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Research Paper

EDUCATION AND FEMALE WORKFORCE PARTICIPATION IN INDIA

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ABSTRACT

The ongoing radical transformation in India has much to do with education rather than growth; with women rather than men. However, the work force participation of females in India lags considerably behind the “norm”. There exists large difference between the participation rates of females in the rural & urban areas, worst is the case of the latter. In rural areas, the participation rate has hovered around 40-45% and in urban areas it is found to be lower than that. The international norm for female participation in labour force being around 60%, it clearly indicates that even rural India is quite a distance away from “fitting” the worldwide pattern. The situation prevalent hence would not be very dissimilar from that prevailing in most Islamic countries. India is unlikely to realise its “demographic dividend” to the fullest extent unless significant steps are taken to improve the workforce participation of females.

KEYWORDS: education, economic growth, income, manufacturing.

1. INTRODUCTION

The ongoing radical transformation in India has much to do with education rather than growth; with women rather than men. Economic growth is associated with rising female education levels and falling fertility, both of which can be considered to set the favourable pre-conditions for a rising female participation in the labour force. Thus an accelerated pace of female participation is expected given the economic growth of the country. Also, drawing more and more women into the labour force can be a significant source of future growth in the economy. Hence, there is increasing emphasis in development policies on female education as a key intervening variable for the achievement of a number of development goals. Consequently, there have been marked improvements in the field of women education in India. However, a closer look at whether education has made a significant impact on the workforce participation of the other half of the demographic dividend leads to shocking revelations.

2. LITERATURE REVIEW

While rising education and declining fertility both generate conditions that theoretically imply an increase in female labour supply, in practice, data often fail to confirm these expectations (Becker, 1993). Often, it has been contended that education in India is associated with lower rather than higher work force participation rates. Several studies suggest that ceteris paribus, labour force participation of women declines with education (Kingdon and Unni, 1997; Fafchamps and Quisumbing, 1999; Das and Desai, 2003).

A stream of literature suggests that there is an unconditional U-shaped relationship between women’s participation and women’s education (SS Bhalla & R. Kaur; Pieters & Klassen). This pattern arises because at low levels of income and education, survival instincts dictate the work decisions of women and higher levels the family pride, honour and status comes in the way of taking such decisions.



Another hypothesis forwarded in this regard conveys that the U-curve is the outcome of a combination of structural change in the economy, income effects, and social stigma against factory work by women. In initial stages of development, education levels rise and employment shifts from agriculture to manufacturing. However, in these initial stages, education increases much more for men than for women. Women's wages and opportunities for work change relatively slowly. Participation is further reduced because of social stigma against women working outside of the home as these are particularly strong in case of married women. Later on, women's education rises further, higher wages and socially acceptable types of work, and an erosion of a social stigma against female employment, lead to higher female labour force participation. (Goldin, 1994; Mammen and Paxson, 2000).

3. OBJECTIVES

An attempt to identify the factors operating behind the apparently inverse relationship between education and female workforce participation has been made with the help of a simple regression followed by a descriptive analysis of the education specific employment trends. The objectives of this study are:

- To analyze the impact of education on female work-force.
- To study the education specific trends of female employment in rural as well as urban areas over different NSSO rounds in post-reform period.
- To assess the quality of employment of females through a look at the category-wise trends and also with respect to broad industry division.

4. DATA & METHODOLOGY

- The data used here is taken from NSS 66th ROUND REPORT (July 2009 – June 2010): 'Employment and Unemployment Situation in India'.
- A regression is run with female WPR as the dependent variable for 27 states for both rural and urban areas amounting to a total of 54 observations.
- The independent variables taken are average household size, no. of female headed households and literacy rate (crude measure to capture impact of education on female WPRs). Also, an area dummy has been introduced to capture any significant variation. The *regression equation* can be stated as:

$$FWPR = \alpha + \beta_1 \text{ avg. hhsz} + \beta_2 \text{ fhhd} + \beta_3 \text{ filtrate} + \text{YD}$$

Here,

FWPR = female workforce participation rate;

Avg.hhsz = average household size;

Fhhd = no. of female headed households;

Filtrate = female literacy rate;

D = area dummy (= 0; rural)

