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Gender, Skill and Employability in India

Jeemol Unni

jeemol.unni@ahduni.edu.in

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Ahmedabad University, Commerce Six Roads, Navrangpura, Ahmedabad-380009, Gujarat, INDIA
Email: workingpaper@ahduni.edu.in



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Author: Jeemol Unni

School/Address: Amrut Mody School of Management, Ahmedabad University, GICT Building, Central Campus, Navrangpura, Ahmedabad 380009, Gujarat, India

Email: jeemol.unni@ahduni.edu.in

Abstract (150 words, Font 12):

The growing skill mismatch questions the benefits of India's 'demographic dividend'. To tackle this challenge the Prime Minister's Council for Skill Development set up a manpower target of 500 million skilled workers by 2022. Recently the government abandoned this supply driven target and announced that skill training will be demand driven. What prompted this policy change? Can one incentivize a demand-driven strategy? We argue that if students and workers see the benefits of education and training they would be willing to invest in themselves. Further, if most enterprises see the benefits of conducting training for their employees, there will be no poaching across enterprises. The enterprises will be able to reap the benefits of their investment and would be willing to undertake on-the-job training activities. A demand-driven incentive structure can replace the supply driven approach and help to reduce the skill mismatch and improve employability of workers.

Keywords: Employability, Skill, Education, Gender, Workforce

Gender, Skill and Employability in India

Jeemol Unni

Introduction: India's youth population is expected to peak in 2020¹ with 64 percent in the working age group. This 'demographic dividend' seems to be an advantage due to a growing mismatch between skills-jobs for the wage/salaried workers and education-occupations for all, including the self-employed. With increasing use of technology in manufacturing and service industry, the emerging gaps at the level of tertiary education are a major constraint. To tackle this challenge the Prime Minister's Council for Skill Development had set up a manpower target of 500 million skilled workers by 2022. This target was divided among 20 odd ministries/departments including the National Skill Development Council (Sanghi, 2012). In this context, the recent news that the government is abandoning the supply driven well publicized skill target² and making it demand based, came as a shocker. What is the harsh reality with regard to skills and employability in the labour market that could have led to such an announcement and what are its gender implications?

Level of education: We begin by looking at current status of education and skill training among the youth. There has been a vast improvement in levels of general education among the youth, defined as the age group 15 to 35 years, during the period 2004-05 to 2011-12³. Illiteracy has declined sharply, particularly for women from 32 to 20 percent. For men illiteracy was lower and declined from 17 to 11 percent. Completion rates of secondary and higher secondary schooling rose by nearly 10 percent point for men and women over the period. An encouraging feature is that the gender gap in secondary (about 46 percent for both) and higher secondary schooling (about 37 percent for both) appears to be closing. The gender gap has also closed for graduate education, about 20 percent of youth, though the increase over the period was only of three percentage points.

We note an interesting gender difference between the choice of men and women after schooling and graduation. Women have a slight edge over men in completion of post-graduation, while men are more likely to undertake a diploma/certificate course. Such a gender differential was observed by us in some of our field studies. A rational explanation provided was that the boys, particularly from poorer households, have to enter the labour market early to support the family. Due to restriction on the mobility of girls, they are more likely to be allowed to continue with their education for a little longer, perhaps under the consideration that the educational institution provides a safe environment as well as would be closer home.

Skill Training: India's performance in providing skill training has been dismal. Only about 1 percent of the youth report to be enrolled in any vocational training course in

¹ <http://www.thehindu.com/news/national/india-is-set-to-become-the-youngest-country-by-2020/article4624347.ece> (accessed June 13, 2017).

² <http://www.livemint.com/Politics/mhdopSWAv59UtBaRIJPZQK/Govt-abandons-goal-of-training-500-million-people-in-new-ski.html> (accessed June 13, 2017).

³ Data in the paper are based on author's computation from unit level data of the Employment Unemployment Survey, National Sample Survey Organisation (NSSO), Government of India, for 2004-05 and 2011-12.

2011-12. About 16 percent of male and 9 percent of female youth reported having received some form of formal or informal training. Of course, one can expect that this is grossly underestimated, though it apparently includes hereditary training (nearly 3 percent), that is within the family or from friends and neighbours, and on the job training (nearly 4 percent). Young men receiving on-the-job training is much larger, nearly 6 percent, compared to women (less than 2 percent). The low volume of training, both formal and informal, may reflect the lack of confidence among the employers to be able to retain the workers once trained, due to poaching by other enterprises in the industry. Among employees, the cost and quality of skill training on offer may be a concern.

