trends in the NEET rate can provide valuable policy inputs to deal with aspects such as school dropouts, school to work transition, labour market discouragement, etc. which have a direct bearing on overall youth labour market outcomes. The NEET rate also serves as a broader measure of potential youth labour market entrants who could contribute to development by engaging in economic activities.

The NEET rate can also provide vital information complementary to LFPRs and unemployment rates. For instance, a high youth NEET rate and a low youth unemployment rate implies significant discouragement for young people. Similarly, a high NEET rate

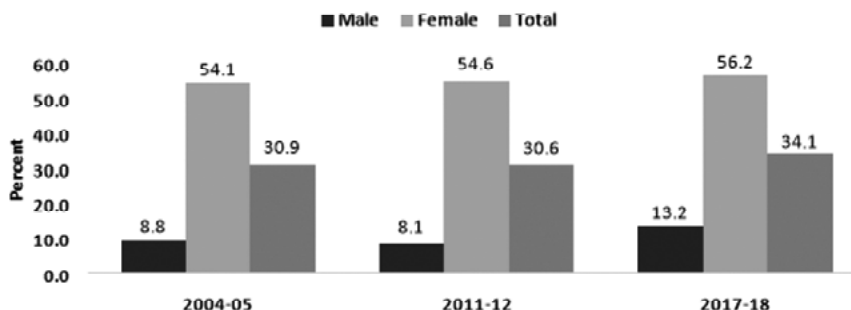
among young women may suggest their increasing involvement in domestic duties on the one hand and/or the presence of institutional barriers deterring female participation.

ILO (2019b) estimates that, in 2018, nearly 31 per cent of the young people (15-24) globally were neither in employment nor in education or training, the major proportion of them being females. It points out that this would imply that one out of every five young persons in the world is at the risk of economic and social exclusion. The importance of operationalising strategies to immediately reduce the NEET rate can be gauged from the fact that Target 8.6 of SDG 2030 stipulates that 'by 2020 substantially reduce the proportion of youth not in employment, education or training'.

An analysis of the NEET rates in India for the youth population as a whole and across age cohorts within the youth population, reveals interesting insights. The overall NEET rates for youth in India have registered an increase of more than 3 percentage points during 2004-05 to 2017-18 (Figure 2). While the NEET rates for females, which is at a very high of 56.2 per cent in 2017-18 have remained at high levels for nearly two decades, the NEET rates for young men have increased significantly over the period. In spite of this increase in male rates, gender differentials in NEET rates are still very pronounced with the rates for females being four times higher than those reported for males in 2017-18.

Recent studies examining the declining LFPRs have clearly shown that more and more women across all age groups in India are increasingly citing domestic duties as the reason for staying away from the workforce. Such a tendency is keeping the NEET rates very high and opens up several policy derivatives.

Figure 2
NEET Rate among Youth in India
 (in per cent)



Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

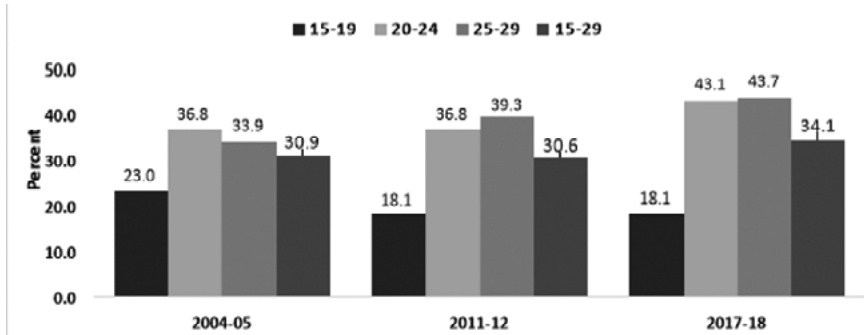
Most importantly, there is a strong need to understand whether it is the discouragement effect or/and other institutional factors (like discrimination at work) which holds back women, including the young and educated, from entering the labour force. Considering that educational attainment among women is increasing at an accelerated pace, policy interventions (such as customised job-related counselling for women, incentives to employers to employ women, and improving security for women workers at the workplace) should be urgently evolved to encourage more women to enter the labour force. From a social welfare perspective, enhanced maternity benefits for women (such as the recent initiative in India to increase the period of maternity benefits from 12 weeks to 26 weeks) can also have a favourable impact on the retention of women in the workforce.

NEET rates across different age cohorts within the youth population show that while the rates are lowest and are declining in the 15-19 age group, they are high and rising for 20-24 and 25-29 age groups (Figure 3). From the policy perspective, the prevalence of high NEET rates in the 25-29 age cohort should receive maximum priority. This age cohort is the most productive age group; it would include those who have completed their education and also those who may have been trying to secure jobs

or have worked for a period of time. A high NEET rate for this age cohort could also be an indicator of discouragement among this category of jobseekers.

Figure 3
NEET Rate by Age Groups

(in per cent)

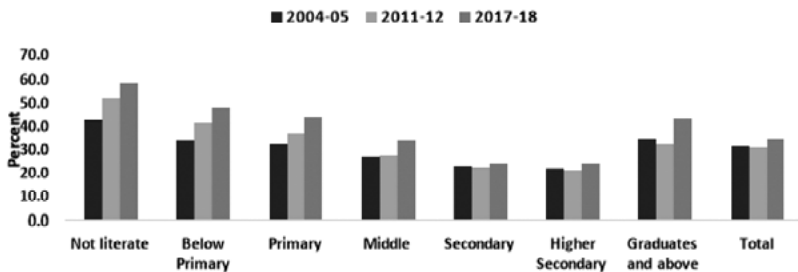


Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

So far as NEET rates across educational attainments are concerned, the rates are higher for those with lower levels of educational attainment and relatively low for those who have higher educational attainment (Figure 4).

Figure 4
NEET Rate by Education Level

(in per cent)



Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

High levels of NEET for those with lower educational attainment indicate that the employability of these jobseekers may be proportionally very low. However, it is also important to note that the NEET rates for the category 'Graduate and above' are fairly high. This may be due to the fact that those with high levels of educational attainment may have higher labour market aspirations.

The long-anticipated structural transformation of the labour market—the movement of workers from the less productive primary sector - has gained pace in India in recent years, with the share of the primary sector employment declining significantly for the workforce as a whole and the youth in particular. The drop is quite visible for both male and female workers, though the proportion of women workers in agriculture continues to remain above the halfway mark (Table 10). However, the shift of workers from agriculture to manufacturing, a key component of the secondary sector, continues to be slow. In fact, the proportion of total manufacturing employment to total employment has remained more or less stagnant in the last two or three decades; it was reported at a low of 12.13 percentage in 2017-18. Similar trends are also reported for the youth; the share of manufacturing employment in total youth employment was only 13.25 percentage in 2017-18.

Most of those moving out of agriculture have taken up employment in the construction sector; accordingly, there has been a sharp increase in construction employment during the last two decades. The proportion of workers (15+) in the construction sector has more than doubled from 5.6 per cent in 2004-05 to 11.57 per cent in 2017-18. A similar trend is also witnessed in the context of youth employment where the proportion of youth workers engaged in construction registered an increase from 6.9 per cent in 2004-05 to 13.8 per cent in 2017-18.

Major policy contours emerge from such trends. Most importantly, investment in manufacturing must be scaled up substantially so that the sector provides opportunities for youth, those with skills as well as those moving out of agriculture. There are both supply and demand considerations associated with this. From a supply perspective, as noted earlier, the scale of vocational skills needs to

be scaled up massively among youth so that their employability is enhanced and there are more skilled youth available to respond to the demands of the manufacturing sector. From a demand perspective, youth must be provided appropriate incentives to start enterprises in the manufacturing sector so that they become job creators and do not remain mere jobseekers.

Table 10
Distribution of Employment by Sectors (UPSS)

(in per cent)

Sector	2004-05			2011-12			2017-18		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-29									
Primary Sector	48.3	71.2	55.6	39.3	57.1	44.0	33.3	49.0	36.6
Secondary Sector	24.4	17.1	22.0	32.2	24.9	30.2	33.1	22.9	31.0
Tertiary Sector	27.3	11.7	22.4	28.5	18.0	25.7	33.6	28.0	32.4
30-64									
Primary Sector	51.9	75.3	59.7	45.4	64.9	50.8	41.9	59.3	46.2
Secondary Sector	18.6	11.2	16.1	23.3	18.1	21.8	24.9	16.1	22.7
Tertiary Sector	29.6	13.5	24.2	31.3	17.0	27.3	33.2	24.6	31.1
15+									
Primary Sector	50.6	73.9	58.3	43.6	62.7	48.8	40.7	57.1	44.5
Secondary Sector	20.6	13.1	18.1	25.9	20.0	24.3	26.5	17.6	24.4
Tertiary Sector	28.8	12.9	23.6	30.5	17.3	26.9	32.8	25.2	31.1

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

The critical dimensions of the structure of the labour market and quality of employment are provided by the status of employment of the workforce. The predominance of self-employment is a distinctive feature of the Indian labour market. In fact, India is one of the few large economies where the proportion of self-employment is higher than that of those engaged in wage and salaried employment (Table 11). This is not surprising as nearly 45 per cent of the workforce is still engaged in agriculture, many of those being small, self-cultivating farmers.

The proportion of self-employed (15+) in the workforce has registered a decline of 4 percentage points in the last decade. This is mainly on account of people leaving agriculture in search of improved employment avenues in the secondary and tertiary sectors (Table 14). The proportion of youth who are self-employed is less than the overall proportion of self-employed in the country. What is significant is that an overwhelming proportion of those in self-employment are either own account workers or those who work as helpers in households. Given such a situation, improving the income earning of the self-employed and providing basic social protection to these workers need to be positioned as key objectives of policy interventions.

It is important to note that there has been an increase in the employer category within the self-employed though it is still at a low level. This development has been mainly triggered by the ongoing big push to support youth, in particular, engaged in own enterprises. Another major positive development in the Indian labour market, including for the youth, has been the consistent increase in the proportion of regular workers within the wage and salaried category. It is encouraging that the proportion of regular workers has increased for both male and female youth.

An overwhelming presence of workers in informal employment continues to be a grave concern for emerging economies like India. Apart from 45 per cent of the labour force who are either own account workers or helpers in household enterprises, nearly one-fourth of the young workers (26.71 per cent) are engaged in casual work. Hence, around 70 per cent of the youth are presently engaged in informal employment. Transitioning informal employment to formal employment thus remains a core policy challenge.

Table 11
Status in Employment (UPSS)

(in per cent)

Category of Employment	2004-05			2011-12			2017-18		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-29 Years									
Self Employed	49.4	60.0	52.8	42.6	55.5	46.0	41.6	51.1	43.5
Regular Salaried	17.0	8.6	14.4	22.5	16.0	20.8	29.8	25.2	28.8
Casual Labourer	33.5	31.4	32.8	34.9	28.4	33.2	28.6	23.7	27.6
30-64 Years									
Self Employed	57.3	61.8	58.8	54.2	56.2	54.7	54.6	51.9	53.9
Regular Salaried	17.5	8.4	14.4	18.8	11.6	16.7	22.1	20.2	21.6
Casual Labourer	25.2	29.9	26.8	27.1	32.3	28.5	23.3	27.9	24.5
15+ Years									
Self Employed	54.6	61.2	56.8	50.7	56.0	52.2	52.3	51.9	52.2
Regular Salaried	17.3	8.4	14.4	19.9	12.8	17.9	23.4	21.1	22.9
Casual Labourer	28.1	30.4	28.9	29.4	31.2	29.9	24.3	27.1	24.9

Source: NSS on Employment Surveys (2004-05 & 2011-12) and Periodic Labour Force Survey (2017-18).

3. POLICY IMPERATIVES

This section highlights some key possible strategies to promote youth employment, particularly in the context of ongoing rapid technological transformations and the evolving future of work, and to situate youth at the centre of development processes.

Creating appropriate and remunerative employment and income-earning opportunities for youth who form a sizeable proportion of the population and labour force can be a catalyst to boost effective demand in the economy, stimulate investment and achieve sustainable economic growth. Promoting youth employment is critical from the perspective of tackling the high unemployment rates and NEET rates prevailing among different

segments of youth in the country and also to meet the aspirations of the increasingly educated youth. Effective youth employment strategies are also pivotal for reducing the gender differentials in the labour market, especially in terms of tackling low participation rates and high unemployment rates among women. Innovative measures are also necessary to transition an overwhelming proportion of youth engaged in informal employment to formal work and social security arrangements. One of the greatest challenges in India is to scale up, both in quantitative and qualitative terms, the skill base of India's youth. Concurrently, there is also a pertinent need to equip the youth with relevant skill sets to enhance their employability and reap the opportunities created by technological advancements. Given that access to technology is widening in India, appropriate use of technology and the digital tools will be vital for improving the core aspects of youth employment, such as extending public employment services, expanding entrepreneurial development among youth, developing learning resources for young workers, and evolving green infrastructure and jobs.

We identify the following core pathways to promote a better future of work for youth: employment-centred macroeconomic and sectoral policies; reorientation of the skill ecosystem; innovative use of technology and digital tools; re-regulation of the labour regulation systems; and an improved labour market information system, particularly with respect to new forms of employment.

Employment-centred Macroeconomic and Sectoral Policies

With long-term decline in employment elasticities, the focus of India's macroeconomic policy should be on the demand side. It is important to consider the ongoing global slowdown and its possible repercussions on India's growth while re-strategising macroeconomic and sectoral policies.

From the perspective of creating more job opportunities, policies should lay increased emphasis on labour-intensive industries like food processing, leather and footwear, apparel and garments. One of the problems of the labour-intensive sectors, particularly apparel and garments, is that most of the firms are small, have not grown over time, and hence operate at low productivity levels. In fact, as

noted in this report, this is one of the major characteristics of manufacturing firms in India. There is a critical need to incentivise small firms to grow into medium or large firms, with the focus being on new firms rather than old. Similarly, priority lending should be provided to young firms in high employment elastic sectors.

Given that agriculture continues to be a dominant source of employment, there is a need to concentrate on rural economic diversification and thus facilitate productive structural transformation. Focusing on productivity growth through adoption of new and cost-effective technologies in sectors like food processing, storage and distribution will be pivotal in facilitating rural economic diversification.

So far as tackling economic slowdown is concerned, the policy interventions could comprise a host of counter-cyclical measures, including sectoral incentives like goods and service tax (GST) relief to sectors like automobiles to boost effective demand, and confidence-building steps for the private sector in order to step up investment. Given that export potential is declining due to deepening trade wars and the global slowdown, and the fact that the exports played a major role in the upsurge of India's economic growth in the last two decades, there is a need to recalibrate trade policies. One possible strategy to be considered is import substitution, particularly in relation to non-petroleum imports. Attractive incentives should be provided to domestic and foreign firms to invest in such import substitution endeavours, which in turn will pave the way for more employment avenues.

Reorientation of the Skill Ecosystem

Expanding the skill base of the economy, both in quantitative and qualitative terms, should be accorded the topmost priority. Given the rapid technological advancements and the shifting nature of demand for skills, the overall skill ecosystem needs reorientation to equip it to respond to the challenges of change. Most importantly, the skill ecosystem must move towards a lifelong learning system with a focus on problem-solving skills (to aid critical and analytical thinking), learning skills (to enable acquisition of new knowledge),

and social skills (for promoting collaborations and teamwork). The curriculum of the skill development centres should always include a judicious combination of technological and problem-solving skills. Strong emphasis must be placed on 'on-the-job training'. Workers, particularly young workers, should be incentivised for skill acquisition. Firms should also be provided subsidies to skill workers.

Although the amendments to the Apprenticeship Act in 2014 has created an enabling environment for the growth of young apprentices in India, there is a need to promote quality apprenticeship as a strategy to skill youth and enhance their employability. Assessments of successful apprenticeship systems around the world indicate that a dual system that combines work- and school-based learning may be ideal for transitioning to full-time employment. One of the fundamental strengths of this approach is the high degree of encouragement and ownership by employers.

Innovative Use of Technology and Digital Tools

Innovative use of technology can significantly improve the labour market outcomes of the youth. It is quite clear from the operation of certain active labour market policies in India (such as the NCS) that technology-enabled systems enhance efficiency and outreach. We need to use technology particularly to formalise informal employment. There is also a strong need to make young workers an integral part of innovation and technology plans.

Advances in technology also need to be used to assist young workers for newer employment opportunities. Micro technology should be promoted to improve the income-earning potential of young persons in micro and small-scale enterprises. Digital platforms should be developed to offer young workers a virtual space for information sharing and grievance redressal. Considering that labour force participation rates among young women are lower and unemployment among those who enter the labour force is higher, customised mobile apps should be developed to provide on line counselling and job search assistance to young women.

There is tremendous scope to improve the competencies of the young workers and firms through innovative use of digital tools. Organising Massive Open Online Courses on themes related to

youth employment are critical not only to provide a nuanced understanding of how to respond to the emerging challenges but also as a method to situate youth at the centre of the development policy discourse.

Research from different parts of the world shows that firms using Artificial Intelligence achieve high levels of efficiency and create market concentration. Therefore basic AI tools need to be provided in the form of open source, particularly to young entrepreneurs.

Re-regulating Labour Regulations

From the perspective of re-regulating labour regulations, what is of utmost significance is the universalisation of social protection. Given that a large proportion of young workers are still engaged in informal employment, the provision of basic social security needs is important not only from the perspective of addressing the insecurities but also as a method to formalise informal employment. Another critical issue to be tackled is dealing with ambiguities related to the categorisation of employment status of workers engaged in the platform economy.

Improved Labour Market Information System

Although new forms of employment in a sharing economy are expanding, we still lack appropriate national-level information regarding the key labour market outcomes associated with such work. There is a need to have customised national-level labour market surveys to generate the requisite information towards relevant policy formulation. Most of the existing estimations on automation and its impact on employment are at the macro level. However, for evolving more informed interventions, we need more firm-level evidences, particularly the conditions in which automation of jobs is likely to occur.

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HOUSEHOLD-LEVEL SURVEYS ON LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT IN INDIA: A COMPARATIVE ASSESSMENT

Manoj Jatav* and Deepika Jajoria**

The National Sample Survey Office's (NSSO) quinquennial surveys on the employment and unemployment situation (EUS) have been an integral part of its socioeconomic survey programme. The EUS survey has many advantages over other surveys on labour issues, and it has been developed/modified from time to time as per the needs. In recent efforts, as part of the ongoing statistical reforms, the EUS survey has been replaced by the Periodic Labour Force Survey (PLFS) in the year 2017-18. It is a major initiative of the Ministry of Statistics and Programme Implementation (MoSPI) towards improving data collection through sample surveys, particularly through enhancing the use of technology, removing the existing errors, and increasing the frequency. This paper provides a comprehensive description and critical analysis of the developments since the initiation of this survey. It lists the advantages and disadvantages of the new PLFS data. Finally, the paper provides suggestions for possible improvements in the next phases of data collection through the PLFS.

Keywords: *Population Census, NSSO, EUS, Quinquennial Round, PLFS, Labour Force, Employment*

1. INTRODUCTION

As a founding member of the International Labour Organisation (ILO), India has always been committed to its conventions. Out of a total of 190 ILO conventions, so far 47 have been ratified by India, which means India is legally bound to apply these ratified conventions in its national law and practices along with reporting their application at regular intervals. In addition, conforming to the Sustainable Development Goals (SDGs) is an important agenda

* Associate Fellow at the V.V. Giri National Labour Institute, Noida, India;
E-mail - jatav.manoj@gov.in

** Assistant Professor at Shyam Lal College (Evening), University of Delhi, India,
E-mail - deepikaomatic@gmail.com

of the Government of India, as a responsible founding member of the United Nations. Further, together with following international norms, India's development policy has focused on two broad objectives: poverty reduction and inclusive development. For assessment of the situation and for making policy recommendations, a regular, robust and reliable set of data on various socioeconomic parameters, particularly on the unorganised labour and other vulnerable sections in the population, is therefore imperative.

Targets in the SDGs are closely interlinked and are set out in an orderly manner, from the foremost priorities (e.g. ending poverty, removing hunger, good health and well-being, equality in education, gender equality, clean water and sanitation, etc.) to the others. Improvement in any of these indicators automatically improves the status of other indicators as well. In other words, with the process of development, these indicators move in a positive direction simultaneously with each other. In order to examine the status of these indicators collectively, researchers need comprehensive data from various sources. In India, various governmental and non-governmental agencies have played a significant role in ensuring the availability of reliable data on these indicators by conducting surveys at different levels (household-level surveys and enterprise/establishment-level surveys). SDG 8 is exclusively related to the labour component, which sets the target of the 'promotion of inclusive and sustainable economic growth, employment and decent work for all' by the year 2030. Its scrutiny requires a regular availability of data on labour and employment (specifically, data on the quality of employment and human resource development) in the country to effectively assess the progress made and strategise to meet the set targets before time. In the system of socioeconomic data collection in India, household and enterprise / establishment level surveys have been providing such data so far. Among these, the importance of the household-level surveys, such as the population census, NSSO's EUS survey, the annual EUS survey by the Labour Bureau, and the newly introduced PLFS, has been recognised among researchers.