(= 1; urban)

5. RESULTS AND ANALYSIS

The regression results are given in the table as follows:

	Coefficients	S.E.	t-values
Avg. hhd. sz	-74.07192	42.35851	-1.75
No. of f.hhds	1.254144	0.4241112	2.96**
Literacy rate	-9.161791	2.56122	-3.58***
Area dummy	73.81274	48.70692	1.52
F=4.99 Prob>F=0.0019 R sq.=0.2896 Adj.R-sq=0.2316			

The only significant variables in our regression exercise are the no. of female headed households, significant at 5% level of significance and literacy rate, significant at 1% level of significance.

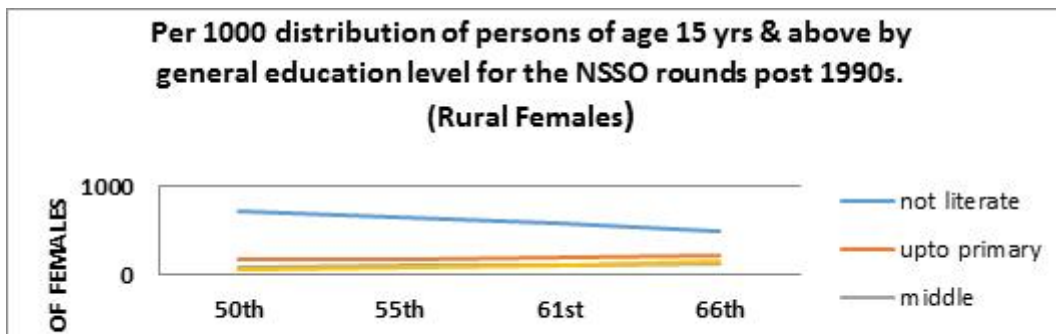
The results are quite in conformation to the available literature as the literacy rate, taken here as a

crude measure for education, bears a negative coefficient reflecting the negative relation between education and female workforce participation rate. On the other hand, the no. of female headed households is having a positive coefficient which is again quite obvious because unmarried, divorcees and widows are more likely to

participate in labour force. The inverse relationship between education and female workforce participation can be further analysed with the help of trends in female education as well as female workforce participation over

different NSSO rounds for rural as well as urban areas. Let us have a look at the per thousand distribution of females in the working age group by general education level:

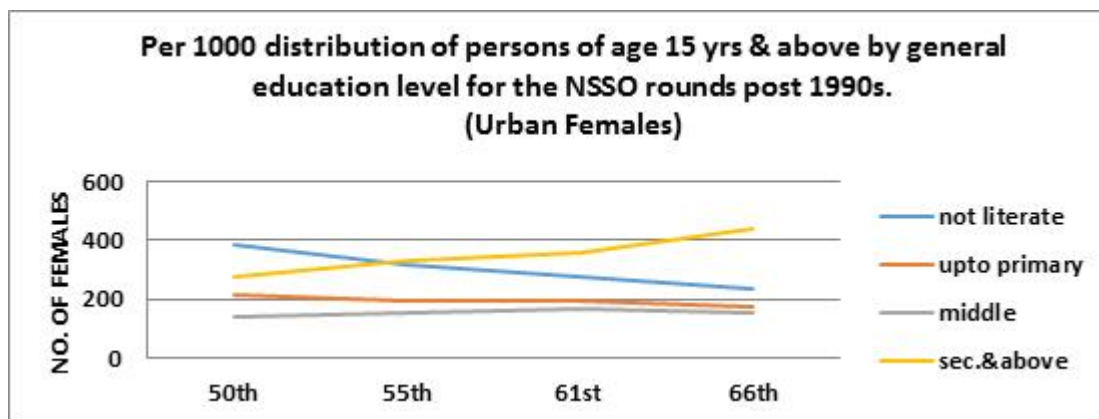
Fig:1



In rural areas, the no. of illiterates lies much above the no. of females belonging to different education-specific categories. Though a consistent decline can be observed in the no. of illiterates over the

NSSO rounds accompanied by a slow increasing trend in the educated groups, still the no. of illiterates exceed the no. of educated females and the gap persists.