Table 1: Vocational Training for Youth (15-35 years) by gender, 2011-12

Vocational training	Male	Female	Total
Yes: Receiving formal	1.37	0.86	1.12
Received Formal training	2.79	2.11	2.46
Non-formal Hereditary	3.55	2.06	2.83
Self-learning	2.06	1.42	1.75
On-the-job training	5.95	1.75	3.92
Others	0.41	0.55	0.47
Did not receiving training	83.88	91.26	87.44
Total	100.00	100.00	100.00

Source: Author's computation from unit level data, NSSO, Employment Unemployment Survey, 2011-12

Among those who received formal training, there is a gender difference in the field of training. About 32 percent of the male youth were trained in engineering fields while only about 3 percent of female youth were so in 2011-12. Another male dominated occupation was driving and mechanic (nearly 18 percent). About 26 percent of female youth were trained in textile related activities, which could be weaving, tailoring, embroidery, while less than 2 percent of men were so. About 11 percent of women received training in health and paramedical services, while only 4 percent of men were so. One profession where there was gender equality was in computer trades (nearly 30 percent of youth). The choice of trades may be dictated by social norms, but more likely to be the perceived demand for these activities.

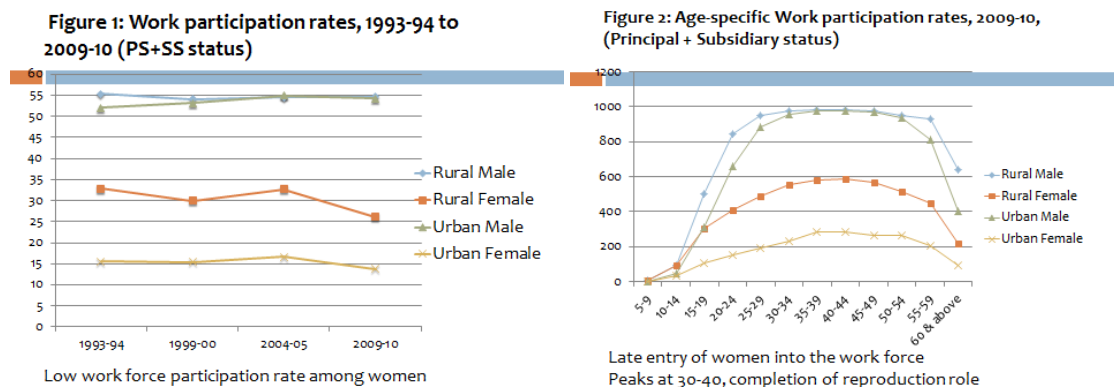
In a survey of households engaged in informal work conducted in Surat city in 2004, we found that more than 80 percent, of the respondents said they received non-formal sources of training (Kantor, et.al, 2006). The salaried workers said they received on-the-job training, which was the predominant source in the informal enterprises in the city. The predominance of such training raises the question of how much of knowledge is retained by the short duration of training. The duration of formal training was nearly five times longer (in days) than informal training. "Starker differences are apparent within activities by gender. Women are clearly unable to access the same length of training as men; their median days are half or less than men's, even among female dominated piece rate workers." In the absence of formal training and considering the cost of training, the informal salaried workers felt that the training was useful and helped them to find better jobs, while the self-employed found it useful to improve their earnings.

Workforce participation: A worrying feature of women's work is the very low participation compared to men. In fact in urban areas work participation is abysmally low at less than 15 percent of the population of all ages This is partly because women face a 'double burden of work', fulfilling both productive and reproductive roles. Further, women's work participation is seen to decline over time, while men's remain stable (Figure 1).

There are various interpretations of this phenomenon, the dominant one being that as the economy prospers, income levels rise and women withdraw from the labour force (Vinoj, A. 2013). However, an alternative view is that women enter the workforce when work is available. That is, women constitute a large part of the flexible workforce becoming available when there is a large demand. For example the dip in the overall work participation of women in rural areas in 1999-00 and 2009-10 was due to poor agricultural years, which is less reflected in the urban work participation (Unni and Raveendran, 2006). Of course, this cannot explain the dismal overall participation.

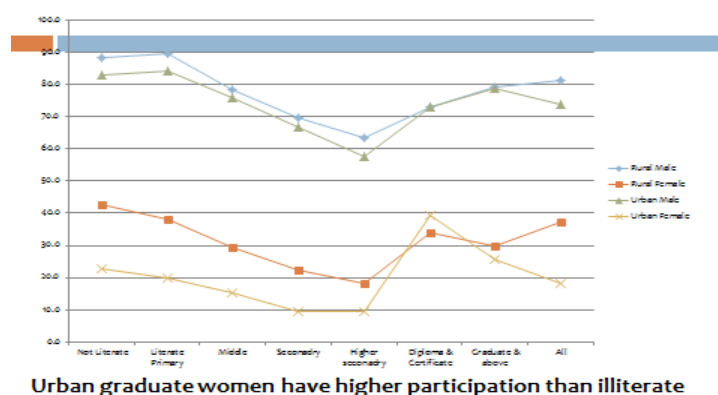
In a randomized control trial (RCT) experiment in villages 50-150 kilometers from Delhi eight Business Process Outsourcing (BPO) recruiters were engaged to hire women for call-centers, a major source of women's employment (Jensen, 2012). Through panel data for three years from this control trail, recruitment from treatment villages and control villages with no recruitment, they found that women's enrollment in education and work participation increased in the treatment villages. Such experiments further confirm our argument that women respond to demand with increased education, training and work participation.