NSSO's EUS survey has an advantage over enterprise-level and other household-level surveys as it provides the most

comprehensive dataset (in terms of scope and coverage) not only on EUS but also other important socioeconomic characteristics of the population (Jajoria and Jatav, 2020). The previously conducted annual survey of the Labour Bureau on EUS, though it provided estimates not only of usual status (both usual principal and usual subsidiary status combined) but also current weekly and currently daily status (Jajoria and Jatav, 2020), it is available only for the period 2010-11 to 2015-16. Another limitation of the Labour Bureau survey was the non-availability of labour data for the 5-14 age group. The main purpose of conducting these surveys was to support the ongoing public programmes by providing data whenever there was an urgent need. Also, these surveys adopted a target-based approach with a limited timeline and budget. Therefore, these surveys did not capture the seasonality aspect, as there was no fixed duration (period) followed during the field investigation. Recently, after releasing the annual report for the year 2015-16, the government has discontinued these surveys (along with the quinquennial rounds of NSSO) and has introduced PLFS during 2017-18. The discussion in this paper is confined to the population census, NSSO's EUS survey and the newly introduced PLFS. As far as the contents of the questionnaires for the household-level surveys are concerned, we have attempted to provide a critical comparison between population censuses and household-level surveys, particularly between various EUS surveys conducted by the NSSO and the latest annual survey under PLFS. The paper also throws light on the recent developments in terms of restructuring of the EUS survey methodology, the questionnaire/schedule and the use of technology in the survey.

2. POPULATION CENSUS VERSUS NSSO'S EUS SURVEY

The Population Census of India has been collecting data on labour and employment since its initiation, and there have been significant improvements in the methodology of data collection and concepts and definitions. Though it has the advantage that it enumerates each and every person living in the country (except in a few geographical regions which are inaccessible throughout the year or regions which have serious conflict issues or any type of social/political unrest), it is conducted on a decennial basis and often takes considerable time in final dissemination and reaching the

end-users. Also, the data is published at 'aggregated' levels (i.e. ward, village, block, sector, district, state and the national levels) across various socioeconomic and demographic characteristics of the population (e.g. social and religious groups, education, age, gender, etc.). This aggregated data has a number of limitations. For instance, (a) it restricts the users from carrying out a detailed micro-level analysis at the household or person level, (b) it lacks detailed information on key indicators of the labour force across various other socioeconomic parameters, as available from the NSSO's EUS survey, (c) concepts and definitions used in the Census of India in measuring 'economic activity' and classifying the population according to 'duration spent in different activities' ('main worker', 'marginal worker' and 'non-worker') are different from those used in the NSSO's EUS survey, and (d) the census digital data (which is available from Census 1991 onwards) is provided in an aggregated form across fixed socioeconomic and demographic categories. All these severely restricts comprehensive analyses of the existing inequalities.

NSSO, on the other hand, provided more detailed statistics, not only on key indicators of employment, but also other socioeconomic parameters which are relevant for studying inequalities and inclusiveness, status of decent work, unemployment, etc. in a more comprehensive manner at any desired level (i.e. up to the household and its members). NSSO began to conduct EUS surveys from the year 1955 (9th round; May-September) onwards. These were irregular in nature, and due to the absence of a fixed duration of survey, it was not appropriate to generate annual estimates from the collected data as it was lacking in equal representation of samples across the seasons during the survey period, leading to seasonal bias in the estimates. Based on the recommendations of the Planning Commission of India, an Expert Committee on Unemployment Estimates, known as the Dantwala Committee, was set up in 1970 to develop concepts and definitions for a systematic survey on EUS (Papola, 2014; NSO, 2019; Jajoria and Jatav; 2020). It was the beginning of the conducting of the EUS survey on a regular frequency of five years (usually), known as a quinquennial survey. The first such survey was conducted during October 1972-September 1973 in

the 27th round of the NSSO. The broad advantages of these surveys included: (a) adequate representative samples for different socioeconomic groups in the population, (b) robust and improved sampling techniques, (3) a fixed duration of survey in which the sample size (i.e. number of sample households) is distributed evenly across the four quarters (or sub-rounds) in the entire duration of survey in all the states, so that the seasonality of the employment/unemployment situation is captured, and(d) appropriate reference periods for different types of queries in the questionnaire.

Since the 27th round, nine more comprehensive surveys have been carried out by the NSSO: eight quinquennial rounds (32nd round during July 1977-June 1978; 38th round during January-December 1983; 43rd round during July 1987-June 1988; 50th round during July 1993-June 1994; 55th round during July 1999-June 2000; 61st round during July 2004-June 2005; 66th round during July 2009-June 2010; and 68th round during July 2011-June 2012) and the first annual PLFS survey on EUS during July 2017-June 2018. Since the initiation of the quinquennial format of EUS, the NSSO has put considerable efforts into enhancing the sample frame, survey design, methodology of sample selection (from allocation of sample size and selection of first-stage units - FSUs - to various regions to final selection of sample households), use of technology during the survey, data collection and data processing, etc. It has also tried to minimise human errors in the household-level data.

The data was made available in digital form from the 38th round onwards. Considerable of improvements have been seen in the codification of data, user guide manuals, instructions, etc. and efforts have been made to provide clean, systematic and robust data for researchers and policymakers. Particularly from the 61st round onwards, the unit-level (digital) data on EUS has been made available in a very clean and user-friendly format. The annual data of PLFS for 2017-18 is in the simplest form ever; however, there are crucial issues related to data as far as its comparability/compatibility with previous quinquennial rounds is concerned. These issues will be discussed in the later part of this paper. In the next section, we compare these various surveys in terms of the type of information available, codification of the data, and the level at which analysis is possible.

3. COMPARABILITY ACROSS THE NSSO'S EUS SURVEYS

Comparability across the NSSO data on EUS has been examined in two ways. The information available in the questionnaires of the EUS surveys for each round is dissected and compared across two broad categories: (a) the variables related to a household's socioeconomic characteristics, demography, participation of household members in MGNREGS, and skills; and (b) the variables pertaining to household members' activity status, key employment and unemployment characteristics, quality of employment, sectoral and occupational mobility, follow-up questions for those who are mostly engaged in the domestic duties but also involved in various extended SNS activities, current daily and weekly activities, wages and salary earnings, time disposition various activities, etc.

Basic particulars of a household and its members pertaining to social, economic and demographic characteristics are essential to provide a cross-sectional view of the population. This helps in understanding the status of development targets across various thematic areas as mentioned in the SDGs and related planning documents in India (e.g. see Niti Aayog, 2018). NSSO's EUS survey witnessed a significant improvement over a period of time. Comparing the unit level/digital data available from NSSO, starting from the 38th round to the last quinquennial survey conducted in 2011-12 (i.e. 68th round), one can see advances in the survey methodology, the questionnaire and coding in the information provided. In addition, for the same rounds, there has been a continuity in the availability of data which can be compared across a period. However, in the 64th round, which is not a quinquennial round but a 'thin round' on EUS and migration, a lot of information is unavailable (e.g. land ownership, current education, skills, information related to MGNREGS, detailed information on usual activity, follow-up questions on quality of employment and domestic duties, etc.), which makes it incompatible with other quinquennial rounds as far as the amount of information is concerned (Table 1).

A comparative analysis of the level and type of information available in these surveys (Tables 1 and 2) suggests the following. First, for the purpose of data estimation and tabulation (i.e. when

the numbers are required), one has to adjust the estimated figures obtained from the unit-level data with the projected census population for the corresponding year due to the fact that the NSSO's estimated figures are generally lower than the actual population. However, the data need not be adjusted with the census population for the purpose of calculating ratios, percentages, central tendencies, etc. Second, the use of district-level estimates is advisable only from the 61st round onwards by taking into consideration the actual sample size allocated for the unit to be studied. Third, significant additions or removals of relevant information from the EUS questionnaire have been observed since 1983. For instance, NSSO stopped gathering data on the status of 'leased-in and leased-out land' ownership of the households from 1999-2000 onwards (i.e. 55th round). Also, along with other information on demography and education, the NSSO stopped collecting data on the 'total number of years spent in formal education' from 1993-94 (50th round) to 2011-12 (68th round). From 2004-05 to 2011-12, it also collected data on 'type of educational institution' (government or private/aided or unaided) from the eligible population. In addition, to assess the progress and impact of the largest ever employment generation programme, the ongoing MGNREGS, a few questions were added during 2009-10 (66th round).

Table 1
Comparability across NSSO's Surveys, from 1983 to 2017-18
(List of Covariates Available along with the Labour Data)

Covariates	Unit of Data	NSSO's EUS Round							PLFS, 2017-18
		38	50	55	61	64	66	68	
State; Region; Sector	HH/PR	✓	✓	✓	✓	✓	✓	✓	✓
District	HH/PR	x	x	x	✓	✓	✓	✓	✓
Land Owned, Possessed, Cultivated	HH/PR	✓	✓	✓	✓	x	✓	✓	x
Leased-in and Leased-out Land	HH/PR	✓	✓	x	x	x	x	x	x
HH's Principal Industry (NIC) and Occupation (NCO)	HH/PR	✓	✓	x	✓	✓	✓	✓	x
HH Type; Religion; Social Group; Household Size	HH/PR	✓	✓	✓	✓	✓	✓	✓	✓
Monthly HH Consumer Expenditure*	HH/PR	✓	✓	✓	✓	✓	✓	✓	✓*
Male- or Female-headed HH	HH/PR	✓	✓	✓	✓	✓	✓	✓	✓
Gender; Age; Marital Status; General and Technical Education	PR	✓	✓	✓	✓	✓	✓	✓	✓
Number of Years in Formal Education	PR	✓	x	x	x	x	x	x	✓
Registration with Emp. Exchange; Placement Agency	PR	✓	✓	✓	✓	x	✓	✓	x
Status of Current Attendance in Educational Institution	PR	✓	✓	✓	✓	x	✓	✓	✓
Type of Current Educational Institution	PR	x	x	x	✓	x	✓	✓	x
Received Vocational Training?; Field of Training	PR	✓	✓	✓	✓	x	✓	✓	✓
Skill Training; Duration, Type, Status, Source of Funding	PR	x	x	x	x	x	x	x	✓
Whether Registered in any MGNREGS job card	PR	x	x	x	x	x	x	x	x
Whether Worked in MGNREGS during Last 1 Year	HH/PR	x	x	x	x	x	x	x	x
Period of Seeking/Available for Work during Last 1 Year	PR	x	✓	✓	✓	x	✓	✓	x

Source: Authors' compilation from various reports and technical documents available from NSSO; HH – Household, PR – Person, CT – Categorical, CN – Continuous, OD – Ordinal; "✓" denotes the availability of data, while 'x' denotes the non-availability of data; *data on consumer expenditure of the household members is given in 'usual' (lump-sum or rounded) terms (i.e. not in a detailed manner as collected in previous EUS surveys) which provides less accurate estimates.

Table 2
Comparative Availability of Labour Data across NSSO Surveys, from 1983 to 2017-18

Type of Information	Description	Status Criteria	Reference Period	NSSO's EUS Round							PLFS, 2017-18	
				38	50	55	61	64	66	68		
Usual Activity	Activity Status; Sector; Occupation	UP+SS	Last 365 Days	✓	✓	✓	✓	✓	✓	✓	✓	
	Location of Workplace			×	×	✓	×	✓	✓	✓	✓	
	Enterprise Type, Size; Type of Job Contract; Social Security Benefits			×	×	✓	✓	×	✓	✓	✓	✓
	Method of Payment (Regular; Daily; Piece Rate)			×	×	✓	✓	×	✓	✓	✓	×
	Period of Seeking Available for Work during Last Year			×	✓	✓	✓	×	✓	✓	✓	×
Follow-up Questions on Quality of Employment; Sectoral and Occupational Mobility; Union/ Association at Workplace	Engagement in Full-time/Part-time Work; Whether Worked More or Less Regularly; Approximate Number of Months without Work; Availability for Work during Those Months; Efforts Made to Get Work; Availability for Additional Work and Reason	UP+SS	Last 365 Days	✓	✓	✓	✓	×	✓	✓	×	
	Available for Alternative Work and Reason; Nature of Current Employment (Permanent/Temporary)			×	✓	✓	✓	×	✓	✓	×	
	Last Activity Status, Sector and Occupation; Reason for Change			×	✓	✓	✓	×	✓	✓	×	×
	Follow-up Questions (for those engaged in domestic duties at UPS and also engaged in various extended SNA activities, particularly those related to the collection of common property resources for the household's own consumption)			✓	✓	✓	✓	×	✓	✓	✓	×
				✓	✓	✓	✓	×	✓	✓	✓	×

Description of Current Daily Activity*	Activity Status; Sector	CDS	Last 7 Days	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Operation (Ploughing, Sowing, Transplanting, Weeding, Harvesting, and Other Manual/Non-manual Work Anywhere); Intensity of Activity; Number of Days in Each Activity			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hours Actually Worked; Hours Available for Additional Work			×	×	×	×	×	×	×	×	×	×	×
	Wage Earnings (Casual Workers)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Wage/Salary (Regular Workers)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×
	Activity Status; Sector; Occupation			CWS	Last 1 Week	✓	✓	✓	✓	✓	✓	✓	✓	✓
Description of Current Weekly Activity	Number of Nominal Days in Work (in a Week)	CWS	Last 1 Week	×	✓	✓	✓	✓	✓	✓	✓	✓	×	
	Wage Earnings (Casual Workers)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Wage/Salary (Regular Workers)			✓	✓	✓	✓	✓	✓	✓	✓	✓	×	
	Whether Unemployed all 7 Days of the Week?			✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×
	Duration of Present Spell of Unemployment			✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×
Wage/Salary of Regular Workers	Not Defined	No Reference Period	×	×	×	×	×	×	×	×	×	×		
Earnings of Self-employed		Last 1 Month	×	×	×	×	×	×	×	×	×	×		

Source: Authors' compilation from various reports and technical documents available from NSSO; UP+SS - Usual Principal and Usual Subsidiary Status; UPS - Usual Principal Status; CDS - Current Daily Status; CWS - Current Weekly Status; HH - Household; "" denotes the availability of data, while 'x' denotes the non-availability of data. * The information is provided at daily basis separately for all the 7 days of the reference period (see the detailed description in section 4).

4. PREVIOUS SURVEYS AND PLFS

The maximum restructuring of the questionnaire and the survey methodology, along with significant removals and additions from/to the previously existing EUS questionnaire, can be observed during the first annual survey under PLFS in 2017-18 (Tables 1 and 2). As far as the covariates to be studied along with the labour data are concerned (Table 1), the PLFS questionnaire has discontinued collecting data on important aspects such as 'land ownership status' of the household along with 'land possessed' and 'land cultivated', 'type of current educational institution' for eligible household members, 'registration of eligible household members in employment exchange/placement agency', queries related to participation in MGNREGS, and availability for work during the one year preceding the data of survey. Also, though the queries on a household's principal industry and occupation have been removed from the questionnaire, the same can still be obtained by aggregating the information given for all members of the surveyed household in the unit-level data.

Apart from removal of the query pertaining to a household's access to land, the detailed information on the household's consumer expenditure on various durable and non-durable goods and services for three different reference periods (*viz.* a week, a month and a year preceding the date of survey) - which was provided in the previous quinquennial rounds - has been entirely replaced in the PLFS questionnaire by merely one question on the '*usual* monthly consumer expenditure of the household'. It limits researchers' access to information regarding the access to productive assets among the surveyed households. Such information is valuable to look at labour and employment issues in a holistic manner and focus on the sustainable generation of livelihoods for the people (e.g. see UNDP, 2017). Along with other productive assets of sustainable livelihoods (access to education and skills, productive land, public schemes, sustainable employment, etc.), previously collected information on consumer expenditure is generally used as a proxy covariate of a household's financial capital. Evidently, whatever limited information on various productive assets was available in the past has been trimmed down or removed significantly in the PLFS questionnaire.

For the first time, PLFS has included detailed queries on aspects related to skill training and education which would indeed be helpful for assessing the progress made through the ongoing efforts of the government towards skill development by the formalisation of technical and vocational training and education. These queries are related to household members' participation in skill training, duration and type of training, status of completion and the source of funding. Also, in a positive move, the query on 'number of years in formal education' of the household members has been added again from the first PLFS. PLFS, for the first time, also includes the 'third gender' in its questionnaire, which allows opportunities for researchers to conduct socioeconomic situation analyses for representative households (Jajoria and Jatav, 2020).

The first PLFS introduced a major restructuring of the labour data at the person level (Table 2). There are several major omissions from the labour data. First, queries on the method of payment of wage/salary (i.e. regular monthly, regular weekly, piece rate, etc.) for those who are in paid employment at the usual principal and usual subsidiary statuses, and on the period of seeking available for work preceding one year from the date of survey, are missing. The second missing element is follow-up queries pertaining to quality of employment, duration of spell of unemployment, sectoral and occupational mobility of the labour force, and unionisation among the labour force at usual status. Such information is considered vital to study the changing nature of rural-urban and sectoral dynamics of labour and employment, and also helps understand the trends in labour migration. Third, follow-up queries related to women involved in domestic duties at the usual principal status who are also carrying out various extended SNS activities, particularly those related to the collection of common property resources only for the household's own consumption, have been dropped. However, the removal of this section in the questionnaire would be substantiated by the upcoming NSSO's 'Time Use Survey' which would record actual hours spent by the household members in various SNA, extended SNA and non-SNA activities¹ along with essential covariates such as household characteristics, usual activity particulars of the household members, education, etc. As proposed (Niti Aayog, 2017), such a

survey would be conducted on a regular basis every three years. This would probably be the first comprehensive survey by the NSSO on time use which is being conducted during January-December 2019.

The fourth missing aspect is the various operations (viz. ploughing, sowing, transplanting, weeding, harvesting, and other manual/non-manual work anywhere) performed by the rural workforce at current daily status. This restricts data users from accessing all such information available and examining rural labour dynamics in a detailed manner to develop a thorough understanding. Fifth, the 'duration of spell of unemployment at current weekly status', which talks about the severity of the unemployment situation, has been removed. Finally, PLFS, for all the seven days of the reference week, records the particulars of the household members who are involved in market-oriented economic activities such as status, industry, hours actually worked and wages received from casual employment. It is done separately for all the seven days preceding the date of survey, which restrict researchers in estimating the key indicators of labour and employment on current daily status (CDS). In previous quinquennial rounds, the NSSO used to record not only the CDS of the household members involved in economic activities, but also that of those who are unemployed or out of the labour force. Also, PLFS provides the CDS for all the seven days, whereas in the previous rounds the CDS is determined for each of the activities carried out by the household members in all the seven days collectively. Therefore, researchers will not be able to generate CDS estimates from the PLFS data which are comparable with the CDS estimates obtained from the previous rounds.

Attempts have been made to improve the quality of labour data in PLFS, particularly through queries related to the current weekly status of the household members. Compared to the previous quinquennial surveys, PLFS records actual hours spent in any economic activity by household members instead of recording the working intensity (i.e. half day as 0.5 and full day as 1.0). Also, the query on 'number of nominal days at work' of a person is replaced by 'total hours actually worked', which in turn would provide a better estimation of under-employment in the country. Also, if a person is available for additional work, then the 'hours available for

such work' are also recorded. For casual workers, the wages are recorded on a daily basis and aggregated at the weekly level. However, earnings of the regular and self-employed workers are recorded on a monthly basis. In earlier rounds, there had been no estimation provided by the NSSO on the earnings of the self-employed members of the household, which would help the government in making assessments for its schemes and programmes initiated to develop entrepreneurship among the labour force, e.g. Mudra Yojana. However, earnings of the regular workers were provided on a daily basis, further aggregated at the weekly level.

5. CAN THE PLFS ESTIMATES BE COMPARED WITH PREVIOUS ROUNDS?

The PLFS data needs to be utilised carefully by its users while comparing its estimates with the previous quinquennial rounds of the NSSO. Apart from the omissions and additions discussed so far, some improvements are there in the questionnaire, such as the way the 'working intensity' of household members is measured. Also, in the earlier rounds, all the activities carried out by the household members were recorded, while PLFS measures only two major activities carried out in a day. This would eventually lead to underestimation of actual working intensity as well as total earnings received from household members (Jajoria and Jatav, 2020). In PLFS, earnings of the regular and self-employed workers within the household are given on a monthly basis, which can be scaled down at any level (e.g. weekly or daily) for comparison. Thus, data users will not be able to compare the datasets across all the rounds.