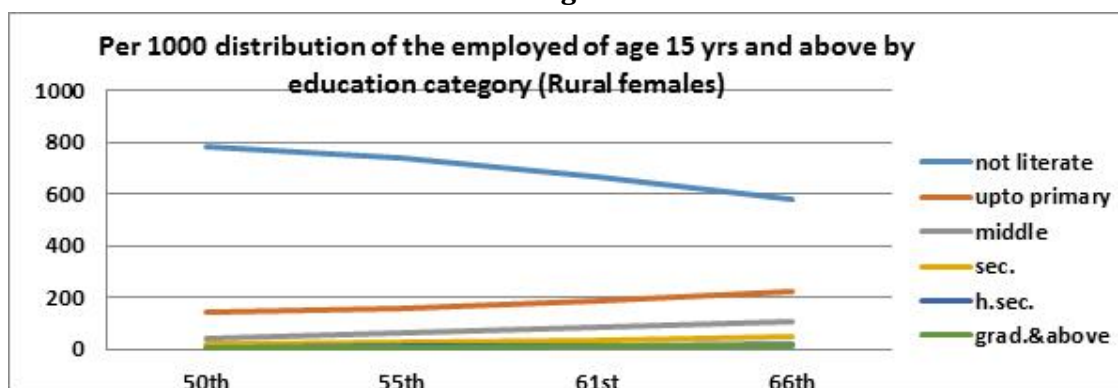
Fig:2



In urban areas, there is a sharper decline in the no. of illiterates and an impressive increase in females belonging to higher education levels i.e. secondary education and above. This would automatically imply a greater demand for white collared and salaried jobs in urban areas by this educated lot of females.

Now, let us have a look at *the education level specific employment status of the females* for the different rounds for all those in the working age group i.e. 15 years and above.

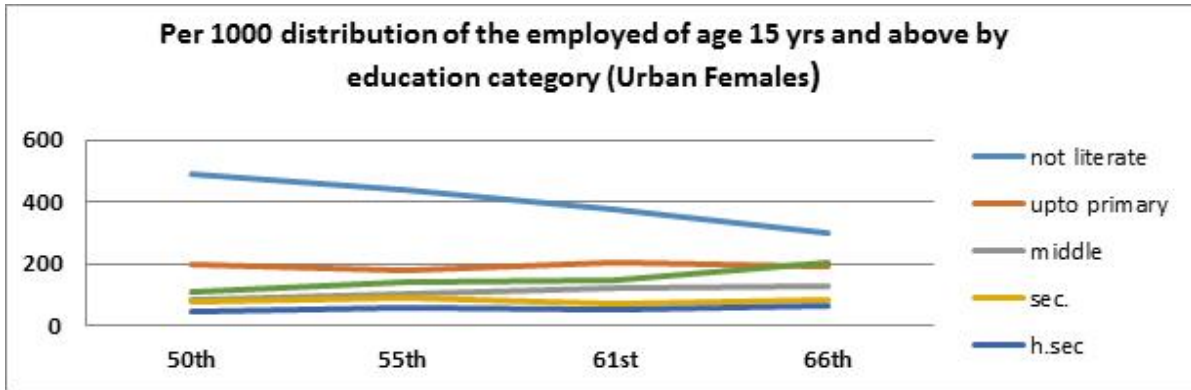
Fig:3



In the rural areas, it is observed that illiterates constitute the most employed class and educated employed are a limited no. compared to the illiterates. This might be because in rural areas, women tend to be mostly employed in the agricultural sector and such

activities do not demand any skill or education requirements. On the other hand, the educated lot do not intend to indulge in such strenuous work and hence remain out of workforce.

Fig:4



Even in urban areas, the no. of employed is highest in case of illiterates for all the NSSO rounds taken here. However, this no. of employed among females has shown a decline in case of illiterates and a slight rise among the educated categories over the years. This data is well reflective of the shift in employment structure in urban areas.

To analyse the impact of education on work participation rates of females belonging to different education categories, we take a look at the trends of education specific worker-population ratio in urban as well as rural areas for the four NSSO rounds.