The age-specific work force participation rates clearly show the late entry of women into the labour market, which is partly due to continuation in formal education (as noted earlier) and partly to fulfill her reproductive function (Figure 2). This may accentuate the low level of training imparted to the women employees as the employer would not want to invest if they expected them to leave the job due to various reasons.



Broadly, there is a U-shaped relationship between participation in the labour market and the level of education (Figure 3). The illiterate and least educated men and women have the highest work participation, which mainly implies that they need to work in order for the family to survive. As the level of education goes up participation declines as people remain in school, till higher secondary level, after which the entry into the work force rose sharply. Persons with diploma or certificate education and the graduates have higher participation rates than those who only finished school.

Figure 3: Education-specific worker population ratio, 15+ years, 2009-10



Urban graduate women have higher participation than illiterate

The mean/average years of education of youth, both men and women, in urban areas has improved over time among the wage and self-employed workers. Women in formal jobs, had the highest mean years of education at nearly 10 years, compared to men with 8.7 years in 2011-12. Women in informal jobs also had higher mean years of education (8.2 years) compared to men (6.1 years) (Table 2). The same was true for women in regular and casual jobs. This reflects the point noted earlier that girls are more likely to continue in the formal education system after they have crossed the threshold of schooling, while boys opt for vocational training or enter the labour market. The implication for policy is that if girls, or parents of girls, can be coaxed into letting them finish school their chances of entering and completing graduation is greater. This is addressed to some extent in programmes such as the Balika Cycle Yojana in Bihar⁴ and the Ladli scheme in Delhi⁵.

Table 2: Mean Years of Education of Formal-Informal and Regular-Casual Youth by Class and Gender, 2004-05 and 2011-12

	Male		Female	
	15-20	21-35	15-20	21-35
2004-05				
Formal	6.22	7.67	5.78	8.49
Informal	4.98	6.0	5.43	7.3
2011-12				
Formal	6.82	8.69	6.5	9.87
Informal	5.18	6.11	5.96	8.18
2004-05				
Regular_Salaried	5.31	7.01	5.77	8.1
Casual_Work	4.8	5.18	4.92	5.51
2011-12				
Regular_Salaried	5.57	7.43	6.2	9.19
Casual_Work	4.83	5.23	5.3	5.46

Source: Author's computation from unit level data, NSSO, Employment Unemployment Survey, 2004-05 and 2011-12

Self-employed workers experienced an improvement in the mean years of education over the period. The phenomenon of women being slightly better educated than men, was true

⁴ <http://www.pradhanmantriyojana.co.in/mukhyamantri-balika-cycle-bihar/> (Accessed on June 21, 2017)

⁵ http://delhi.gov.in/wps/wcm/connect/doit_wcd/wcd/Home/Delhi+Ladli+Scheme/ (Accessed on June 21, 2017)

for all three categories of self-employed workers, own account work (without hiring labour), employers (who hire workers) and participating family members (Table 3). Since self-employment can vary from street vending to professional software consultancy we looked at the mean years of education by class. Class was defined around the median value of monthly per capita consumption expenditure (MPCE) of the household⁶. As expected, the mean years of education rose with the expenditure class, the upper most class of self-employed workers having double or more years of education than the lowest class. The upper middle class women have overtaken the men in mean years of education in 2011-12 compared to 2004-05. This unfortunately does not translate into higher work participation of these upper class urban women. To that extent the country is losing a great potential of its ‘demographic dividend’.

Table 3: Mean Years of Education of Self Employed by Class and Gender, 2004-05 and 2011-12

Age 15+	Male				Female			
	Lower Class	Lower Middle	Upper Middle	Upper Class	Lower Class	Lower Middle	Upper Middle	Upper Class
2004-05								
Own Account	4.1	6.1	9.0	11.6	2.7	4.3	7.1	11.4
Employer	5.0	8.2	9.6	12.3	10.3	5.9	9.9	11.7
Family Worker	5.6	7.6	10.1	11.7	2.0	3.9	6.4	10.5
2011-12								
Own Account	5.7	7.7	9.5	12.1	3.3	5.5	7.7	12.8
Employer	8.3	8.8	11.0	12.7	-	9.8	15.5	14.9
Family Worker	7.5	9.4	11.0	13.3	3.4	4.9	7.9	11.6

Note: Lower class-75% of median monthly per capita consumption expenditure (MPCE); Lower middle-above lower class till median of MPCE; Upper middle-median to 125% of median; Upper class-above 125% of median.