Households' consumer expenditure data obtained from PLFS cannot be compared with the previous data due to differences in the respective ways of measurement. Though the PLFS data enables its users to estimate households' total income from employment, it essentially excludes income from other sources, such as pension, rent from productive assets, etc. The estimates of financial capital of the households estimated this way would lead to biased estimates because a major section of the economically better-off households might be earning a significant proportion of their financial capital from sources such as rents, pensions, etc., which remain uncovered in the new scheme of data collection. Unlike previous rounds, PLFS

does not collect data on land ownership, which would have been a significant indicator of households' status or well-being, particularly in rural areas.

PLFS is based on the idea of providing regular updates on key indicators of labour and employment in the country by providing data on an annual basis for both urban and rural areas; it has introduced periodic availability of data on a quarterly basis for urban areas (Jajoria and Jatav, 2020). These quarterly estimates are comparable with the previous estimates only when the data from the first visit of PLFS is taken into consideration due to the fact that the panel surveys (i.e. revisiting the same households in the subsequent quarters) are conducted only in urban areas.

For the first time, the NSSO is making use of advanced technology while collecting data at the household level by bringing in 'computer-assisted personal interviewing (CAPI)', which replaces the 'paper inquiry' method previously used in the EUS surveys. The CAPI has 'in-built validation rules' for ensuring reliability of collected data. As far as the sampling method is concerned, PLFS has come up with improvements in the final selection of sample households by bringing in the 'education criterion' in household selection (Table 3). In earlier rounds, this criterion was based on 'economic efficiency' of the households in rural areas and the 'level of monthly per capita expenditure' of the household in urban areas (Jajoria and Jatav, 2020). Household selection during field investigation is critical because any potential human error in household selection would lead to biased estimates. In earlier rounds, there was a higher possibility of such errors as the final selection of households to be surveyed was dependent solely on field investigators' training, experience, awareness and sensitivity towards all sections of society.

Table 3
Criteria for Household Selection during the
Field Survey, PLFS 2017-18

Category of Household or Socio-economic Strata [^]	Number of Household Members Who Completed upto 10 th Standard of Schooling	
	Rural Areas	Urban Areas
1	2 or More	3 or More
2	1	2
3	0	1
4	*	0

Sources: NSSO (2019), Jajoria and Jatav (2020); [^] category 1 represents the upper-most strata while category 4 represents the most deprived section; * category does not exist for rural areas

To correct this error, PLFS has used a fixed criterion based on educational attainment which appears to be a better alternative for selecting sample households within a village or an urban block/sub-block. However, there are serious concerns over compatibility of PLFS with previous surveys while comparing estimates across the socioeconomic groups. In other words, the estimates generated by using PLFS data will not be comparable while looking at the existing socioeconomic inequalities in the country (Jajoria and Jatav, 2020). There are two reasons. First, the categorisation based on the education criterion might exclude households from the upper socioeconomic category where less than two or three members in the households fulfil the criteria. This can happen in two ways: (a) for small households, particularly in urban areas where household size is comparatively smaller than that in rural areas, and (b) for small households with children who do not fulfil the household selection criteria. Second, the possibility of higher prevalence of fertility rates is more in households falling in lower economic strata. Also, the possibility of such households having more than two or three members who have completed their schooling upto the 10th standard is now higher as the average years of schooling have increased overtime. Again, having attained education up to the 10th standard is not an adequate indicator of achievement of a better standard of living when there are high rates of

underemployment and unemployment. Further, better education is only a means to the achievement of a better standard of living; it is not an end. Therefore, the new criterion introduced might lead to miscounting of the households belonging to the lower-most strata as upper ones.

However, PLFS data can be compared with the previously conducted quinquennial NSSO rounds on EUS for the purpose of making comparisons and generalisations in trends and patterns of key workforce indicators (without looking at the persisting socioeconomic inequalities). Also, the micro-data for 2017-18 needs to be adjusted with the projected population census figures (for the same year) for generating accurate estimates, as the multiplier given in the data underestimates the number of households and population to a large extent (Jajoria and Jatav, 2020).

6. CONCLUSION

Recent developments in the system of collecting labour data have been remarkable. However, it is important to acknowledge that along with the improvements in the dataset, there are certain limitations that still exist. It is advisable that the newly introduced PLFS data is used wisely while interpreting trends in key indicators of the labour force and persisting socioeconomic inequalities. A detailed analysis of the queries put to the surveyed households in the PLFS data indicates the necessity of a re-examination of the questionnaire along with reconsideration/revision of the criteria used for final household selection procedure during the field investigation. The panel data collection for rural areas is equally important to avoid urban biasness in the survey. As discussed in the paper, there is a need to include more queries related to household characteristics that are indicative of a household's access to various productive assets so that the socioeconomic inequalities can be measured along with fulfilling the objective of making PLFS the most comprehensive survey of this kind ever. It will also result in providing inputs to the ongoing efforts of the government to meet the targets set under the SDGs before time.

There is a need to include detailed queries on household consumer expenditure as it is the single-most important proxy variable based on which the researchers can categorise the population in

appropriate income groups. In an attempt to streamline the questionnaire, the NSSO has omitted queries which have no significance in the current scenario of rapidly changing technology, such as household members' registration with employment exchanges. However, it would be relevant to include queries related to the registration of the workforce in online platforms such as the National Career Service portal of the Ministry of Labour and Employment. PLFS also needs to collect data on all the activities carried out in a day by household members so that underestimation can be avoided while calculating actual hours at work and wages earned by casual labourers. Also, in the earlier rounds, all the activities carried out by the household members were recorded, while PLFS measures only two major activities carried out in a day. This would eventually lead to underestimation of working actual working intensity as well as total earnings received from household members (Jajoria and Jatav, 2020). Therefore, while the NSSO's steps to improve the database on labour and employment are welcome, there is a need to consider the concerns raised and incorporate the improvements suggested. Any such effort would be a progressive step in the development of a robust data infrastructure, as targeted by the present government.

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ADVANCING CAREERS OF MANAGERIAL WOMEN IN THE CORPORATE SECTOR: A STUDY OF ORGANIZATIONAL INFLUENCES

Rita Latha D'couth*

Although there has been a significant increase in the number of women pursuing managerial careers, there seems to be an obvious disparity in terms of advancement into the top levels of management and positions of power. Global research has highlighted the contributions women make when they do attain power and influence in organizations. Various person-centred, organization centred and social system-centred explanations have been offered for the low proportion of women in the senior ranks of corporate organizations. While the "glass ceiling" to career advancement may not be a deliberately created barrier to hinder women's career progress, managerial women still have to navigate several barriers which are formed by the interaction of socialization, tradition, biases and stereotypes prevalent in organizations. The present study focuses on the organizational influences that may either constrain or support career advancement and success of women. It explores the perception of 121 women managers working at middle and senior levels of private and public sector Indian corporate organizations. An attempt is made to understand the views of these women regarding extent to which organizational culture supports their career progress, availability of specific organizational initiatives for supporting career advancement of women and organizational barriers which may limit their upward mobility. The study reveals that although the women do not find organizational culture and its norms to constitute an overt barrier to career advancement, they highlight the prevalence of stereotypical thinking and assumptions regarding women's capabilities, interests and career commitment which may restrict the developmental opportunities available to them and career advancement avenues. The study also brings out that various initiatives considered important by women for facilitating their career progress are not available in their organizations. This suggests the need for a more proactive approach on the part of corporate organizations to the issue of women's career advancement and utilization of women's managerial potential.

Keywords: *Women in Managerial Careers; Corporate Sector; Organisational; influences*

*Associate Professor and Head, Department of Commerce, St. Joseph's College for Women.

1. INTRODUCTION

The increasing participation of women in managerial careers has not been accompanied by a significant increase in the proportion of women in the senior levels of management. Worldwide, the relative failure of women to reach positions of power and influence is a matter of concern. In the Indian corporate world too, the scenario seems to be no different. Although there has been a marked increase in the number of women pursuing managerial careers and who are seen to be entering the corporate arena with credentials comparable to those of their male counterparts, they appear to be losing out to men in terms of advancement to senior managerial positions, career development opportunities and recognition. The greatest challenge in achieving gender equality in organizations seems to be the slow pace in achieving a critical mass of women in top jobs with power.

With the intensification of global competition, organizations are being forced to recognise that the opportunity cost of relying on the historic male-dominated pattern of senior management is definitely high. With women playing an increasingly significant role in purchasing decisions, companies realize that failing to understand women's perspectives and needs can seriously disadvantage them. Moreover, management experts all over the world are claiming that the managerial style traditionally associated with women is more in tune with the needs of contemporary organizations than that of their male counterparts, as it incorporates to a greater extent instinct, intuition, empathy, emotional intelligence, ability to manage change and multi-tasking skills. Unless organizations support the career aspirations of their women employees and adopt a more proactive approach to the utilization and development of their managerial potential, they may have to pay in the form of reduced productivity and competitiveness in an increasingly demanding global market. As such, the representation of women in senior management positions is being increasingly seen as a matter of strategic competitive advantage.

2. BARRIERS TO CAREER ADVANCEMENT OF WOMEN MANAGERS

Global research highlighting the special contribution that women bring to organizations and their effectiveness as managerial leaders brings out the need to focus on the barriers women face to attain managerial positions and progress through the organizational hierarchy. Here, an attempt is made to present a brief summary of the research findings regarding the individual, interpersonal, organizational and societal factors inhibiting the advancement of women into the senior ranks of management.

2.1 The Glass Ceiling

As women enter the workforce in increasing numbers, their failure to reach the highest management positions has paved the way for considerable research and debate. Apparently, women face barriers to progression within organizations that are not faced by their male counterparts. In the race towards higher-level positions, they are confronted both by a "glass ceiling" and "glass walls". The "glass ceiling" is a barrier so subtle that it is transparent, yet so strong that it prevents women from moving up the managerial hierarchy (Morrison and Von Glinow, 1990). They cite the major organizational barriers that constitute the glass ceiling as a lonely and non-supportive working environment, the tendency to treat women's differences as weaknesses, excluding people from group activities because of their differences, and failure to help individuals to prepare to balance work and personal life issues.

Schwartz (1989) considers the term "glass ceiling" as misleading as it tends to suggest an invisible barrier deliberately created by corporate leaders to hinder the advancement of women managers. She argues that it would be more realistic to consider the glass ceiling as comprising the barriers women face in progressing to senior management positions "when potentially counterproductive layers of influence on women- maternity, tradition and socialization - meet management strata pervaded by the largely unconscious preconceptions, stereotypes and expectations of men." According to her, such interfaces do not exist for men and tend to be impermeable for women.

In this regard, the observation made by Burke and Davidson (1994) is significant. They stress that in attempting to identify specific reasons for women's lack of advancement, it is important to remember that managerial and professional women live and work in a larger society that is patriarchal, a society in which men have historically had greater access to power, privilege and wealth than women. In this context, they note that a useful analogy for conceptualising the intricacy of the structure enforcing this status quo has been presented by Frye, quoted by Code (1988). She envisions a birdcage in which if one examines each individual wire, one cannot understand why the cage is so confining. It is only by stepping back to contemplate the entire structure, the interconnected and mutually enforcing system of barriers, that one can see why the bird is trapped.

There is extensive literature on the glass ceiling which indicates that women face obstacles in their careers that are not faced by their male counterparts. Karin Klenke in her book "Women and Leadership" states that even though it is no longer considered politically correct to be overtly gender biased, subtle forms of discrimination continue to exist. According to a report in the World of Work: The Magazine of the ILO (1998), the major underlying factors for discriminating against women and holding them back from senior managerial positions were social attitudes, cultural biases, and male prejudices. According to Linehan (2000), men's and to a lesser extent, women's negative attitudes and behaviours towards women in management combine to serve as barriers to women's entry both at the educational level and for promotion in management careers. At the early stage of career choice, these attitudes and behaviours can act as a factor discouraging women from pursuing careers in management.

Another barrier which women in management face is the pressure resulting from **work-family conflict**. This results when work and family roles are mutually incompatible such that participation in one role renders participation in the other more difficult. Hochschild (1989) claims that uneven distribution of household responsibilities forces women to work a second shift at home in addition to their first shift at work. Dipboye (1987) observed that reduced career

involvement in response to work-family conflict may take the form of restricted time devoted to the job, seeking a less demanding job, refusing a promotion, less psychological investment in a career, cutting back on job-related travel, or unwillingness to relocate. Such strategies for managing career-family conflicts can impede career progress of women managers.

Thus, the cultural norms that define a woman's familial and career roles can act as an obstacle to women's career advancement. Work-family conflicts resulting from their inability to effectively balance the demands of their conflicting roles may cause some women to respond by reducing their investment in the career role. Such an attitude on the part of women might negatively impact the career opportunities made available to them, thus reducing their prospects for upward mobility. The practice of measuring career commitment in terms of time spent at the workplace, and the continuous career norm that implies an absence of career breaks can also be considered as a barrier hindering the career progress of women managers. Career breaks taken by women managers for childbearing and child raising are viewed by many to be incompatible with the job of management, which is considered as a full-time and continuous job and may be perceived as indicating a lack of career commitment. There is extensive evidence of the negative impact of career breaks on women's career development.

Vinnicombe and Sturges (1995) suggest that many organizations appear to subscribe to a double standard for marriage, whereby the married male manager is viewed as an asset, with a stable support network at home which allows him to devote undivided attention to his career, but the married female manager is considered a liability, likely to neglect her career for the sake of family. Because of this double standard operating for marriage, many woman managers have been forced to avoid the responsibility of family commitments if they wished to advance their careers significantly.

Given the current gendered bias of organizational and family life, in the aggregate, it appears to be a foregone conclusion that men and women can never be equal to one another in the world of work until and unless they are equal outside it (Maier, 1999).

2.2 Differential Developmental Opportunities

Many studies point at differential treatment of male and female employees in terms of qualifying assignments as a crucial factor in the processes disadvantaging women (Kirchmeyer, 1999; Ruderman and Ohlott, 1992). Women are frequently found to be assigned job responsibilities and assignments that yield lower developmental opportunities, thereby reducing their promotion potential. They are rarely considered for highly visible, risky or challenging assignments. Even in cases where women appeared to have been given equal opportunities, it was seen that the responsibilities assigned to men involved a higher degree of risk, increased visibility, higher business diversity and involved more negotiation and international aspects (Ohlott, Ruderman and McCauley, 1994). Many research studies indicate that women are denied the same opportunities as men in the same career context and therefore disadvantaged in the process of career development. Burke and Mckeen (1994) suggest that certain types of job assignments and challenging experiences are less available to women. For example, women may be offered staff, not line jobs, and jobs that are not high profile or challenging. The fact that women are afforded different developmental opportunities than men over the course of their careers may constitute a possible explanation for the glass ceiling.

Parasuraman and Greenhaus (1993) found that family role involvements can have a negative impact on career achievements even when the women themselves may not choose to reduce their career involvement. Based on gender stereotypical thinking, organizations often assume that women should play the role of primary caretaker within the family. This may reduce the developmental opportunities available to them. Linehan (2000) claims that when promotional opportunities arise, and when an employer is given the choice between an equally qualified man and woman, the woman is frequently viewed as the greater risk and hence the less desirable option.

According to Holton (2002), women are disadvantaged by inadequate "sign-posting" and access to training and development opportunities. They are less likely to know about the career choices

available, and to identify key training and development opportunities that will help them develop their career in the right direction. The use of informal training processes also serves as a barrier to women's career progress. In many organizations, the line manager is responsible for identifying high-potential staff for inclusion in succession planning. Evidence shows that such informal processes, without objective checks and balances in place, often exclude women.

A study by Catalyst (1998) has identified the following as the most powerful barriers to female career advancement:

- negative assumptions in executive ranks about women, their abilities, and their commitment to careers
- perceptions that women don't fit into the corporate culture
- lack of career planning and the range of job experiences commensurate with the future needs of the organization
- lack of core opportunities for female employees who have management potential
- assumption that women will not relocate for career advancement
- failure to make managers accountable for advancing women
- management reluctance to giving women line experience
- absence of, or too limited, succession planning
- "negative mentoring" and self-selection where women move into staff areas instead of line positions
- lack of mentoring and exclusion from informal career networks
- appraisal and compensation systems that are not uniform for men and women
- corporate systems designed prior to women's large-scale infusion into the workplace

- other forms of "cultural discouragement", like a work environment that values long hours over actual performance or that offers limited support for work-family initiatives
- discrimination and sexual harassment

Powell (1999) summarises various social-system-centred, situation-centred, and person-centred explanations for the relatively small proportion of women in top management. Social-systems centred explanations include patriarchal social systems, direct discrimination by the dominant group, and masculine stereotypes of effective managers. Situation-centred explanations include use of gender-based schema when making hiring and promotion decisions for top management positions and differences favouring men in developmental experiences at lower management levels such as challenging assignments, personal support, and access to mentoring. In addition, person-centred explanations include sex differences in task-oriented behaviour, influence and emergent leadership in groups, interest in jobs at top management levels, the effect of family responsibilities and corporate work-family initiatives, and inclinations to quit corporate organizations when faced with a lack of career opportunities. Powell argues that it is chiefly the social-system-centred and situation-centred explanations that account for the glass ceiling as a barrier to the upward mobility of women in management hierarchies.

3. THE PRESENT STUDY

Research on women's career development can be undertaken both from a person-centered and an organization-centered approach. The person-centered view attempts to determine to what extent women's career progression is due to factors that are internal to women. The organization-centered approach examines the perspective of whether women's under-representation in the top levels of management may be due to the difficulties faced in the context of the organization. These may include organizational practices and policies, unsupportive aspects of organizational culture, and gender stereotypes prevalent in the organization. In this research, the organizational influences on women's career development are explored on the basis of the perceptions of 121

women managers working at the senior and middle levels of corporate organizations in the private and public sectors.

3.1 Objectives of the Study

The specific objectives outlined for the research study are as follows:

- a) To explore the perceptions of women corporate managers regarding the organizational influences on career advancement
- b) To examine whether there is a difference in perceptions of private and public sector managers regarding supportiveness of organizational culture
- c) To study the perceptions of women managers regarding availability of organizational initiatives for career advancement of women.
- d) To understand the organizational factors that act as barriers to the career development of women managers.

4. PERCEPTION OF SUPPORTIVENESS OF ORGANIZATIONAL CULTURE

Research studies have shown that various gender based norms pervade organizational life and managerial practice. These norms influence the attitudes of organizational members and their interpersonal relations and constitute a gender culture peculiar to each work environment (Maddock and Parkin, 1993). In organizations where there is greater acceptance of women and their right to career advancement, a more positive environment develops where women are judged on merit and in their own right. It has been suggested that these cultures are determined by corporate agendas and that in spite of the interest shown in promoting women into the ranks of middle management, there is a tendency for top executives to protect their exclusive male culture at board level (Handy, 1991).

Gender cultures may create psychological barriers for women, restrict their career aspirations, distort communication between organizational members and limit the developmental opportunities available to them. Organizations will derive maximum benefit from the capabilities of their employees only when the prevalent

culture is conducive to the development of managerial potential and career advancement of all employees of the organization, including women.

In this context, the researcher felt it relevant to attempt an exploration of how the managerial women perceived different aspects of the organizational culture and its constituent norms. For this purpose, the respondents were asked to express their extent of agreement or disagreement with eight statements which were designed to test their perception regarding the supportiveness of the organizational culture towards the career advancement of women. The statements were categorized on a five point scale ranging from 'strongly agree' to 'strongly disagree'. The two categories 'strongly agree' and 'agree' were fused into one, for the purpose of presentation. Likewise, the ratings of 'strongly disagree' and 'disagree' have also been combined.

Perception of whether organizational culture supports women's career advancement

Global research seems to suggest that the gender-based norms at work in organizations may form an organizational culture that could restrict the effective utilization of women's talent and development of their managerial potential. Table 1 categorizes the perceptions of the respondents regarding whether the prevalent culture in their organizations is supportive of the career advancement of women managers.

Table 1

Perception that Organizational Culture is Supportive of Career Advancement of Women Managers

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	48 (78.7)	33 (55)	39 (65)	42 (68.9)
Neither Agree nor Disagree	10 (16.4)	16 (26.7)	14 (23.3)	12 (19.6)
Disagree	3 (4.9)	11 (18.3)	7 (11.7)	7 (11.5)

Figures in parentheses indicate percentage.

Source: Field Survey.

Data in Table 1 indicates that nearly 79 per cent of the women managers from the private sector opine that the organizational culture is supportive of women's career advancement. The perception of supportiveness of organizational culture towards career development of women managers seems to be more prevalent in the private sector. Only 55 per cent of the women surveyed from the public sector appear to affirm the supportiveness of organizational culture towards the career progress of women. Only 5 percent of women managers from the private sector perceive the organizational culture to be unsupportive as compared to around 18 per cent from the public sector.

A comparison by managerial position indicates that the perception of supportiveness of organizational culture towards women's careers does not vary much across different managerial levels. Almost the same proportion of women managers from middle and senior levels seem to perceive both supportiveness and non-supportiveness of organizational culture.

Perception of availability of line experience for women managers

It is only in line positions that managers make significant decisions, control budgets and interact with top level executives who could have an impact on their career progression. These opportunities to gain visibility in the system and develop on the job help managers to advance to top-level positions. The stereotypical belief that women are more suitable for nurturing positions than leadership roles may result in the lower probability of their being assigned line positions in their early careers and greater likelihood of being assigned staff positions. Thus the 'glass walls' which prevent women from advancing to line positions involving revenue-generating responsibilities may pose a serious constraint to their career advancement (McRae, 1995). The researcher felt that it would be relevant to explore whether the managerial women perceived reluctance on the part of top management in their corporate organizations to make line experience available to women.

Table 2 categorizes the perceptions of women managers from different sectors and managerial levels regarding the availability of line managerial experience.

Table 2
Perception that Top Management is Reluctant to Give Women Managers Line Experience

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	11 (18)	4 (6.7)	11 (18.3)	4 (6.6)
Neither Agree nor Disagree	12 (19.7)	15 (25)	13 (21.7)	14 (22.9)
Disagree	38 (62.3)	41 (68.3)	36 (60)	43 (70.5)

Figures in parentheses indicate percentage.

Source: Field Survey.

The table indicates that only 18 per cent of women managers surveyed from the private sector and 6.7 per cent of respondents from the public sector seem to feel that Top management is reluctant to make line experience available to women managers. A large majority of respondents from both sectors do not appear to perceive difficulty in securing line managerial experience.

When the responses are categorized on the basis of managerial position, it can be observed that 18.3 per cent of middle managers and 6.6 of senior managers perceive lower probability of women managers obtaining line experience. Nearly 22 per cent of middle managers and 23 per cent of senior managers seem to be unable to express a definite opinion in this regard. Sixty per cent of middle managers and 70.5 per cent of senior managers do not concur with this point of view.

Perception that organizational culture prescribes different standards of behavior for men and women

Global research has highlighted that there is a 'narrower bandwidth of acceptable behavior' prescribed for women in organizations which may be problematic for them (Morrison, White and Van Velsor, 1987). People tend to hold stereotyped perceptions of how women should behave which spillover to the expectations which are held of women occupying managerial roles. It has been suggested that the need to overcome negative stereotypes about women in some areas of corporate performance and yet remain

stereotypically feminine enough may cause additional stress to those women who seek to conform to these standards of behavior (Burke and Mckeen, 1994). It was felt that it would be interesting to explore whether women managers perceive that such differential standards of behavior are prescribed for women by Corporate India. Table 3 presents the perceptions of various categories of respondents in this regard.

Table 3

Perception that Organizational Culture Prescribes Different Standards of Behavior for Men and Women

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	8 (13.1)	14 (23.3)	11 (18.3)	11 (18)
Neither Agree nor Disagree	7 (11.5)	12 (20)	10 (16.7)	9 (14.8)
Disagree	46 (75.4)	34 (56.7)	39 (65)	41 (67.2)

Figures in parentheses indicate percentage.

Source: Field Survey.

Data in Table 3 indicates that only about 13 per cent of women from the private sector and 23 per cent of respondents from the public sector feel that different standards of behaviour are fixed for women and men in corporate organizations. However, more than 75 per cent of women managers from the private sector and nearly 57 per cent from the public sector do not feel that women have to contend with different behavioural expectations. A comparison of perceptions on the basis of managerial level reveals that 18.3 per cent of middle managers and 18 per cent of senior managers perceive that organizational culture prescribes different standards of behavior for men and women.

Perception that women have same chance for promotion relative to equally qualified men

Research evidence appears to suggest that managerial women possessing education, training, and other credentials on par with their male counterparts do not progress to the ranks of senior

management at comparable rates (Morrison and Von Glinow, 1990). Table 4 categorizes the responses of the women managers to the question whether women have the same chance for promotion to senior managerial positions as men with comparable qualifications.

Table 4

Perception that Women Have the Same Chance for Promotion to Senior Management Positions as Equally Qualified Men

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	47 (77)	45 (75)	45 (75)	47 (77)
Neither Agree nor Disagree	8 (13.2)	6 (10)	9 (15)	5 (8.2)
Disagree	6 (9.8)	9 (15)	6 (10)	9 (14.8)

Figures in parentheses indicate percentage.

Source: Field Survey.

Data in Table 4 reveals that 77 per cent of private sector managers and 75 per cent of public sector managers feel that women have the same chances as men for advancing to senior management positions. However, nearly 10 per cent of managers from the private sector and 15 per cent from the public sector feel that women are at a disadvantage relative to men with regard to opportunities for progressing to senior management positions. On the basis of managerial level, it can be seen that 77 per cent of senior managers and 75 per cent of middle managers perceive that women have the same opportunities for promotion to senior management positions as equally qualified men.

Perception that women have equal chance of being given challenging assignments

There is a perception that women are less likely to be given challenging assignments and may be disadvantaged with regard to developmental opportunities relative to men, as a result of pervasive stereotypes regarding their capabilities, attitudes and career commitment (Parasuraman and Greenhaus, 1993). Table 5 depicts the opinions of various categories of managers as to women

having equal chances of being given challenging assignments and developmental opportunities.

Table 5

Perception that Men and Women have Equal Chances of Being Given Challenging Assignments/Developmental Opportunities

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	49 (80.3)	36 (60)	42 (70)	43 (70.5)
Neither Agree nor Disagree	4 (6.6)	3 (5)	4 (6.7)	3 (4.9)
Disagree	8 (13.1)	21 (35)	14 (23.3)	15 (24.6)

Figures in parentheses indicate percentage.

Source: Field Survey.

From the table, it can be observed that 80.3 per cent of private sector managers feel that women have equal chances of getting challenging assignments and developmental opportunities. A lower percentage of public sector managers (60 per cent) seem to share this perception. About 13 per cent of private sector managers and 35 per cent of public sector managers do not feel that they have equal chances of getting challenging assignments and developmental opportunities.

A comparison of opinions by managerial level reveals that 70 per cent of the middle managers feel that they have equal chance of obtaining challenging assignments. Almost the same proportion of senior managers shares this perception. About 23 per cent of managers from the middle level and 24.6 per cent from the senior level do not agree that they have an equal probability of obtaining challenging assignments and developmental opportunities.

Perception that women managers have to perform better than men to prove their competence

There is a general perception that owing to prevailing stereotypes of women as possessing lower managerial competence, women have to perform twice as well as men to be thought half as good. Table 6 highlights the perceptions of different categories of

respondents as to whether they feel women managers have to perform better than men to prove their competence.

Table 6
Perception that Women Managers Have to Perform Better than Men to Prove their Competence

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	33 (54.1)	36 (60)	33 (55)	36 (59)
Neither Agree nor Disagree	6 (9.8)	10 (16.7)	8 (13.3)	8 (13.1)
Disagree	22 (36.1)	14 (23.3)	19 (31.7)	17 (27.9)

Figures in parentheses indicate percentage.

Source: Field Survey.

The table shows that 54.1 per cent of the women managers from the private sector and 60 per cent of the respondents from the public sector seem to feel that women have to contend with higher performance standards in order to be perceived as competent as their male counterparts. More than 36 per cent of women managers from the private sector and 23 per cent of respondents from the public sector do not find this perception to be true.

When the responses are categorized on the basis of managerial position, it can be observed that 55 per cent of the middle managers and 59 per cent of the senior level managers perceive that women have to perform better than men to be thought equally competent. Nearly 32 per cent of middle managers and 28 per cent of senior managers do not concur with this opinion.

Perception that stereotypical assumptions about women influence developmental decisions

Global research on women's career development suggests that gender stereotypes prevailing in organizations may lead to assumptions being made regarding interest and willingness of women to utilize developmental opportunities (Flanders, 1994). This may limit the possibility of challenging assignments, developmental opportunities and promotions being made available

to women. Table 7 categorizes the perceptions of the respondents regarding whether the developmental opportunities made available to them are constrained by stereotypical assumptions about women's interest in utilizing such opportunities.

Table 7

Perception that Developmental Decisions are Influenced by Stereotypical Thinking about Women

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	28 (45.9)	35 (58.3)	32 (53.3)	31 (50.8)
Neither Agree nor Disagree	18 (29.5)	8 (13.3)	12 (20)	14 (23)
Disagree	15 (24.6)	17 (28.4)	16 (26.7)	16 (26.2)

Figures in parentheses indicate percentage.

Source: Field Survey.

The table reveals that nearly 46 per cent of respondents from the private sector and 58 per cent of those from the public sector seem to be of the opinion that developmental decisions are influenced by assumptions which are rooted in stereotypical thinking about women. Nearly 25 per cent of respondents from the private sector and 28.4 per cent of those from the public sector do not concur with this point of view.

A comparison of the perceptions on the basis of managerial level indicates that 53.3 per cent of middle level managers and 50.8 per cent of senior managers seem to believe that women's advancement opportunities are constrained by stereotypical assumptions about interest and willingness of women to make use of such opportunities.

Perception that women are considered more suitable for nurturing functions

It is generally felt that stereotypical beliefs about women's traits and capabilities have led to the perception that they are better suited for positions involving nurturing functions like training, customer care, public relations, etc. that offer little opportunity

for movement into powerful positions. Table 8 categorizes the responses of the women managers to this perception.

Table 8

Perception that Women are Considered to be More Suitable for Positions Involving Nurturing Functions

Opinion	Sector		Position	
	Private (n=61)	Public (n=60)	Middle (n=60)	Senior (n=61)
Agree	31 (50.8)	32 (53.3)	33 (55)	30 (49.2)
Neither Agree nor Disagree	18 (29.5)	15 (25)	14 (23.3)	19 (31.1)
Disagree	12 (19.7)	13 (21.7)	13 (21.7)	12 (19.7)

Figures in parentheses indicate percentage.

Source: Field Survey.

The table shows that 50.8 per cent of respondents from the private sector and 53.3 per cent from the public sector feel that women are more likely to be assigned managerial positions involving nurturing functions. If this perception is true, it would result in women who are placed in such roles lacking the visibility to be identified as key people in the organization or be considered for advancement to top level positions.

The table also indicates that 55 per cent of middle managers and 49.2 per cent of senior managers agree that women are felt suitable for handling nurturing functions while 21.7 per cent of middle managers and 19.7 per cent of senior managers do not concur with this opinion.

5. SECTOR-WISE COMPARISON OF PERCEPTION OF SUPPORTIVENESS OF ORGANIZATIONAL CULTURE

The responses of the women managers to the various statements were averaged to obtain the mean scores for each measure designed to test perceived supportiveness of various aspects of organizational culture that were likely to impact their career advancement. For calculation of mean scores, the responses of the women managers to various perceptions have been tapped on a 5-point scale. Three of the statements are positively keyed and

five are negatively keyed. The scoring pattern has been reversed in the case of the latter, so that a high mean score on any statement, whether positive or negative, would reflect a stronger perception of supportiveness of that aspect of organizational culture towards career advancement of managerial women.

Table 9 depicts the sector-wise comparison of perception of supportiveness of organizational culture towards the career advancement of women.

Table 9
Comparison of Supportiveness of Organizational Culture
Based on Sector

Factors	Private			Public			z	p
	Mean	SD	n	Mean	SD	n		
Organizational culture is supportive of Career advancement of women managers	3.9	0.7	61	3.5	0.9	60	3.12*	0.002
Top management is reluctant to give women managers line experience	3.6	1.0	61	3.7	0.7	60	0.28	0.780
Organizational Culture prescribes different standards of behavior for men and women	3.8	0.8	61	3.4	0.9	60	2.51*	0.013
Women have the same chance for promotion to Senior Management positions as equally qualified men	3.9	0.8	61	3.7	0.8	60	1	0.321
Men and women have equal chances of being given challenging assignments	3.9	0.9	61	3.3	1.1	60	3.03*	0.003
Women managers have to perform better than men to prove their competence	2.8	1.1	61	2.4	1.2	60	1.74	0.085
Developmental decisions are based on assumptions about attitudes of women	2.7	1.0	61	2.5	1.1	60	0.96	0.338

Women are considered to be more suitable for positions involving nurturing functions	2.7	0.9	61	2.7	0.8	60	0.34	0.733
General supportiveness of organizational culture	27.3	4.8	61	25.2	5.1	60	2.4*	0.018

* Significant at 0.05 level.

Source: Field Survey.

The table indicates that private sector women managers seem to have a fairly high mean score of perceived supportiveness of organizational culture towards women's career progress (3.9 on a 5-point scale), while the public sector women managers seem to have a relatively lower perception of supportiveness of organizational culture, with a mean score of 3.5. The z-test for the difference in means of the two groups reveals a value of 3.12, seen to be significant at the 0.05 level. This shows that the women managers from the private sector have a significantly higher perception that organizational culture supports women's career advancement.

The public sector managers have a stronger belief that organizational culture prescribes different standards of behavior for men and women, as suggested by their lower mean score of 3.4 on perceived supportiveness in respect of this aspect, in comparison with the average score of the respondents from the private sector which is 3.8. The z-statistic for the difference in means of the two groups is 2.51, which is found to be significant at the 0.05 level. This indicates that women managers from the public sector have a significantly higher perception that differential standards of behaviour are laid down for men and women by the organizational culture.

Women managers from corporate organizations in the private sector appear to perceive much more equity with regard to availability of challenging assignments and developmental opportunities, as suggested by their higher mean score of 3.9 as compared to the score of 3.3 of public sector women managers. The z-test for difference of means of the two groups yields a value of 3.03 ($p < 0.05$), indicating that the difference in perception is significant at the 0.05 level.

The organizational culture seems to be perceived more unsupportive by women managers from both sectors with regard to the higher performance standards they feel they have to contend with to prove their competence, as evidenced by the low mean scores of both categories for perceived supportiveness on this aspect.

Another factor which both groups perceive to be a constraint to their career advancement is that decisions about promotions/ assignments are based on assumptions about interest and willingness of women, rather than on actual information. Both categories of managers also seem to share a fairly strong perception that women are considered more suitable for positions involving nurturing functions. This could be the cause for initial recruitment of women to powerless positions in organizations, placing them on career paths which offer very little scope for movement into positions of power and influence.

In the case of these three aspects of organizational culture where less supportiveness is perceived, there does not appear to be significant difference in the perceptions of women managers serving in the private and public sectors.

With regard to the general perception of supportiveness of organizational culture, summation of the mean scores for the eight aspects studied for assessing perception of supportiveness yields average scores of 27.3 for private sector managers and 25.2 for public sector managers. The z-statistic (2.4, $p < 0.05$) suggests that women managers employed in the private sector have a significantly higher perception of the general supportiveness of organizational culture towards career advancement of managerial women.

6. ORGANIZATIONAL INITIATIVES FOR FACILITATING CAREER ADVANCEMENT OF WOMEN

Globally, there is a growing awareness and concern within corporations about the turnover of valued female talent. Companies are interested in knowing how they can leverage the investment made by them in the recruitment and training of women employees and better utilize their managerial potential. The ethos

of an organization and the attitudes, managerial styles and values of top managers are likely to have a major impact on the scope and pattern of women's career development (Rothwell, 1984). It has also been argued that much depends on the organization's view of women, whether they are viewed as a cost or investment (Storey, 1989). Management perception of women and the level of understanding of their specific problems will to a large extent determine the nature of the employers' women-friendly policies and their commitment to them. Against this background, it was considered relevant by the researcher to elicit the perceptions of the respondents regarding the initiatives taken by their organizations for supporting women's career progress.

Perception regarding importance and availability of specific organizational initiatives

Corporate initiatives to facilitate the career advancement of managerial women are relatively few in number compared to corporate programs designed to assist women in balancing their work/family obligations. Even in countries where such initiatives have been taken to a greater extent, very little research has been done to assess the impact of these initiatives on women's career progress or on the more intangible barriers in the corporate culture. It was considered necessary to understand the views of the respondents regarding the importance of specific organizational initiatives as a means for facilitating career growth of women managers, and whether these had been implemented in their organizations.

Table 10 depicts a sector-wise comparison of the perception of managerial women regarding the desirability and availability of various organizational initiatives for promoting the career advancement of managerial women.

Table 10
Perception Regarding Importance and Availability of
Organizational Initiatives for Promoting Career Advancement of
Women Managers

Organizational Initiative	Opinion	Sector		Availability of Initiative	
		Private (n=61)	Public (n=60)	Private (n=61)	Public (n=60)
Training courses for equipping women	Important	53 (86.9)	57 (95)	18 (29.5)	28 (46.7)
	Neither Important Nor Unimportant	3 (4.9)	(0)		
	Unimportant	5 (8.2)	3 (5)		
Career counseling and Guidance	Important	46 (75.4)	49 (81.7)	9 (14.8)	5 (8.3)
	Neither Important Nor Unimportant	9 (14.8)	2 (3.3)		
	Unimportant	6 (9.8)	6 (10)		
Flexible working Arrangements	Important	50 (82)	50 (83.4)	14 (23)	1 (1.7)
	Neither Important Nor Unimportant	9 (14.7)	5 (8.3)		
	Unimportant	2 (3.3)	5 (8.3)		
Management-sponsored mentor system	Important	29 (47.5)	14 (23.3)	10 (16.4)	3 (5)
	Neither Important Nor Unimportant	17 (27.9)	27 (45)		
	Unimportant	15 (24.6)	19 (31.7)		
Informal mentoring	Important	46 (75.4)	39 (65)	42 (68.9)	35 (58.3)
	Neither Important Nor Unimportant	8 (13.1)	13 (21.7)		
	Unimportant	7 (11.5)	8 (13.3)		
Membership in Women's Networks	Important	24 (39.3)	24 (40)	4 (6.6)	4 (6.7)
	Neither Important Nor Unimportant	25 (41)	22 (36.7)		
	Unimportant	12 (19.7)	14 (23.3)		
Task Force/ Committee for	Important	11 (18)	19 (31.7)	5 (8.2)	5 (8.3)
	Neither Important	29 (47.6)	22 (36.7)		

Advancement	Nor Unimportant Unimportant	21 (34.4)	19 (31.6)		
Succession planning	Important	50 (82)	49 (81.7)	14 (23)	5 (8.3)
	Neither Important Nor Unimportant	6 (9.8)	5 (8.3)		
	Unimportant	5 (8.2)	6 (10)		

Figures in parentheses indicate percentage.

Source: Field Survey.

From the table, it can be observed that training courses for equipping women with the managerial skills necessary for high-level managerial positions are considered important by 86.9 per cent of private sector managers and 95 per cent of public sector managers. However, such programmes are perceived to be available in their organizations only by 29.5 per cent of women managers from the private sector and 46.7 per cent of women managers from the public sector.

About 75 per cent of private sector women managers and 81.7 per cent of respondents from the public sector feel that career counseling and guidance are important for promoting women's career development. However, only 14.8 per cent of women from the private sector and 3.3 per cent from the public sector state that their organization takes the initiative for providing this service to women executives. Flexible working arrangements are perceived to be important by 82 per cent of private sector managers and 83.4 per cent of women from the public sector. 23 per cent of respondents from the private sector state that their organizations make available such facilities to them, whereas the corresponding figure for the public sector is a mere 1.7 per cent.

Succession planning is another organizational initiative felt to be vital for promoting the career development of women managers. It is perceived to be important by 82 per cent of women managers from the private sector and 81 per cent of respondents from the public sector. However only 23 per cent and 8.3 per cent of women managers from these two categories respectively say that their organizations engage in succession planning.

Informal mentoring is perceived to have significant career oriented benefits by 75.4 per cent of respondents from the private sector and 65 per cent from the public sector. A larger proportion of managers from both groups (68.9 per cent from private sector and 58.3 per cent from public sector) claim to have benefited from informal mentoring. However, management-sponsored mentor system seems to be considered less important than informal mentoring. Only 47.5 per cent and 23.3 per cent of respondents from the private sector and public sector respectively feel that this initiative would be useful for promoting career advancement of women managers. More than 16 per cent of private sector managers and 5 per cent of public sector managers state that their organizations have a management-sponsored mentoring system.