Source: Author's computation from unit level data, NSSO, Employment Unemployment Survey, 2004-05 and 2011-12

Where are these men and women absorbed in the workforce? What kind of work do they do? The changing occupational distribution of work among the youth tells us an interesting story. Men are mainly in senior management, service and marketing, crafts and elementary occupation (manual labour). In all these areas their share has also increased over the period till 2011-12 (Table 4). Women are professionals (including in health and education), technicians and associated professionals, services and marketing, crafts and elementary occupations. And the share in all these occupations, except service and marketing, has increased. Elementary occupations include a large increase in urban domestic workers (Unni, 2017).

The increase of women in professional and associated occupations explains, to some extent, where the better educated women can and do find work. Crafts are where the textile and other vocational training could and does take them. The predominance of women as technicians and associated professionals and in craft such as textile explains the predominance of training in computer trades, health/paramedical services and textiles noted earlier. Such choice of training can be demand driven as workers perceive an increase in women's participation in these occupations. While there may be a phenomenon

⁶ Lower class-75% of median monthly per capita consumption expenditure (MPCE); Lower middle-above lower class and till median; Upper middle-median to 125% of median; Upper class-above 125% of median.

of withdrawal of women from the workforce due to rise in incomes, increasing level of education and the growing demand from the tertiary sector will hopefully see an increase in participation of women in the future.

Table 4: Distribution by Occupation of Urban Youth (21-35 years) by gender, 2004-05 and 2011-12

	2004-05		2011-12	
	Male	Female	Male	Female
Legislators, Senior officials and Managers	7.50	18.62	13.3	8.7
Professionals	9.65	6.23	7.8	12.5
Technicians and Associate Professionals	16.53	10.07	6.0	11.5
Clerks	12.01	5.07	4.1	5.2
Service workers and Shop and Market Sales	8.56	18.91	17.4	11.5
Agriculture, Fishery Workers	2.28	11.01	4.8	8.9
Craft and related Trades	9.88	18.81	19.9	20.7
Plant and Machine operators and Assembly	11.60	2.43	10.0	1.8
Elementary Occupations	18.46	6.52	16.4	19.1
Not classified	3.52	2.33	0.1	0.1
Total	100.00	100.00	100.0	100.0

Source: Author's computation from unit level data, NSSO, Employment Unemployment Survey, 2004-05 and 2011-12

Skill-mismatch: India today faces a strange phenomenon of skill mismatch. There is high unemployment among the educated and uneducated youth, while the employers say that there is a labour shortage. We can identify two kinds of skill mismatch.

Over-education is a form of skill mismatch when persons are hired for jobs/activities that do not require such high qualifications. For example, a post-graduate in economics is hired as a bus driver. A similar situation can arise when technically qualified persons are hired for non-technical jobs. For example, an engineer is hired as the Director of a marketing firm.

Quality skill-gap is a second form of skill mismatch which occurs when firms hire apparently qualified workers, but complain that the quality/skill is inadequate for such activities. The firms then have to invest significant amount in training of the employees adding to the cost of the firms. For example, graduates in commerce are required to be trained in the accounting procedures of the firm.

Such skill mismatch is costly to the employer and inefficient to the employee. The returns to the investment in education for the worker are lower when there is such an education-occupation mismatch. Studies have shown that workers earn less for working in the informal sector and in particular suffer additional penalty due to educational mismatch when compared with their formal counterparts (Herrera et al. 2015).

Overall, skill building is important to improve the worker's employability in a fast changing labour market. Abandoning the skill training targets by the government of India, given the immensity of the problem, may be a practical move. However, it would be better if the government could create incentive structures for reducing such skill mismatch.

Some suggestions for an incentivized demand driven approach to skill training:

1. Create an incentive system for skill training and technical education institutions that are able to find jobs and place their trainees and students.
2. Create incentives for firms to invest in their workers as on-the-job training is a major method engaged by formal and informal enterprises to train their employees. Rejuvenating the old apprentice scheme which was meant for public sector in a privatized form.
3. Incentivize educational institutions and enterprises that maintain diversity of students and employees. Gender, social and economic diversity will benefit the enterprises, institutions and the country and drive up participation rates.

Conclusion: We argue that if students and workers are able to see the benefits of education and training they would be willing to invest in themselves. Further if most enterprises see the benefits of conducting training for their employees, there will be no poaching across enterprises. The enterprises will be able to reap the benefits of their investment and would be willing to undertake on-the-job training activities. Such a demand-driven incentive structure can replace the supply driven approach and help to reduce the skill mismatch and improve employability of workers. It will also help to raise the work participation rate of women if some of these policies are targeted at them. Of course, all this is based on the premise that there will be high economic growth, which will create an increasing demand for workers.

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