Although international research on women's career development points to the importance of networking for promoting career development of women, it can be seen that only 39.3 per cent of women managers from the private sector and 40 per cent from the public sector perceive membership in women's networks to be important for helping women to advance their careers. Only 6.6 per cent and 6.7 per cent from the two sectors respectively feel that their organizations take initiative for promoting networking among women managers.

An organizational initiative in the form of constituting a Task Force/Committee for promoting the career advancement of women executives is considered an important and desirable initiative only by 18 per cent and 31.7 per cent of private sector and public sector women managers. About eight per cent each of respondents from the two groups state that such an initiative has been taken in their organization.

7. AVAILABILITY OF SUPPORT FACILITIES IN ORGANIZATIONS

Table 11 shows the sector-wise comparison of the support facilities provided by organizations for women managers to assist them in balancing their dual responsibilities.

Table 11
Availability of Support Facilities in Organizations-
A Sector-wise Comparison

Support facility	Sector		
	Private (n=61)	Public (n=60)	χ^2
Crèche /Day care facility	1 (1.6)	2 (3.3)	0.36
Support for educational expenses of children	17 (27.9)	29 (48.3)	5.38*
School admission support where relocation is involved	9 (14.8)	7 (11.7)	0.25
Housing subsidies	24 (39.3)	52 (86.7)	29*
Holiday schemes for employees and their family	21 (34.4)	52 (86.7)	34.49*
Maternity leave	56 (91.8)	60 (100)	5.13*
Stress Management Programmes	22 (36.1)	14 (23.3)	2.35
Periodical Health Check up	25 (41)	32 (53.3)	1.85
Comprehensive Medical Insurance Policy	55 (90.2)	39 (65)	11.05*
Harassment cell	20 (32.8)	35 (58.3)	7.96*

Figures in parentheses indicate percentage.

*Significant at 0.05 level.

Source: Field Survey.

From the table, it can be seen that with regard to provision of support facilities like housing subsidies, holiday schemes for employees and their families and support for educational expenses of children, public sector corporate organizations fare better than the organizations in the private sector. With regard to maternity leave and periodical health check-up, more public sector organizations seem to be providing support to their women employees. More respondents from the public sector benefit from having a 'Harassment cell' in their organizations. However, Comprehensive Medical Insurance Policy and Stress Management

Programmes appear to be more available to women employees in the private sector.

8. ORGANIZATIONAL BARRIERS TO THE CAREER ADVANCEMENT OF WOMEN MANAGERS

It is being increasingly recognized that the 'glass ceiling' which supposedly prevents the advancement of women to the highest echelons of management is the cumulative outcome of attitudinal, cultural and organizational biases that are at work in corporations. It is felt that organizations need to identify the specific barriers and biases in their culture and work environment and develop systematic approaches to eliminating them.

Table 12 indicates the mean scores of the ranks assigned by various categories of managers to the organizational barriers which are perceived to negatively impact the career advancement prospects of women.

Table 12
Comparison of Ranks for the Organizational Barriers to Career Advancement

Sl. No.	Barrier	Type				Present position			
		Private		Public		Middle		Senior	
		Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
1	Stereotypical thinking about women	8.25	1	7.95	2	8.53	1	7.67	1
2	Discriminatory organizational policies	4.34	9	3.70	9	4.13	9	3.92	9
3	Lack of challenging assignments	7.41	2	8.22	1	8.07	2	7.56	2
4	Lack of line experience	6.95	3	7.75	3	7.52	3	7.18	3
5	Restricted access to training and developmental opportunities	4.41	8	5.18	5	4.72	6	4.87	8

6	Lack of mentors	5.00	6	4.40	8	4.42	7	4.98	7
7	Exclusion from informal networks	6.16	4	5.15	6	5.85	4	5.48	4
8	Sexual harassment	2.39	10	2.25	10	2.23	10	2.41	10
9	Absence of succession planning	4.70	7	5.12	7	4.33	8	5.48	5
10	Lack of flexible working arrangements	5.38	5	5.28	4	5.20	5	5.46	6
	Spearman Rank correlation	0.979*	0.915*						

*Significant at 0.05 level.

Source: Field Survey.

Table 12 shows the comparison on the basis of sector and managerial level of the ranking of the organizational barriers to the career progress of managerial women. From the table it can be seen that stereotypical thinking about women, lack of challenging assignments and lack of line experience are perceived to be the three strongest barriers to the career advancement of women. Women managers from the private sector feel that stereotypical thinking about women is the strongest barrier to their career progression, while the second strongest is the lack of challenging assignments. In the case of the respondents from the public sector, these ranks are reversed. A point which emerges from a perusal of the literature on women's career development is that these two barriers are inter-connected, the non-availability of challenging assignments for women executives being rooted in stereotypical thinking about women's career commitment, interest and attitudes. Even the barrier ranked third, i.e., lack of line experience is considered to be the result of stereotypical perceptions that women are more suitable for positions involving nurturing functions.

Exclusion from informal networks is ranked fourth by women managers from the private sector but only sixth by those from the public sector. Respondents from the public sector feel that the

fourth strongest constraint is lack of flexible working arrangements, while this barrier is ranked fifth by private sector women managers. Sexual harassment and discriminatory organizational policies are assigned the last two ranks by all categories of respondents.

9. CONCLUSION

The analysis of the perceptions of the respondents regarding the organizational factors likely to impact their career progress has revealed certain interesting findings. The majority of the women managers surveyed do not seem to feel that organizational culture and its norms constitute overt barriers to their career advancement. However, an analysis of the responses has also brought to light a fairly strong perception of the prevalence of norms that are likely to act as strong, though subtle barriers to women's upward mobility in corporate organizations. Women managers from both sectors seem to feel that they have to contend with higher performance standards than men to prove their managerial competence. A large number of respondents also perceive that decisions about promotions and challenging assignments are often based on stereotypical assumptions about attitudes of women, rather than on actual information. If this is so, there is a possibility of women's developmental opportunities being severely constrained by such assumptions, which is likely to diminish the chance of women being considered for advancement to top level managerial positions. Respondents from both sectors also seem to perceive that women are considered more suitable for positions involving nurturing functions. Such thinking may increase the likelihood of women being offered staff responsibilities in their early careers which tends to limit their opportunities to gain visibility in the system and place them on career paths which restrict their mobility to positions of power and influence.

The analysis has also brought out that managerial women perceive the strongest barriers to their career progress to be stereotypical thinking about women, lack of challenging assignments and lower access to line managerial experience. These three barriers appear to be inter-connected, as the lack of challenging assignments and lower availability of line experience are rooted in stereotypical assumptions about women's abilities, interests and career

commitment. Thus, it appears that there is a need for designing and implementing training programs to sensitize both men and women to the harmful effect of such stereotypical thinking and to counteract the negative influence of such attitudes on the developmental decisions taken in organizations.

The responses of managerial women regarding the importance and availability of specific organizational initiatives for promoting women's career advancement show that most of the initiatives perceived to be important by a large majority of respondents like training courses for equipping women with managerial skills required for top level leadership roles, career counseling and guidance, flexible work arrangements and succession planning are available only to a minority of the women managers surveyed. This appears to suggest the need for a more proactive approach on the part of corporate organizations to the issue of women's career advancement. Such an approach could result in organizations reaping a valuable competitive advantage in the form of optimum utilization of women's managerial potential.

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EMPLOYMENT BEHAVIOUR OF THE ENGINEERING INDUSTRY: A STUDY OF INDIAN ORGANIZED SECTOR

Suresh Ramiah* and Piyali Majumder**

Engineering industry is an integral part of the capital goods sector in India and it has played a pivotal role in the expansion of the indigenous technological capacity of the country. This paper compares the employment behavior of the engineering industry in the pre, early and post-liberalization period of the Indian economy. The paper tests for the conjecture that whether along with the rise in output in the engineering sector, the sector also generated jobs in the economy. The analysis is based on the panel data of the Annual Survey of Industries.

Keywords: *Employment, Engineering Industry, Economic Reforms*

1. INTRODUCTION

Engineering industry is an integral part of the capital goods sector in India and has played an important role in the expansion of the indigenous technological capacity of the country. Since independence, this sector has gained strategic importance in the policy formulation owing to its linkage effect with other industries. It directly facilitates the growth of other sectors. The goods produced by the engineering sector serve as a raw material for the other industries like railways, defense, fertilizer plants, transport equipment manufacturing sector etc. Due to the presence of this forward linkage, the growth in this sector also affects the overall growth of the economy. Several measures have been taken under the state-dominated industrial policy regime to incentivize the production of this capital goods manufacturing sector. In the early 1990s India entered into a phase of liberalization. Economic reforms taken under the liberalization policy majorly affected the trade and the industrial policies in India. Indian manufacturing firms started facing stiff competition from foreign firms as a consequence of the rapid integration to the world market. The

* Assistant Professor, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

** Consultant, Office of Economic Advisor, Ministry of Commerce and Industry, New Delhi.

impact of liberalization on Indian manufacturing firms has been analyzed well in the literature. However analysis of the impact of liberalization specifically on engineering industries is sparse in the literature. The present paper examines the impact of liberalization on the employment behavior of the Engineering industry in Indian organized sector.

In the manufacturing sector, we generally have two types of industries: employment-creating and employment displacing sector. If we combined these types of sector in any analysis then their effect get cancelled out and may not decipher properly whether there has been jobless growth or not. A sector-specific study analyzing the employment behavior may reflect the true scenario of the employment status of the manufacturing sector. The present study compares the employment behavior of the Engineering industry in the pre, early and post-liberalization period of the Indian economy. The paper tests for the conjecture that whether along with the rise in output in the engineering sector, it has also been able to generate jobs in the economy. The study has used panel data analysis across engineering industries¹ during the period 1983-84 to 2012-13 using Annual Survey of Industries database. The entire period has been divided into three phases: *Phase 1*: 1983-84 to 1988-89 as the pre-reform period; *Phase 2*: 1989-90 to 1997-98 as the early-reform period; *Phase 3*: 1998-99 to 2012-13 as the post-reform period. The results obtained in different phases are compared to understand how over the period employment behavior has changed in the pre-reform and the post-reform era. Combined analysis over the entire period was difficult because establishing concordance across several National Industrial Classification (NIC) structures (NIC 87; NIC 98; NIC 2004 and NIC 2008) was a major challenge in the study.

The empirical estimation reflects that the conjecture of jobless manufacturing sector growth does not hold true for the Engineering industries both in the pre as well as in the post-reform period. It is true that in the post-reform period, characterized by free capital inflow, capitalization of the manufacturing sector led to the loss of formal jobs. However, the same phase, experienced a surge in the growth of contractual workers across engineering industries. The

¹ Industries included in the study has been listed in the appendix of the paper.

relation between employment growth and output growth remained positive throughout each phase indicating the fact that the conjecture of jobless growth is a meagre myth for the Engineering industries of the India.

2. THEORETICAL BACKGROUND

There are two theoretical models in the literature that correlates the output growth and employment growth [Tejani, 2016] viz; The Okun's law and the Kaldor Verdoon's law. The Okun's law relates the quarterly changes in the growth rate of GDP to the rate of unemployment. It is one of the famous models in macroeconomics framework to forecast the impact of output growth on employment growth. It is also used in dynamic framework, by including lagged values of both dependent and independent variables. The heterodox school of thought correlates the employment growth with output growth using Kaldorian framework of endogenous demand-led growth [Tejani, 2016]. The Kaldor-Verdoon coefficient measures the employment elasticity of output growth. However in the chapter we have tried to examine impact of output growth on employment from a neo-classical perspective where all the parameters are exogenously determined [Goldar, 2000, Nagaraj, 1994, 2004]. In this paper we tried to have some reconcile on the famous debate between Goldar, 2000 and Nagaraj, 1994, Nagaraj, 2004, Papola, 1994, focusing on the employment behavior of the engineering industries. There are broadly two objectives of the empirical analysis. Firstly, we examine whether engineering industries have experienced jobless growth or not; comparing the pre and the post-reform era. Secondly, what factors that may have attributed the observed pattern in the employment behavior of the engineering industries.

The manufacturing sector in India is characterized by dualism i.e. organised formal sector and unorganized or informal sector. The unorganized sector accounts for a larger share of employment compared to the organised sector. The organised manufacturing sector is characterized by productive jobs i.e. jobs with higher wages and better social security for the workers as compared to the informal sector. In the post liberalization era, the organised manufacturing sector has experienced a 4.6% growth in the employment [Kapoor, 2015]. During this phase the growth in the

value added has been double approximately 10.2% per annum. This leads to the conjecture that for the past few decades Indian organised manufacturing sector has experienced jobless growth. However an industry level analysis reveals that this conjecture may not be true across all the industries [Tejani, 2016]. The disproportionate growth in employment vs. output growth has drawn the attention of many researchers. Most of the papers have tried to examine the possible factors behind this jobless growth. It is also true that over the past few decade India has been following service-led growth strategy which is also an important factor that has eroded the potential of job creation within the manufacturing sector. Recently, government of India has taken a 'Make in India' policy (2014) to enlarge the manufacturing base of the country. This may also help improve the labor absorption rate of the manufacturing industries thereby negating the jobless growth conjecture.

3. DATA

While empirically analyzing the employment behavior we have used Annual Survey of Industries unit level data. We used plant level data to generate the four-digit industry level estimates. Papers using this data set are sparse in the literature [Dougherty et.al., 2011; Lall,2004]. We faced several challenges while dealing with the data. While cleaning the data and estimating industry-level aggregates we followed all the standard methods as described in the literature. The following paragraphs describe some of those methods. Dougherty et.al. (2011) have removed observations corresponding to closed plants, plants with negative values of output, value added, materials, fuels, fixed capital or labor. ASI unit level data also suffers from the problem of outliers. This paper used winsorizing² methodology to neutralize the impact of outliers on the estimators. The methodology is given in detail below.

In ASI unit level data both the census as well as the sample sector plants is surveyed. One limitation is the sample sector plants are not surveyed over the year. The entry and exit of census sector plants

² An outlier is an observation far away from most of the other observations in the sample. The presence of outliers may either undervalue or over value the estimated coefficients of the parameter of interest. Winsorizing the outliers imply that either assigning lesser weight or modify its value in such a way that it is closer to the other sample values. In winsorizing the common procedure that is followed is to replace any data value above the 95th percentile of the sample data by the value corresponding to the 95th percentile and any value below the 5th percentile by the value corresponding to the fifth percentile.

with at least 200 workers is surveyed consistently. While estimating the plant-level productivity Dougherty et.al. (2011) have restricted their sample only to census sector plants. Harrison and et al. 2012 dropped the non-operating firms. The firms with negative values for the key variables were dropped from the dataset. While dealing with the outliers they trimmed the dataset i.e. top 0.5% of the values corresponding to variables output and material inputs were dropped. In this study we have also used winsorizing method to deal with the outliers. All the variables used in the empirical analysis have been estimated in real terms. In order to convert them into real terms, proper deflators have been used. We constructed industry-specific Whole sale price index deflator to deflate the price of each industry. We checked the output profile of each industry and constructed the WPI by taking the weighted average of several items. Material used has been deflated by non-food article deflator. The capital stock used by the industries has been constructed using perpetual inventory method [Goldar, 1986].

4. LIBERALIZATION AND EMPLOYMENT BEHAVIOR OF ENGINEERING INDUSTRIES

While analyzing the hypothesis of jobless growth of the engineering industries across different phases of liberalization, it was observed that the employment elasticity with respect to the output of engineering industries is positive. From the preliminary analysis it appears that engineering industries have been one of the employment-creating sectors in the Indian organized manufacturing sector. This observation is in tandem with the results of Kumari (2008). However, it can be observed that in the pre-reform and the post-reform era the employment elasticity with respect to output has been falling. This observation is coupled with the fact that over time capital labour ratio has been rising followed by the rise in labour productivity across engineering industries. This indicates that per unit productivity of labour in the engineering industries have increased with technological upgradation. Similar to other sector, engineering sector in the post reform era also experienced the capital deepening process. It is true that in the post-reform era, in the engineering sector, the absorption of labour decreased relative to capital but the employment elasticity with respect to output remained positive (Table-1).

Table 1
Employment Elasticity

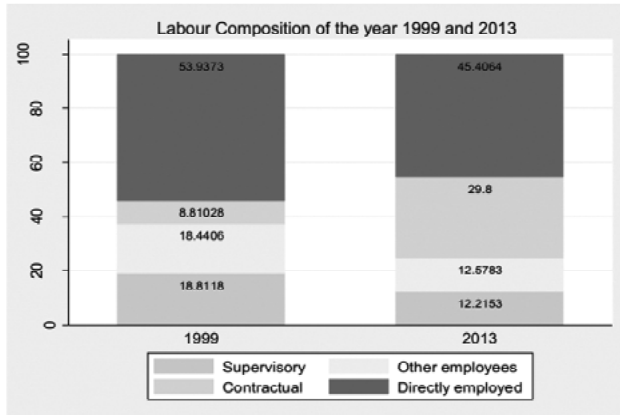
Liberalization Phases	Average Employment Elasticity across Engineering Industries
Phase-I (Pre-Reform)	0.81
Phase-II (Early-Reform)	0.75
Phase-III (Post-reform)	0.72

Source: Author's calculation based on ASI unit level database.

While analyzing the structural composition of the labour in the engineering industries, we observed that in the post-reform era proportion of contractual labour has increased as opposed to the pre-reform era. From the Figure 1 below it is evident that formal employees have lost their jobs in the year 2013. Supervisors and other employees have also registered a decline. This indicates that contractualisation has taken place not only at the labor class but also at the managerial level. With the development in the information and technology, it seems that outsourcing of innovative activities is also taking place in manufacturing sector. The loss of formal jobs is often interpreted as the jobless growth phenomenon in the manufacturing sector. However, it is important to consider the fact that there has been contractualisation of labor as a result the formal employees lost their jobs.

Figure 1

Structural Composition of Labour in Engineering Industries



5. EMPIRICAL MODEL AND METHODOLOGY

Following Goldar (2000) and Nagaraj (1994, 2000), factors affecting the employment of the Engineering industries across three different phases of liberalization has been estimated as a function of labor productivity, capital labour ratio, wage rate, after controlling for other factors like material intensity and fuel intensity. The material intensity and fuel intensity also controls for the nature of engineering industries.

$$emp_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \quad (1)$$

where X is a matrix that includes labor productivity, capital labour ratio, wage rate, profit share, material intensity, fuel intensity. *emp* represents the employment of industry i at time t categorized under Engineering sector. ε_{it} is the idiosyncratic error term.

While estimating the capital stock of the industries perpetual inventory method has been followed. Fixed effect panel regression estimation technique has been used to estimate model (1).

6. RESULTS AND DISCUSSION

Pre-reform Result

In the first part of our empirical analysis we took man-days of employee as the dependent variable, to analyse the employment behaviour of the engineering industries. The regression results are reported in staggered form. In order to capture unobserved heterogeneity across industries which is time invariant we included industry-fixed effect in our model. Different policy changes across the time period has been captured by the time fixed effect in our model. Both the dependent as well as the explanatory variables are in the log form, so all the interpretation will be in the elasticity form. As we can see from the Table 2 a percentage increase in output has a positive and statistically significant effect on the percentage increase in employment. It implies that in the pre-reform era there was no jobless growth in the engineering industries. The capital-labour ratio has a significant negative effect on the employment growth.

Table 2
Pre-reforms Period Fixed Effect Regression Results

Dependent Variable: Employment			
VARIABLES	Model 1	Model 2	Model 3
Output	0.858*** (0.0580)	0.848*** (0.0576)	0.720*** (0.0606)
Capital-Labour Ratio	-0.128*** (0.0374)	-0.119*** (0.0292)	
Fuel-Intensity		0.435*** (0.121)	
Wage-Rental Ratio			0.106*** (0.0370)
Profit Share			-0.00237 (0.0200)
Constant	1.175 (0.873)	2.528** (1.009)	1.664 (1.043)
Observations	233	233	216
R-squared	0.751	0.822	0.863
Number of Industries(at 4-digit)	54	54	54
Industry FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses. All the variables are taken in log form. The logarithmic transformation accounts for the non-linearity.

*** p<0.01, ** p<0.05, * p<0.1

We tried another proxy for it the wage-rental ratio in model (3) specification. It can be concluded that a percentage increase in capital has a negative and significant effect on the employment growth. The profit ratio however is insignificant.

Early Liberalization Result

In the early liberalization period, qualitatively the results remained the same. The growth in output has a positive and significant impact on the percentage change in employment. The coefficients are significant throughout all the three specification in Table 3. There has been no jobless growth in the engineering sector.

Table 3**Early Liberalization Result (Fixed Effect Regression results)**

Dependent Variable: Employment			
VARIABLES	Model 1	Model 2	Model 3
Output	0.484***	0.505***	0.608***
	(0.0596)	(0.0685)	(0.0530)
Wage Rental Ratio			0.0886***
			(0.0279)
Fuel Intensity		0.342***	0.288***
		(0.0722)	(0.0616)
Profit Share			-0.0269
			(0.0345)
Capital-Labour Ratio	-0.0147		
	(0.0438)		
Constant	6.146***	6.655***	4.384***
	(1.031)	(1.282)	(0.879)
Observations	748	748	748
R-squared	0.273	0.363	0.380
Number of nic4	103	103	103
Industry FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

In the early liberalization era the effect of capitalization has been quite strong compared to the influence of increase in working hours of each labour. The man-days per employee become insignificant. The capital-labour ratio has a positive and significant result on the labour productivity. The interpretation of other variables remained the same as that of the pre-reform era. The profit share which has been calculated as the ratio of profit by output, in the early reform era has a positive and significant effect on the labour productivity.

Post liberalization result

In the post-liberalization period there was a change in the composition of labour. There was an upsurge in the proportion contractual labour. In the post-liberalization era also, we can see from Table 4 that a percentage increase in output has a positive and significant effect on the employment growth. The capital-labour ratio negatively affects the employment growth i.e. substitution of capital for labour has taken place. The contractual labour share is positive and significant in determining the employment behaviour of the engineering industries. This indicates that there has been contractualisation.

Table 4

Post Liberalization Result (Fixed Effect Regression Results)

Dependent Variable: Employment			
VARIABLES	Model 1	Model 2	Model 3
Output	0.659***	0.693***	0.368***
	(0.0625)	(0.0548)	(0.117)
Capital-labour ratio	-0.188***	-0.176***	-0.120*
	(0.0525)	(0.0471)	(0.0668)
Fuel Intensity		0.248***	0.0843**
		(0.0642)	(0.0356)
Real Wage			0.511***
			(0.113)

Profit share			-0.0730***
			(0.0257)
Contractual Labour share	0.118***	0.118***	0.0887***
	(0.0271)	(0.0255)	(0.0255)
Constant	7.724***	7.899***	3.602***
	(0.700)	(0.597)	(0.668)
Observations	553	553	553
R-squared	0.735	0.763	0.896
Number of Industry groups (4 digit)	44	44	44
Industry FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

7. CONCLUSION

Engineering sector has been one of the important sectors in creating employment among the other industries in Indian organized manufacturing sector across the pre-reform/ early reform and post reform era. In the pre-reform era, Basic Metal and alloy manufacturing followed by transport equipment manufacturing industries registered a high employment growth. In the early reform, there was a change in the pattern. Manufacturing of machinery industries showed an upward trend. In the post-reform era many new industries cropped up and were categorized under the engineering sector like the manufacturing of the electrical equipment industries, manufacturing of computer and electronics industries etc. The manufacturing of electrical equipment industries registered high growth in employment accompanied by a growth in output. Across the three phases of our analysis we observed that manufacturing of transport equipment industries has been consistent in employment generation accompanied by the growth in output.

From our empirical analysis we can conclude that the growth in output in engineering industries has been accompanied by the

growth in employment. The jobless growth conjecture is not very prominent among the engineering industries. During the period 1988-1990 engineering industries registered a decline in the labour productivity, however the employment elasticity with respect to output remained positive. We get clear evidence of the fact that capitalization remained one of the most important factors that enhanced the labour productivity of this sector. It is true that technological up gradation of this sector had a negative impact on the employment growth but the labour absorption rate relative to the growth in output remained positive.

The economic reforms which came as an inevitable part of the liberalization policy acted as a boon for the engineering industries. With the improved availability of capital or the technological up gradation improved the labour productivity of this sector. In the post-reform era there was loss of formal jobs. However contractual labour registered a high share in this era. The substitution of capital caused displacement of labour but the growth in output was accompanied by the growth in employment. The relation between employment growth and output growth remained positive throughout all the three-time phases of our analysis.

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APPENDIX

A1. List of Engineering Industries (at the 2-digit level of disaggregation*) included in our study

Phase 1: 1983-84 to 1988-89 as the pre-reform period (National Industrial Classification- 70 has been followed in this phase)

- 33 Basic Metal and alloys industries
- 34 Manufacture of Metal Products and Parts except machinery and Transport Equipments
- 35 Manufacture of machinery, machine tools and parts except Electrical machinery
- 36 Manufacture of electrical machinery, apparatus, appliances and supplies and parts
- 37 Manufacture of transport equipments and parts

Phase 2: 1989-90 to 1997-98 as the early-reform period (National Industrial Classification-87 has been followed)

- 33 Basic Metal and alloys industries
- 34 Manufacture of metal products and parts, except machinery & equipment
- 35 Manufacture of machinery and equipment other than transport equipment
- 36 Manufacture of electrical machinery, apparatus, appliance and supplies
- 37 Manufacture of transport equipment and parts
- 38 Other Manufacturing industries

Phase 3: 1998-99 to 2012-13 as the post-reform period; NIC-08 has been followed in this; we con corded NIC-98 and 04 to NIC-08

- 24 Manufacture of Basic metal only casting is included
- 25 Manufacture of Fabricated Metal Products
- 26 Manufacture of computer, electronic and optical products

- 27 Manufacture of Electrical Equipment
 - 28 Manufacture of machinery and equipment
 - 29 Manufacture of motor vehicles, trailers and semi-trailers
 - 30 Manufacture of Transport Equipment
- * The empirical analysis has been conducted at the 4-digit level of disaggregation for each phase. The concordance as per requirement has been done at the 4-digit level in each phase. In order to avoid the clumsiness in listing the industries; we mention the two-digit level description of the industries.

PRODUCTIVITY OF BANARASI SILK WEAVERS

Madhura Mukherjee*

Silk industry in India has been playing a vital role in generating employment and earning foreign exchange. Banarasi silk is an unmatched example of excellent artistry, appreciated and valued in India as well as abroad. As weavers constitute the backbone of this traditional craft, weaver's Quality of Work Life (QWL) should be treated as an important factor influencing labor productivity and it needs to be improved beyond doubt. A good quality of work life of weavers can increase their productivity and overall production. This study tries to elucidate the vulnerable conditions of weavers and suggests some measures to improve the present situation.

Keywords : *Silk Weavers; Quality of Working of Life; Labour Productivity*

1. INTRODUCTION

Silk industry as an important segment of the textile industry in India has been playing a significant role in the Indian Economy, generating employment, earning foreign exchange and contributing handsomely to national income. Speaking of value addition by this industry, one should take a broad view of the term 'value' as going beyond 'use or functional value' applicable to the output of most other industries to include 'esteem or prestige value' Silk Industry has flourished in several locations scattered throughout the country and, at least in days of yore, the value addition was essentially a contribution of weavers.

Banarasi silk is an unmatched example of excellent artistry. Banarasi silk sarees, dress materials and home furnishing products are famous in India as well as abroad. It is believed that the weaving of Varanasi saree gained prominence during the Mughal rule. The traditional Varanasi handloom product is exclusively known for the handwork of traditional weavers who developed the Varanasi saree brand which is much sought after for its intricacies, art forms and aesthetics. The ancient and traditional art of making Varanasi

* Labour Analyst, Sunnyvale, CA, USA, Email: madhuramini81@gmail.com

saree has lived through generations, Banarasi Silk Weavers are best known for their skill in brocade weaving

Unfortunately, however, the handloom sector of silk industry has not been able to retain its glorious past, losing out in respect of the number of units engaged in weaving, the total quantity produced and the total earnings therefrom and the share of international market compared to countries which were way behind earlier both in quantity and quality. Going by the conventional measure of productivity of labor and accepting figures from concerned official agencies, one would tend to comment that labor productivity in the handloom sector of silk industry has been declining. Of course, adoption of a more meaningful measure of labour productivity based on 'potentials' rather than 'actuals' may present a better picture.

As weavers constitute the backbone of this traditional craft, weaver's Quality of Work Life (QWL) should be treated as an important factor influencing labor productivity and it needs to be improved beyond doubt. A good quality of work life of weavers can increase their productivity and overall production.

The present article takes off with the conventional definition of labor productivity and the somewhat dismal performance of the handloom sector of Banaras silk industry. It goes on to discuss Ishikawa model for Quality of Work Life and puts in some information about the poor quality of work life currently available to silk weavers in Benares (or Varanasi or Banaras) to explain how labour productivity can be improved. The article also emphasizes on the 'capability' approach to measure productivity.

2. DEFINITIONS OF PRODUCTIVITY

Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise productivity in every sphere of work.

According to OECD, labor productivity is defined as output per unit of labor input. Economic growth in an economy or sector can be ascribed either to increased employment or to more effective work by those who are employed. The latter can be described through statistics on productivity. In fact, an inverse definition of

(labor) productivity commonly used in the textile industry is 'hands per ton', where 'hands' mean number of man-hours or man-days and 'per ton' could be replaced by 'per meter or hundred meters'.

The driving forces behind improvements in labor productivity are proper maintenance and deployment of machinery and equipment, improvement in organizational culture as well as physical and institutional infrastructures, improved health and skills of workers (human capital) and generation of new technology. Labor productivity estimates can (i) serve to develop and monitor the effects of labor market policies. For example, high labor productivity is often associated with high levels or particular types of human capital, indicating priorities for specific education and training policies. (ii) be used to understand the effects of wage settlements on rates of inflation or to ensure that such settlements will compensate workers for realized productivity improvements, and (iii) contribute to the understanding of how labor market performance affects living standards.

Thus, labor productivity is a key element toward assessing standard of living and an important input in formulating policy decisions related to certain sectors of the economy. By increasing productivity of silk weavers, the overall productivity of silk industry of Varanasi can be increased. Weaver's productivity can be enhanced by providing them better facilities. Proper training, education, favorable working environment, uninterrupted power supply, easy loans, providing market information etc. are some factors which are responsible for weaver's productivity.

OECD's definition is focused on the contribution of labor alone in a production system. In fact, attempts have been made to develop coefficients of labor productivity, machine productivity, capital productivity, material productivity and even management productivity to assess the relative contributions of these elements individually. However, it is well appreciated that these elements operate as inter-linked determinants of over-all productivity of any production system and compartmentalized concepts of productivity are not quite appropriate to judge relative contributions of the different elements in a production system. It is not difficult to appreciate the fact that labor productivity narrowly understood in terms of quantities (or even value) 'actually'

produced may be far less than what could be produced if the other elements in the system acted in synergy to fully bring out the potentials of labor.

A composite definition of productivity that enables comparisons across different types of production systems—some labor-intensive and some others capital-intensive, some dominated by manual operations and others dominated by machine operations or automated ones—is given below in terms of value addition by the underlying production system

$$\text{Productivity} = (\text{Value of Output}) / (\text{Cost of Inputs})$$

In value analysis, we talk of three forms of value each of which can influence the price per unit of output (if we consider 'products' as the only output, ignoring by-products and commercially useful wastes) viz. (1) use or functional value (2) esteem or prestige value and (3) exchange or re-use value. In this definition and going by the general concept of value, productivity is not determined just by the number or quantity produced per unit of time.

In the present context of dealing with Banarasi silk, esteem or prestige value is quite significant as a determinant of price per unit and enhancing this value implies more time and greater skill. Thus, productivity as defined in terms of value addition by silk weaving has to be judged by taking due account of skill and attention of weavers leading to enhanced esteem value of the product.

In this connection, it will be proper to assert that productivity should not be quantified in terms of actual quantity or number produced. Rather, we should consider the capability of the production system to produce, given adequate and appropriate inputs. Any attempt to improve productivity must address the issue of enhancing this capability of the system. This latter does depend on technology which also should be upgraded in the case of Banarasi Silk weaving. And quite important is the need to address the capability of the weavers. This capability is influenced by the 'quality of working life' (as distinct from just 'quality of life') enjoyed by the weavers. It is in this context that we should bring in the model for 'quality of working life' proposed by the Japanese exponent of quality K. Ishikawa.

3. DECLINING TREND IN THE HANDLOOM SECTOR

Considering the entire silk industry in the country, one notices a declining trend in the total value of export of silk fabric and made-ups, readymade garments and even the grand total including raw silk and silk yarn over the last few years. As given out by the Ministry of Textiles, Government of India, total value of silk exports (in million US Dollars) stood at 410.61 in 2013-14, rose a little to 417.00 in 2014-15, slipped down to 389.53 the next year and was a meagre 218.04 in 2016-17. Corresponding figures for readymade garments were 144.65, 206.18, 171.89 and 146.86 respectively. For fabrics and made-ups, these figures were 240.92, 240.21, 196.67 and just 51.44 respectively. It has been stated that while exports to USA and UK have declined greatly, exports have picked up in UAE, Malaysia, Sudan and Nigeria.

One can hardly expect a brighter picture for Varanasi Silk Industry and one can only reconcile oneself with a much darker picture for the handloom sector in Varanasi silk.

Handloom silk of Varanasi is famous for its intricacy, versatility and wide variety. The range of Banaras weaves and the skills of Banaras weavers are not found in any other single weaving center in the country. Handloom sector of Varanasi plays a vital role in economy to generate employment and export earnings. Over the last few decades, the number of power looms has been increased a lot and it took over the place of handloom silk. Power looms can produce 6 to 12 meters of materials a day, depending on the design, on the other hand a weaver takes weeks to create the same amount. The demand for power loom silk products are also increasing due to its lower price. Despite of having distinctive skills, Varanasi silk weavers are facing tough competition in the market and are struggling for their survival. The Varanasi weaving industry has experienced significant decline since the early 1990s. Demand for saree has stagnated in the face of increased competition from cheaper alternatives, shifting consumer's taste, disruptions to the supply of inputs and hence to production of outputs. The condition of handloom weavers is worse than that of power loom weavers. Power loom products are cheaper than handloom products and therefore the demand for power loom

products has been increasing. The cost of production and time in handloom products both are high. Weavers work around 15 to 18 hours a day and get Rs. 250 to Rs. 350 per day which is comparatively less than wages paid to power loom weavers. The entire family gets involved in the production process but women and children don't get any remuneration for their work. Thus, the situation of most weavers has deteriorated into a pitiful state, as weavers face increased poverty due to low wages and increasing cost of living.

Weavers can be categorized (according to Handloom Census) as household weavers, non-household weavers and allied weavers. Household weavers correspond to persons or groups of persons who live under the same roof and have their own looms. Non-household weavers can be defined as persons who work under a private owner or a society, like weavers working under any master weaver or cooperative society and don't have their own loom. Allied weavers are those who are engaged in pre and post loom activities (like dying, winding, dying of fabric etc.) but not in weaving. Varanasi mainly produces silk sarees, mixed fabrics, cut work items, dress materials, furnishings, stoles, scarves, gauze and leno fabrics, brocade. Uttar Pradesh has the fifth highest number of handlooms in India (according to U.P. Investors Summit 2018).

In Uttar Pradesh, the number of weaver households was 1.4 lakh in 1995 and 0.8 lakh in 2010 respectively. In Varanasi, the number of weaver households has reduced from 36234 in 1995-96 to 30249 in 2009-10. The reasons behind this scenario are increasing competition from power looms, increasing price of silk yarn, reducing demand of handloom products etc. and due to these reasons weavers are shifting to other lucrative jobs.

Handloom weavers are famous for their authentic, intricate and exclusive work. The intricacy of design in Varanasi saree is of the highest order- the highest pixels. In handloom, a saree takes 10 to 15 days or sometimes more than that depending on design and fabric's.

4. MODEL FOR QUALITY OF WORK LIFE

Labor (worker) productivity gets enhanced if workers are enabled to enjoy a better quality of working life. There exist several models

to provide an insight into quality of working life and, that way, indicate ways and means to improve quality of working life. Among such models, the one offered by a Japanese exponent of Quality stands out as somewhat distinct and yet is quite comprehensive, if properly explained.

In this context one can consider a relatively small group of people working within and for a particular organization - a manufacturing unit, a service provider, an educational institution, a research laboratory, a social welfare organization, a government department, or a similar establishment. A model offered by a Japanese exponent of Quality Management K. Ishikawa to explain Quality of Working Life is worth consideration in view of its originality and general applicability. The model is in terms of a set of equations, each equating the product of two characteristics as one determinant of Quality of Working Life. One can easily take the 'product' as 'the composite of'. And this model eventually speaks of Quality of Life experienced by an individual worker. One can possibly aggregate or combine these measures for individuals to come up with a collective measure for the organization.

Knowledge X Skill = Ability

Attitude X Environment = Motivation

Ability X Motivation = Individual Performance

Individual performance X Organizational Resources = Organizational Performance

Organizational Performance X Society = Quality of Working Life

Thus, the determinants of Quality of Life as is being enjoyed by an individual worker depends on his/her knowledge in the domain of work and his/her skill to act, to react and to interact in order to translate the knowledge into performance on a task. Also contributing to performance will be attitude towards the task (s), the organization and its management. These alone cannot explain the individual's performance. As one determinant of Motivation we should take into account the Environment or the Organizational Climate in terms of relations among peers, between peers and superiors, and between self and supporting members. This climate is partly created by the organization in terms of certain

facilities and procedures determined by the management as also by the worker as an individual as influencing the given Environment. This concept of Quality of Working life is no doubt a collective concept that is closely linked up with the performance of the organization where the people work as also on the impact created by the organization - its values and ethics, principles and practices, concerns for and compliance with societal needs and norms - on the society within which it operates.

Even for a single individual, who has to work for or within an organization, this concept is quite relevant. This model links up Quality of Working life with the level of performance and the resulting satisfaction and gratification. It may be noted that this model connects quality of working life to attitudes and aptitudes of individual workers as also to resources available to the organization and quite importantly, the image of the organization and its impact on society. Going a bit deeper, one may note that an individual joining to work in an organization carries with him/her a bag of knowledge and skill and may be placed on a job that matches - more or less, if not perfectly- this bag. And the individual is satisfied and tries to perform to the best of his/her ability (as the composite of knowledge and skill). However, the individual subsequently undergoes programmes - in - house or otherwise, sponsored by self or by the organization - to augment the initial stock of knowledge and enhance the initial level of skill. Unfortunately, however, the individual is more often than not put back on the same job, may be with a higher designation and/a better compensation. The individual now finds the old job to be less satisfying, demanding a much lower level of knowledge or skill than what is currently possessed by him/her. This affects the individual's attitude towards the organization and, more so, about the job. And according to this model, his/her motivation diminishes, eventually causing less-than-expected performance and leading to a poorer quality of working life.

5. FACTORS AFFECTING WEAVER'S PRESENT PERFORMANCE

Though Varanasi silk products have demand in both national and international markets, weavers who are the main artisans behind this art are facing many problems which are affecting their

productivity adversely. To sustain this traditional industry of Varanasi, these problems of weavers need to be addressed and removed to the extent possible. Before we examine the issues that stand in the way of achieving high levels of productivity in the light of the Ishikawa model, we must remember that the silk weavers work mostly in their respective households or in makeshift work places. They cannot be really looked upon as people working within an organization. Instead, most of them work for business houses on contract with meagre wages.

Knowledge, skills and ability - Given a context of stiff competition on the one hand and a spate of technological advances on the other, enhancement of knowledge about changing needs of customers as also modern techniques to meet those is a bad necessity for the weavers. Presently, the weavers come to know of these only indirectly and quite late in the day elders in the household and specially from those who move out and interact with distributors, customers and exporters. They hardly attend any structured training programme. Fortunately, the weavers are a dedicated lot and most of them can be characterized as highly skilled. Despite their odds in life, they rarely move out of this profession and possibly they cannot in the absence of opportunities to join some other profession. Thus, the ability of the weavers can still be regarded as favorable for good quantity and quality of production.

Technology improves productivity and quality of product but unfortunately Varanasi silk weaving industry is technically much behind time and the scope for technological upgradation is very limited without a complete overhaul of the workplace hub. Even then, there is some scope for technical upgradation in the field of design of fabrics, dyeing, wrapping and other pre-weaving activities. Mechanization of such activities can save time and improve the overall productivity of weavers. And to derive the desired benefit from such technical upgradation, formal general education is highly desirable.

In Uttar Pradesh, 60.2% adult (18 years or above) handloom workers have never attended school, 17% handloom workers received education below primary level, 11.0% workers completed primary school level, 5% workers read up to middle school, 3.1%

workers had secondary school education and only 1.6% workers went up to receive education at the higher secondary level. (Handloom Census 2009-2010). These data reveal that the level of education of adult handloom workers is very low and this is one of the important reasons for low absorption of new ideas and methods for greater production of better quality possibly at lower costs.

Attitude and Environment - Good attitude and favorable environment can motivate a worker to perform well. Good working conditions, positive attitudes of workers towards their job, satisfying financial and other benefits from job, are some of the factors which may motivate an employee or a worker to perform exceptionally well. But unfortunately, the working environment of Varanasi silk weavers is not favorable. Equally unfavorable are earnings. Silk weavers of Varanasi are facing many problems regarding health, hygiene, housing, wages etc. as are briefly pointed out in the following.

- (a) **Health issues:** Weavers are facing many health-related problems. They suffer from many diseases like respiratory ailments related to breathing in of fibers and dust from the fabrics they work with. Due to exposure to cotton and silk fibers, many weavers are suffering from tuberculosis particularly multi- drug tuberculosis. They get infected very easily because of the dingy places, where they work. PVCHR (People's Vigilance Committee on Human Rights) and the Asian Human Rights Commission (AHRC) conducted a 5 - month study and consultation (2008) cases in the weaver community in Lohta and diagnosed 67 individuals suffering from the disease. According to PVCHR and AHRC, the treatment requires frequent consumption of medicines that would typically cost Rs. 300-400 per week which the poor weavers can hardly afford. Weavers' children face significant health issues, particularly malnutrition. A PVCHR survey identified 46 severely malnourished children in weaver areas, with an average age of 2.6 years and an average weight of 8.2 kilograms. Other health related issues are weakness of eye side, pains in joint (because of the place where they work), malnutrition etc. Few weavers have access to government

health services (like health card and free/cheap medicines) to treat their ailments, which are often guaranteed if they have political contacts or are willing to pay bribes to gain access to government hospitals. Thus, most of the weavers are deprived of free or cheap medical facilities.

- (b) **Housing problem:** Poor housing facility is another reason of low productivity of weavers. The condition of the houses where weavers live are very poor and it directly effects their health and productivity. Lack of ventilated rooms, poor access to sun light, water seepage etc. are the main causes of weaver's vulnerable living condition. As weaving is a home-based enterprise, therefore, there is a need to focus on the betterment of housing and its surrounding environment. Though, some efforts have been made in this regard such as Rajiv Awas Yojna (RAY), but weaver's community couldn't get much benefit from this scheme.
- (c) **Wages:** Attractive wages and fringe benefits play a vital role in motivating workers and increasing worker's productivity. Weavers work around 15 to 18 hours a day and get Rs. 250 to Rs. 350 per day which is comparatively less than wages paid to power loom weavers. The entire family gets involved in the production process but women and children don't get any remuneration for their work. Thus, the situation of most weavers has deteriorated into a pitiful state, as weavers face increased poverty due to low wages and increasing cost of living.

6. ORGANIZATIONAL RESOURCES

Availability of physical and material resources in due time and right quantity - as can be ensured by a steady flow of monetary investments by the trade is an essential consideration in productivity improvement and the role of management leadership is also vital. Silk industry of Varanasi, particularly the handloom sector, is not that organized and continues to be ridden by a host of resource problems. The industry engages over 5000 firms in different forms and functions. The size and structure of the industry restricts investment in automation, processing and dyeing of yarns, finishing, packaging and so on.

Handloom weavers are famous for their authentic, intricate and exclusive work. The intricacy of design in Varanasi saree is of the highest order- the highest pixels. In handloom, a saree takes 10 to 15 days or sometimes more than that depending on design and fabric's length. The number of working looms in Uttar Pradesh was 2.6 lacs in 1987-88 which has decreased to 0.8 lacs in 2009-10 (Handloom Census 2009-10). Globalization, Economic liberalization of 1991, decrease in government subsidies are some important reasons behind this situation. In Uttar Pradesh, 76.4% workers are weaver households (according to 2009-10 handloom census these are households that own and operate looms either their premises or other than their place) and 23.5% workers are allied households (these are households that do not own looms and engaged in allied activities).

These data reveal that the number of handlooms is decreasing and one of the reasons of current crisis apparently the primacy given to power looms. In Uttar Pradesh the number of power loom weavers is 4.21 lakh, (according to U.P. investors summit 2018) which is almost double of handloom weavers. Handloom weavers are switching their jobs to power looms as this is more economically viable option. The cost of production and the cost of final product both are high in handlooms, on the other side cost of production and price of products are less in power looms which further increased the demand for power loom products. The other reason behind the increasing number of power looms is less time-consuming production process. The competition from power loom problem was highlighted by Sivaraman Committee in 1974. The Committee warned that 'every new Power loom puts six handlooms out of action in the country'. As per the handloom census of India 2009-10, in the country 33.31 percent handloom worker households are threatening from Mill/Power loom Sector.

Raw material is a very significant input which determines the cost of production and final price of the handloom products. The main raw material which is used in handloom industry is yarn, the other raw material is Zari. The sources for procuring raw materials are open market, master weavers and cooperative societies. Weavers are unable to procure raw materials as it is mainly controlled by Gaddidars (rich controlling traders). Gaddidars have considerable

influence over production and marketing of silk fabrics and they control the entire weaving community. Gaddidars provide them raw materials and keep exploiting them. Other problems related with raw material are price of yarn and its availability. The price of yarn often fluctuates, sometimes several times in a day. Government has taken a few steps to facilitate regular supply of raw material to handloom sector. Mill gate price scheme for Zari and Silk has been implemented by government to provide raw materials to weavers at reasonable price but again very few weavers are benefited through this scheme. In Uttar Pradesh, 5.7% household weavers use Mulberry silk, 4.3% weavers household use viscose and blends and 34.8% household weavers use other silk (Handloom census 2009-10).

Finance is a most important input for an industry. Although handloom sector does not need much capital but it needs money for the purchase of raw materials, maintenance of looms etc. In Uttar Pradesh (as per Handloom Census 2009-210), the major source of providing loan was Master weavers (58.7%) followed by commercial banks (13.9%), friends/relatives (13%), moneylenders (7.4%) and cooperative societies (1.9%). Thus, Master weavers are the main source of providing loan and main reason for weaver's exploitation too.

7. A FEW SILVER LININGS

In order to improve the working conditions of handloom weavers and for the sustainable development of the handloom sector, Ministry of Textiles, Government of India has introduced several schemes. Deendayal Hastkala Sankul, the first ever state-of-the-art trade Centre and crafts museum at Varanasi, was dedicated to the public by the Hon'ble Prime Minister of India on September 22, 2017. Set up on a sprawling 7.5 acres of land, the Centre would provide world-class marketing facilities to the weavers and artisans and would also boost the tourism potential of Varanasi. Indian Handmade Bazar an online portal to provide direct market access facility to artisans and weavers, was launched on January 29, 2017. Memorandums of Understanding were signed with IGNOU and National Institute of Open Schooling (NIOS) to provide customized educational services to weavers. The Ministry of Textiles provides

75% of the fee in case of SC, ST, BPL and Women weaver families. Other schemes to support weavers are Weavers' Mudra Scheme, Hastkala Sahayog Shivirs etc. An MoU (Memorandum of Understanding) was signed with National Backward Classes Finance Development Corporation (NBCFDC) and National Schedule Castes Finance Development Corporation (NSFDC), to implement schemes of Government of India for artisans and weavers belonging to OBC and SC categories in 14 identified clusters, with necessary forward linkages for income sustainability and enhancement. Ministry of Skill Development and Entrepreneurship partners with Ministry of textiles signed Memorandum of Understanding to promote skill development and entrepreneurship development for handloom weavers through knowledge sharing, resource optimization and synergy of institutions.

8. SOME SUGGESTIONS FOR IMPROVEMENT

Handloom sector of India contributes significantly to employment after agriculture as well as export earnings. Varanasi Handloom products and artisans (weavers) behind these products are globally eminent. But despite producing high value-added products, weavers' art is in danger of extinction because of the increasing prevalence of power looms, even though the quality of the hand work is incomparable. In Uttar Pradesh a large proportion of household having a lower average production as they work with fine silk yarn and intricate pattern in multi-colored fine silk threads are woven into the fabric. Thus, per weaver per production is low, especially for pure silk fabric, while the fabrics with silk and Zari result in production rates of 2-3 meters per weaver per day as the quantity of Zari used in fabrics is more. 50.7% of weaver households produce less than one meter per weaver per day (as per handloom census 2009-2010). It reveals that a weaver produces less than one meter per day because of the intricacy of his work, thus here it would not be appropriate to say that the weaver's productivity is low as they are working with complex design and fine silk. Despite having high skills Varanasi silk weavers are living in pitiful condition, therefore, it needs immediate attention of government and local NGOs. There are several schemes such as Integrated Handloom Development Scheme, Handloom Weavers

Comprehensive Welfare Scheme, Marketing & Export Promotion Scheme, Mill Gate Price Scheme have been implemented by government but weavers did not get much benefited of these schemes. In the present situation, it is highly recommended to improve the quality of work life of Varanasi silk weavers in order to enhance their productivity. Following steps can be taken in this regard:-

- (i) **Education and Training:** it is important to provide at least primary education on an open schooling basis to all those currently engaged in silk weaving free of any cost. Compulsory primary education should be implemented for children in weaver households not currently engaged in production. This will indirectly lead to better hygiene practice and less exploitation by middlemen and moneylenders. Several skill development programs have been introduced by the government of India but the real need is to make sure that a sizeable number of weavers get benefited from these programs.
- (ii) **Uninterrupted supply of electricity and raw materials:** Frequent power cut is a major hindrance for silk industry of Varanasi. Thus, uninterrupted power supply is an essential need of this sector. Adequate supply of raw materials is also needed to ensure adequate production of finished products. Here also several schemes have been introduced by the Government, but the immediate need is appropriate implementation of these schemes so that weavers can derive good benefit.
- (iii) **Housing and Health Facility:** Good health and healthy environment of workers are two main pillars of success of any industry. Varanasi silk handloom industry is a home-based industry and conditions of weaver's houses are very poor. Many weavers are deprived of the benefit of welfare schemes meant for the poor, such as pucca housing, toilet, free gas connection etc. because of mismanagement and corruption. There is a need to conduct a survey in order to collect feedback directly from the weavers so that appropriate remedial steps can be initiated.

- (iv) **Marketing Strategies:** Weavers need a direct platform to sell their products. Most of the time weavers sell their products through middlemen and do not get remunerative price for their products. A joint venture by Flipkart and Development Commissioner (handloom) under Ministry of Textiles has been taken where local weavers will be able to sell their product online (TOI Sept. 2014). Government should take more such steps so that weavers do not get exploited by the middlemen. Weavers should be encouraged to produce variety of products such as home furnishing products, scarves, stoles, woman's tops and other dress materials, ladies' purse, wall hangings etc. in order to capture domestic as well as global market.

9. CONCLUSION

Varanasi has rich cultural heritage in art of silk weaving. The weavers of Varanasi are highly skilled artisans and work really hard for their livelihood. Despite producing high value-added products weavers are living in vulnerable conditions. The cluster of initiatives has been taken by the Government in order to increase weaver's productivity and overall production. Top Indian designers are also coming forward to help handloom sector. Banarasi Silk got GI recognition in 2009 under the registered name of 'Banaras Brocade and Sarees'. This was a significant achievement for Varanasi silk industry but unfortunately couldn't help much the soul of the industry - the weavers. It was being believed that the condition of silk industry would improve after the GI status but the fact is that the most of the weavers are not even aware of GI and its benefits. This situation is really regrettable that the artisans (weavers) of the world-famous art are struggling for their livelihoods. Many weavers are abandoning their traditional occupation and moving to other jobs like rickshaw pulling, working in brick-kilns etc. and some are moving to power loom for better remuneration. Thus, the immediate need is to improve the current situation through effective implementation of ongoing schemes and programs meant to benefit poor workers in the handloom industry. It is very important to improve the present living conditions of silk weavers in order to enhance their productivity. The present quality of work life of Varanasi silk weavers is not very satisfactory and this is a very significant reason of their low

productivity. Therefore, the need is to ameliorate their living conditions and health status which directly affect their working capacity, in order to boost their productivity. As art of handloom weaving of Varanasi is matchless and no other product (power loom products) can take its place, improvement in the working climate of Varanasi silk weavers is urgently needed.

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EMPLOYMENT, INCOME AND REMITTANCES OF OUT-MIGRANTS FROM NORTH EAST REGION OF INDIA: A STUDY OF DELHI¹

Gaidimlung K Jacob*

With the economic reforms of 1991 in India, the internal migration has been on the rise and North East Region (NER) of India is no exception to this phenomenon. Available evidences suggest that there has been huge exodus of youth from NER to other parts of India. The present study examines the employment status, income and remittances of the out-migrants from NER to Delhi. The data obtained from the field survey is interpreted and analyzed using statistical tools and econometrics model like binary logistic regression and Ordinary Least Square (OLS) method. This field study on which this paper is proposed found that about 73 percent out-migrants are employed in the informal private sector with no social security benefits and about 13 percent each in the public sector and self-employment. The incomes of the migrants are found positively related to the level of education, age and duration of stay in the city. It is also found that about 65 percent of the migrants send remittances in the last 365 days. Also, the long-term migrants (migrated before 2005) are more likely to send remittances compared to recent migrants (migrated after 2010). This paper argues that there is an urgent need at policy level to address the grievances of the out-migrants to bring them under the social safety net as majority of them are in the category of "youth" and found employed in informal service sector where social security benefits are not properly regulated.

Keywords : *North East Region (NER); Out-migrants; Employment; Remittances*

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* Research Scholar, Centre for the Study of Regional Development (CSRD) Jawaharlal Nehru University, New Delhi-110067

1.1 INTRODUCTION

Historically, North East region (NER) of India is considered as migrants receiving region. But in recent years the out-migration has outpaced the immigration due to rapid infrastructural development in transportation and telecommunication technology (Remesh, 2012). It is a widely acknowledged fact that the current neo-liberal economic regime has widened the developmental gap between the rural and urban areas. The impact of globalization on development has remained skewed and uneven thus limiting the life prospects of people living in the rural quarters of the country (Bhattacharya and Sakthivel, 2004; Ahluwalia, 2000; Amitabh Kundu and Varghese, 2010). These anomalies have triggered a huge movement of people to the urban areas, mainly in search for a better life. Literacy rate in the region is exceptionally high, however, there is a lack of higher education and employment avenues. The problem of insurgency in the region also hampered the education system and growth of employment avenues (Akhtar 2013). These anomalies have triggered a huge movement of people to the urban areas, mainly in search for a better life. Consequently, this has led people to migrate or risk living a life untouched by the developmental process.

According to the 2011 census, the North East region has the population of about 45.5 million out of which one million were migrants. It is estimated that the total number of emigration (out-migration) in 1981 was 0.4 million which has gone up to 0.6 million in 1991 and it has further increased to 1.1 million in 2001 and in 2011 it stood at 1 million. For the period 1981-1991, there was a steady increase in out-migration and it got double up in the period 1991-2001 (Chyrmang, 2011). Many studies on migration from the North East region (NER) of India concurs that there has been a rapid increase in out-migration since the early 2000s. The number of out-migration has now increased 12 times as compared to last five years (Jeyaseelan & Stephen, 2015). The NSS 64th round shows that about 34 percent of the out-migrants from the North East region send remittances during the last 365 days. Rajan and Chyrmang (2016) found in their field survey that about 46 per cent of the household in North East region use remittances for consumer expenditure or for daily basic requirement. They also

estimated that the total amount of remittances received by the northeastern states during the last 365 days is rupees 9.18 million.

Despite of these remarkable findings on the rapid growth of out-migration from the North East region to other parts of India, an in-depth understanding of out-migration in terms of employment status, income and remittances for different socio-economic characteristics of migrants continue to be major concern.

1.2 OBJECTIVES AND DATA SOURCE

The broad objective of the study is to explore and analyze the nature and implications of out-migration from North East region to the other parts of India. More specifically, it tries to understand the employment status, income and remittances for different socio-economic characteristics of migrants from North East India in Delhi.

From 2011 census data, the number of out-migrants from North East India is estimated in each district of Delhi (NCR) (Table 1). Then, 2 (two) districts were selected out of 9 (Nine) districts of Delhi (NCR) with a probability proportional to size (PPS) sampling with replacement.

Table 1

Districts and Number of out-migrants from North East India

Districts	Number of migrants	Percentage
North-West	4,827	12.72
North	1,196	3.15
North-East	1,036	2.73
East	3,017	7.95
New Delhi	1,138	3
Central	678	1.78
West	4,303	11.34
South-West	11,746	30.96
South	10,000	26.36
Total	37,935	100

Source: Census 2011

Then, 4 (four) clusters namely Safdarjung, Munirka, Kishangarh and Maharani Bagh were selected on the detailed mapping of pockets with the higher concentration of working out-migrants from the North East region and subsequent discussion with some key resource person from the 2 (two) selected districts.² A total of 200 out-migrants working in Delhi (NCR) were selected and surveyed using a structured questionnaires from the selected clusters (Table 2). Out of 200 out-migrants, 50 out-migrants were selected from each cluster.

Table 2

Distribution of Respondents by Gender and Study Areas

Area	Male	Female	Total
Safdarjung	25	25	50
Munirka	25	25	50
Kishangarh	25	25	50
Maharani Bagh	25	25	50
Total	100	100	200

Source: Survey data, 2017 (July-December)

1.3 METHODOLOGY

We have used econometrics model like Ordinary Least Square (OLS) Method and binary logistic regression in order to examine and analyze the determinants of income and remittances of out-migrants from NER in Delhi.

1.3.1 Ordinary Least Squares (OLS)

Ordinary Least Squares (OLS) is a method for estimating the unknown parameters in a linear regression model. This method minimizes the sum of squared vertical distances between the observed responses in the dataset and the responses predicted by the linear approximation.

² Since data on north East migrant population is not available for different clusters in Delhi (NCR) a systematic sampling is not possible. So, I will be using an alternative method to overcome this shortcoming by consulting the various North East organizations such as student unions, states representative of north East state, NGOs (My Home India) and Special Police Unit for North East Region (SPUNER). The key information derive from these organizations will be used to locate the clusters in term of its size and composition.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + \mu_n$$

Where α is intercept of regression, β_i is the coefficient of the regression, Y is an dependent variable, X_i is the explanatory variables, μ_n is the error term.

Tuyen (2015) uses Ordinary Least Square (OLS) methods to estimate the relationship between household per capita incomes and other socio-economic characteristics among the ethnic minorities in the Northwest Mountains of Vietnam. Similarly, as the dependent variable (income per month of the out-migrants) is a continuous variable we used ordinary least squares (OLS) methods. This regression model is used to analyze relationship between income per month of the out-migrants and various other explanatory variables. For independent variables, we used both continuous (Age of the out-migrants and Duration of the Migration) and categorical variables such as State taken in term of two dummies with Manipur state as the reference category (out-migrant from Nagaland state as 1 and 0 otherwise; out-migrant from other states as 1 and 0 otherwise), religion (taken in term of a dummy with 0 for Christian and 1 for Other religions), gender (taken in the form of a dummy with 0 for males and 1 for females), sector (taken in term of a dummy with 0 for rural and 1 for urban), caste (taken in term of a dummy with 0 for Schedule Tribes and 1 for Others), marital status (taken in term of dummy with 0 for unmarried and 1 for married), types of employment taken in terms of two dummies with private sector as reference category (out-migrants employed in public sector as 1 and 0 otherwise; out-migrants employed as self-employed as 1 and 0 otherwise) and levels of education taken in terms of three dummies with up to secondary level of education as reference category (out-migrants with higher secondary as 1 and 0 otherwise; out-migrants with graduate as 1 and 0 otherwise; out-migrants with post-graduate as 1 and 0 otherwise).

$$\text{Levels of Income (Y)} = \alpha + \beta_1 \text{State (Dummy)} + \beta_2 \text{Religion (Dummy)} + \beta_3 \text{Gender (Dummy)} + \beta_4 \text{Sector (Dummy)} + \beta_5 \text{Caste (Dummy)} + \beta_6 \text{Marital Status (Dummy)} + \beta_7 \text{Age} + \beta_8 \text{Duration of Migration} + \beta_9 \text{Types of Employment (Dummy)} + \beta_{10} \text{Level of Education (Dummy)} + \varepsilon$$

1.3.2 Binary Logistic regression

Logistic regression is useful in prediction of outcome, which are based on values of a set of predictor variables. If the dependent or response variable is binary, like success or failure then only binary logistic regression is employed. Logistic regression calculates the probability of success over the probability of failure. Logistic regression also provides knowledge on the relationships and strengths among the variables.

$$P_i = \text{Prob}\left(Y_i = \frac{1}{X_i}\right) = F(X_i\beta), \forall i = 1 \dots N$$

P_i is the likelihood of individual 'i' to send remittances, Y_i is the endogenous dichotomous variable being '1' if the individual send remittances and '0' if otherwise and F is the distribution function.

Islam et al., (2013) used binary logistic regression to see whether their respondents are migrants or non-migrants. Roman and Vasilescu (2016) also used binary logistic regression to determine the binary outcome that is to identify the socio-demographic factors that influence the decision to migrate. Similarly, in order to assess the remittances that is (whether out-migrants from NER sent or not sent remittances in the last 365 days) we have used binary logistic regression. For the dependent variable, we have a binary variable: (i) Remittances sent and (ii) Remittances not sent. For independent variables, we have used categorical variables such as levels of education taken in terms of three dummies with up to secondary level of education as reference category (out-migrants with higher secondary as 1 and 0 otherwise; out-migrants with graduate as 1 and 0 otherwise; out-migrants with post-graduate as 1 and 0 otherwise), income level taken in term of two dummies with migrant income less than 30,000 rupees per month as reference category (migrant income between 30,000-60,000 per month as 1 and 0 otherwise; migrant income between 60,000 & above per month as 1 and 0 otherwise), the age of out-migrant taken in term of three dummies with age group less than 25 years as reference category (out-migrants age group between 25-30 years as 1 and 0 otherwise; out-migrants age group between 31-35 years as 1 and 0 otherwise; out-migrants age group 36 & above years as 1 and 0 otherwise), sector (taken in term of a dummy with 0 for rural and 1 for urban), caste (taken in term of a dummy with 0 for

Schedule Tribes and 1 for Others), gender (taken in the form of a dummy with 0 for males and 1 for females), religion (taken in term of a dummy with 0 for Christian and 1 for Other religions), marital status (taken in term of dummy with 0 for unmarried and 1 for married), duration of migration taken as three dummies with out-migration before 2005 as reference category (out-migration between 2005-2010 takes value 1 and 0 otherwise; out-migration between 2010-2015 as 1 and 0 otherwise; out-migration between 2015-2017 as 1 and 0 otherwise), household size (taken in term of dummy with 1 for household less than five members and 0 otherwise), types of employment taken in terms of two dummies with private sector as reference category (out-migrants employed in public sector as 1 and 0 otherwise; out-migrants employed as self-employed as 1 and 0 otherwise) and State taken in term of two dummies with Manipur state as the reference category (out-migrant from Nagaland state as 1 and 0 otherwise; out-migrant from other states as 1 and 0 otherwise)

Remittances sent or not sent (Y) = $\alpha + \beta_1$ State (Dummy) + β_2 Religion (Dummy) + β_3 Gender (Dummy) + β_4 Sector (Dummy) + β_5 Household size (Dummy) + β_6 Caste (Dummy) + β_7 Age (Dummy) + β_8 Duration of the migration (Dummy) + β_9 Types of employment (Dummy) + β_{10} Income per month (Dummy) + β_{11} Level of education (Dummy) + ϵ .

1.4 EMPLOYMENT STRUCTURE OF YOUTHS FROM NER AFTER MIGRATION

As per the survey about 173 (86.5%) migrants hold regular salaried jobs (professor, police, lawyer and staff in banks, BPO, airlines, retails employees, staff nurse, doctor, receptionist at restaurant, employed in salon) while 27 (13.5%) were engaged in self-employed (setting up grocery store, indigenous food stall, travel agents and other entrepreneurship). Among migrants who are non-manual regular salaried employees, 147 (73.5) of them are employed in the private sector jobs and only about 26 (13%) migrants are employed in the public sector jobs (Table 3). The higher proportion of migrants in private sector jobs brings in the picture of current neo-liberal regime of development, which had privatized and informalized the job market. In recent years, there is an increasing

proportion of out-migrants employed in regular salaried jobs followed by self-employment irrespective of sex after their migration (Rani, 2012).

Table 3

Distribution of respondents by types of employment

Types of Employment	Number of Migrants	Percentage
Private sector	147	73.5
Public sector	26	13
Self-employed	27	13.5
Total	200	100

Source: Survey data, 2017 (July-December)

It also found that, for different duration of migration, migrants migrated in the period 2010-2015 has the highest percentage (86%) employed in private sector jobs; followed by person migrated between 2015-2017 (74.5 percent) (Table 4). However, for long duration migrants (person migrated before 2010) percentage in private sector jobs is lesser compared to the short duration migrants (person migrated after 2010).

Table 4

Distribution of respondents by Types of Employment and Duration of migration

Duration of migration	Types of Employment			Total
	Private sector	Public sector	Self-employed	
Before 2005	14(48)	5(17)	10(34)	29(100)
2005-2010	28(66.67)	7(16.67)	7(16.67)	42(100)
2010-2015	64(84)	5(6.7)	5(6.7)	74(100)
2015-2017	41(74.5)	9(16)	5(9)	55(100)
Total	147(73.7)	26(13)	27(13.5)	200(100)

Source: Survey data, 2017(July-December); percentage in parentheses

The percentage of long duration migrants (person migrated before 2010) in public sector and self-employment are more in comparison to the short duration migrants (person migrated after 2010). This is due to the fact that many of the migrants from the NER move out to cities to get higher education and continue their stays in cities to access the available public sector jobs. It is also common phenomenon among the migrants that they initially work in the private sector job and in their later stage of migration, they engage in their own start up like opening up of grocery store and other business activities with the savings from the previous job.

Table 5 shows that irrespective of the levels of education, majority of migrants are in the private sector jobs. It is observed that in the public sector migrants with post-graduate degree (28.5 per cent) are more compare to migrants with higher secondary (11.5 per cent) and graduate (12.9 per cent) degree. It is also observed that in the public sector jobs there is no respondent below secondary level. This finding indicates the requirement of a standard level of education to get employed in public sector (mostly formal sector job).

Table 5

Distribution of respondents by Employment status and educational levels

Educational levels	Employment status			Total
	Private sector	Public sector	Self-employed	
Up to Secondary	11(64.7)	0	6(35)	17(100)
Higher Secondary	55(79.7)	8(11.5)	6(8.7)	69(100)
Graduate	70(75)	12(12.9)	11(11.8)	93(100)
Post-Graduate	11(52)	6(28.5)	4(19)	21(100)
Total	147(73.7)	26(13)	27(13.5)	200(100)

Source: Survey data, 2017(July-December); Percentage in parentheses

The above table shows that migrants with secondary (35 per cent) and post-graduate degree (19 per cent) are more in the self-

employed sector as compared to migrants from the other educational levels. The reason behind higher percentage of migrants below secondary level of education in the self-employed category could be attributed to the fact that this category of employment requires no minimum educational qualification unlike in the private and public sectors.

Migrants from NER are found employing in various types of job such as - salon, BPO, cabin crew in airlines, self-employment (setting up grocery store, indigenous food stall, travel agents and other entrepreneurship), receptionist in restaurants, retail job (shopping malls), staff nurse in both government and private hospitals and other salary jobs (professor, police, lawyer and staff in Banks) (Table 6). These are the most common jobs that migrant from North East region of India take up in the cities.

Table 6

Distribution of respondents by types of job and Gender

Types of jobs	Gender		
	Female	Male	Total
Salon	12(75)	4(25)	16(100)
BPO	29(34.5)	55(65.5)	84(100)
Airlines	9(60)	6(40)	15(100)
Self-employed	17(62.9)	10(37)	27(100)
Restaurant	4(57)	3(42.8)	7(100)
Retail job	6(85.7)	1(14)	7(100)
Other salaried employed	11(37.9)	18(62)	29(100)
Hospital (Clinic)	12(80)	3(20)	15(100)
Total	100(50)	100(50)	200(100)

Source: Survey data, 2017(July-December); percentage in parentheses

From the survey data it is observed that female migrants are seen mostly employed in hospitality jobs such as staff nurse, airlines, receptionist at restaurant/hotel and in salon. In contrast, most of

the male are employed in BPO and other regular salaried jobs (professor, police, lawyer and staff in Banks).

Table 7
Distribution of Respondents by Type of Jobs and Marital Status

Types of jobs	Marital status		
	Unmarried	Married	Total
Salon	14(87.5)	2(12.5)	16(100)
Business Process Outsourcing (BPO)	71(84.5)	13(15.4)	84(100)
Airlines	13(86.6)	2(13.4)	15(100)
Self-Employed	10(40.7)	17(59)	27(100)
Restaurant	7(100)	-	7(100)
Retail jobs	5(71.4)	2(28.6)	7(100)
Other salaried job	17(58.6)	12(41)	29(100)
Hospital (Clinic)	10(66.6)	5(33.4)	15(100)
Total	148(74)	52(26)	200(100)

Source: Survey data, 2017(July-December); percentage in the parentheses

Table 7 shows the distribution of respondents for different types of jobs and marital status. It shows that majority of unmarried migrants are employed in salon, BPO, Airlines as cabin crew and flights attendance, receptionist in restaurant, retail jobs such as selling cloths and staff members in malls and staff nurse. In contrast, married migrants are mostly in other salaried jobs (professor, police, lawyer and staff in Banks) and self-employed.

The reason for married migrants engaging in self-employment is mainly because they take care of their children along with their work. In the field survey interaction, many of the self-employed women claims that working in the private sector becomes difficult after marriage.

1.5 MIGRANT'S INCOME DETERMINATION MODEL

Table 8

Distribution of respondents based on socio-economic characteristics

Name of socio-economic and Demographic characteristics	Number of respondents	Percentage (%)
States		
Manipur	135	65.7
Nagaland	35	17.7
Other North East States	30	15
Religion		
Christian	175	87.5
Others	25	12.5
Gender		
Male	100	50
Female	100	50
Sector		
Urban	119	40.5
Rural	81	59.5
Household Size		
Less than 5 members	86	43
5 and above members	114	57
Caste		
Schedule Tribe	178	89
Others	22	11
Age of the out-migrants		
Less than 25 years	64	32
25-30 years	77	38.5
31-35 years	38	19
36 and above years	21	10
Duration of the migration		
Before 2005	29	14.5

2005-2010	42	21
2011-2015	74	37
2015-2017	55	27.5
Types of employment		
Private sector	147	73.5
Public sector	26	13
Self-employed	27	13.5
Income per month		
Less than 30,000 rupees	82	41
Between 30,000-60,000 rupees	81	40.5
60,000 & Above rupees	37	18.5
Levels of education		
Up to secondary	18	8.5
Higher secondary	68	34.5
Graduate	93	46
Post-graduate	21	10

Source: Survey data, 2017(July-December)

Table 8 shows the distribution of respondents based on their socio-economic characteristics. Majority of the migrants holds a secondary or graduate level of education. And majority of the respondents were found to be Christians. Migrants coming from urban areas are more than rural areas. Majority of the migrant households have 5 and above members. Most of the respondents are under the age of 30 years and majority of them belongs to tribal community. It is also observed that the number of short duration migrants (person migrated after 2010) is more than the longer duration migrants (person migrated before 2010).

Table 9 shows the coefficient of linear regression of income per month in rupees for different socio-economic characteristics. As we can see from the table 8, the coefficient of age of the out-migrants is positive and significant which means that, 1(one) year increase in the age of the out-migrants will increase the migrant income per month by 2.2 per cent.

Similarly, the coefficient of duration of out-migration is positive and significant which means that, 1(one) year increase in duration of

migration will increase out-migrants income per month by 3.7 per cent. This could be attributed to the fact that long duration migrants have higher working experience than short duration migrants which increases their bargaining power that have positive impact on their incomes.

Table 9

Coefficients of Linear Regression of Income per month in Rupees for Different Demographic and Socio-economic Characteristic

Explanatory variables		Coefficients
Age of the Out-Migrants		0.022**
State	Manipur@	
	Nagaland	0.138
	Others	0.082
Religion	Christian@	
	Others	-0.066
Types of employment	Private sector@	
	Public sector	0.0671
	Self-employed	0.383**
Gender	Female@	
	Male	0.008
Sector	Urban@	
	Rural	-0.034
Duration of Migration		0.037***
Caste	STs@	
	Others	0.603
Marital Status	Unmarried@	
	Married	0.032

Levels of education	
Up to secondary@	
Higher secondary	0.185
Graduate	0.242*
Post- Graduate	1.23**
Constant = 1.19559	
Total number of observations = 200	R-square = 0.48
** Indicates that the coefficient is significant at the 95% level; * Indicates that the coefficient is significant at the 90% level; and *** Indicates that the coefficient is significant at the 99% level.	

Source: Survey data, 2017(July-December)

The coefficients of the dummy variables are to be interpreted as differential values from the reference category. Taking private sector as a reference category, the coefficient of the self-employed out-migrants is positive and statistically significant. Thus, monthly income is higher for self-employed out-migrants compared to migrants employing in private sector jobs.

Taking secondary level of education as reference category, the coefficients of the out-migrants with graduate and post-graduate degree are positive and significant which means that, the monthly income are higher for migrants with graduate degree and much more for migrants with post-graduate degree compared to migrants with secondary level of education. This could be attributed to the fact that many of the post graduate migrants are employed in public sector and in self-employment where income per month is higher than migrants employed in private sector jobs.

1.6 MIGRANT'S REMITTANCE DETERMINANT MODEL

Binary Logistics Regression was used to analyze whether socio-economic characteristics of migrants influence the likelihood of migrants sending remittances during the last 365 days. We have categorical dependent variable: Whether migrants sent remittances or did not send: (i) Migrants sent remittances and (ii) Migrants did not send remittances.

For independent variables we have used both continuous and categorical variables such as level of education, income level, age, sector, caste, gender, religion, marital status, duration of migration, household size, type of employment and origin states.

Table 10 shows the odd ratios of binary logistic regression. The odd ratios of the dummy variables are to be interpreted as differential values from the reference category. For different states of NER taking Manipur state as a reference category, the odd-ratio for Nagaland is positive, thus, migrants from Nagaland state are more likely to send remittances compared to the migrants from Manipur. Similarly, for the other states taken together (Assam, Mizoram, Sikkim, Arunachal Pradesh and Meghalaya), the odd-ratio is positive and statistically significant thus, migrants from other North East states (Assam, Mizoram, Sikkim, Arunachal Pradesh and Meghalaya) are more likely to send remittances by 4(four) times that of migrants from Manipur.

Table 10

Results of Binary Logistic Regression Analysis Showing Determinant of Remittances sent by Out-migrants during the Last 365 Days

Background characteristic	Odds Ratio
State	
Manipur@	
Nagaland	1.35
Others	4.02**
Religion	
Christian@	
Others	1.03
Gender	
Female@	
Male	1.35
Sector	
Urban@	
Rural	0.794
Total family members of the Migrants	
Less than 5 members@	
5 members & above	2.02**
Caste	
Schedule Tribe (ST)@	
Others	5.62

Age of out-migrants	
Less than 25 years@	
25 - 30 years	0.3454**
31 - 35 years	0.3519**
36& above years	0.5385
Duration of the migration (year of migration)	
Before 2005@	
2005-2010	1.476
2011-2015	1.645
2015-2017	0.7275
Sector in which migrants are employed	
Private sector@	
Public sector	1.155
Self-employed	0.554
Income per month	
Less than 30,000 rupees@	
30,000-60,000 rupees	3.249**
60,000 & above rupees	3.456**
Levels of education	
Upto secondary@	
Higher secondary	0.8307
Graduate	0.5287
Post-Graduate	1.118
Constant 1.345	
N= 200	Pseudo R square = 0.1587
** Indicates that the coefficient is significant at the 95% level; *	
Indicates that the coefficient is significant at the 90% level, and***	
Indicates that the coefficient is significant at the 99% level.	

Source: survey data, 2017 (July-December)

Taking Christian migrants as a reference category, the odd ratio of out-migrants for other religious groups (Hindu, Muslim and others) is positive. Thus we can conclude that migrants from other religious groups are more likely to send remittances than migrants from Christian community. Male migrants are more likely to send remittances than their female counterpart. Also, rural migrants are more likely to send remittances than urban migrants.

Treating small household size migrants (i.e. less than 5 family members) as reference category, the odd ratio for the large household size migrants (i.e. more than 5 family members) is positive and statistically significant. Thus, large household out-migrants are more likely to send remittances compared to migrants from small household. It also found that migrants belonging to other caste groups (taken together) are more likely to send remittances compared to ST migrants.

Treating the age group less than 25 years as reference category, the odd ratio of the age group 25-30 years is positive and statistically significant. Therefore, this age group (25-30 years) is more likely to send remittances than the younger migrants (less than 25 years of age). Similarly, the odd ratio for age group 30-35 years is positive and statistically significant. Thus, migrants of this age group (30-35 years) are more likely to send remittances than younger migrants (less than 25 years of age). Also, migrants aged between 35 and above years are more likely to send remittances compared to the younger migrants (less than 25 years of age).

In terms of duration, migrants who migrated between the years 2005-2010 are more likely to send remittances compared to the long duration migrants (person migrated before 2005). Similarly, migrants who migrated between the years 2010-2017 are more likely to send remittances compared to the long duration migrants (person migrated before 2005).³ This could be attributed to the fact that majority of the long-term migrants spend their earnings on the established household in the city.

Taking migrants having income less than 30,000 rupees per month as the reference category, the odd ratio of migrants in the category of income between 30,000-60,000 rupees per month is positive and statistically significant. Thus, migrants in the income group 30,000-60,000 rupees per month are more likely to send remittances than the migrants having income less than 30,000 rupees per month. Similarly, the odd ratio of the migrants having income of 60,000

³ There is a limitation with binary logistic regression, due to small sample size most of the odd-ratios of explanatory variables such as religion, gender, sector, caste, marital status, duration of migration, types of employment and levels of education are not statistically significant.

rupees and above per month is positive and statistically significant. Thus, the income group of 60,000 rupees and above per month is more likely to send remittances than the migrants with less than 30,000 rupees per month.

1.7 CONCLUSIONS

On examining the migration of North East region, it is found that majority of them are engaged in regular salaried jobs such as professor, police, lawyer and staff in banks, BPO, airlines, retails employees, staff nurse, doctor, receptionist at restaurant, employed in salon. About 73.5 percent are employed in the private sector jobs (BPO, saloon, cabin crew, hotel staff and so on), where there is no proper social security benefit. Only about 13 percent of the respondents were found employed in the public sector (professor, police, lawyer, bank employees, and doctor). The paper reveals that migrants with post-graduate degree are more in public sector jobs as compared to migrants with higher secondary and graduate degree. It is also found that, long duration migrants (person migrated before 2010) are more in public sector and in self-employment compared to short duration migrants (person migrated after 2010). Female migrants are seen mostly engaged in hospitality jobs (staff nurse, airlines, receptionist at restaurant/hotel and in salon). Whereas, male migrants are more in BPO and other regular salaried jobs (professor, police, lawyer and staff in Banks). Majority of unmarried migrants are found employing in salon, BPO, Airlines as cabin crew and flights attendance, receptionist in restaurant, retail jobs such as selling cloths and staff members in malls and staff nurse. Whereas, married migrants are mostly seen in other salaried jobs (professor, police, lawyer and staff in Banks) and in self-employment. The reason for married migrants engaging in self-employment is mainly due to the fact they have family responsibilities. In the field survey interaction, many of the self-employed women claims that working in the private sectors becomes difficult after marriage.

The incomes of the migrants are found positively related to the level of education, age and duration of stay in the city. Migrants with graduate and post-graduate level of education earns higher income as compared to other levels of education. This is due to the

fact that many of the graduate and post graduate out-migrants are employed in public sector and in self-employment where income is higher than migrants employed in private sector jobs. Also, out-migrants migrated before the year 2010 earns higher income compared to the recent migrants (migrated after 2010). This could be attributed to the fact that long duration migrants have higher working experience than short duration migrants which increases their bargaining power that have positive impact on their incomes.

It is also found that about 65 percent of the out-migrants send remittances in the last 365 days. It is found that the amount of money send home varies directly with the migrant income per month. It is also observed that compared to the recent migrants (migrated after 2010), long duration out-migrants (migrated before 2010) are less likely to remit money. This could be attributed to the fact that most of the out-migrants who had migrated for longer duration are married and they take care of their child welfare in the cities with their incomes.

The findings indicated towards the absence of social security benefits (health insurance and medical benefits, pension, disability benefits and maternity benefits). Therefore, it requires policy to address the grievances of the out-migrants as majority of them are in the category of "youth" and found employed in informal service sector where social security benefits are not properly regulated.

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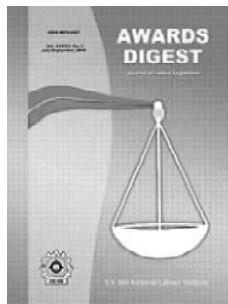
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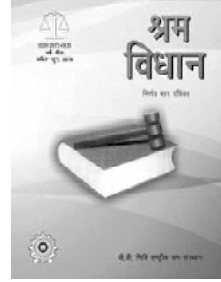
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