Fig:5

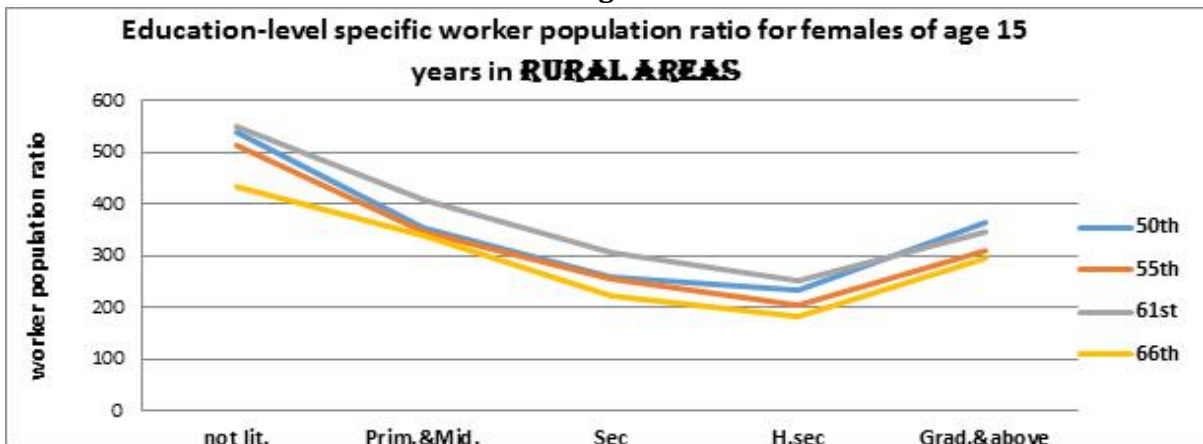
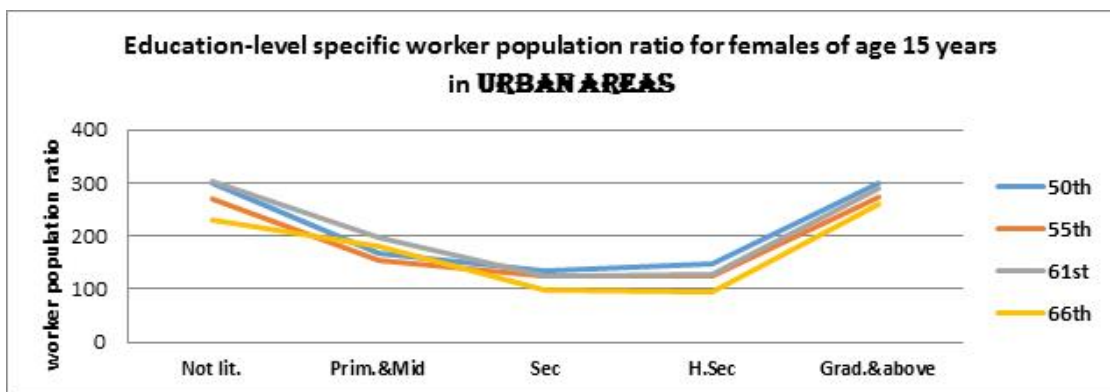


Fig:6



These trends reveal the much discussed U-shaped relationship between education and female WPRs. As can be seen from the graphs of urban as well as rural areas, the WPR is highest for the illiterate category and as education increases, the WPR declines. This fall in WPR continues till it reaches a minimum at the higher secondary level, and then shows a steep rise in WPR for females belonging to higher education levels i.e. graduation and above.

Whereas in the earlier literatures that mentioned about this U-shaped relationship, the lowest WPRs corresponded to the primary and middle schooling categories, now it is seen to have shifted in a way that the lowest WPRs is among those belonging to secondary and higher secondary education categories.

The following arguments can be forwarded as an explanation to this type of behaviour of the trends:

- % At low education levels, female WPRs are driven by necessity dictated by survival instincts. These women, generally belonging to the poor section, are forced to join the labour force due to distress and most of the time to meet the *‘reservation wage requirements’* of the household.
- % Literatures suggest that *‘Income Effects’* strongly affect female workforce participation rates:
 - I. Women’s decision to work is negatively related to the income and employment of other household members. This can be referred to as the *‘negative unearned income effect’*.

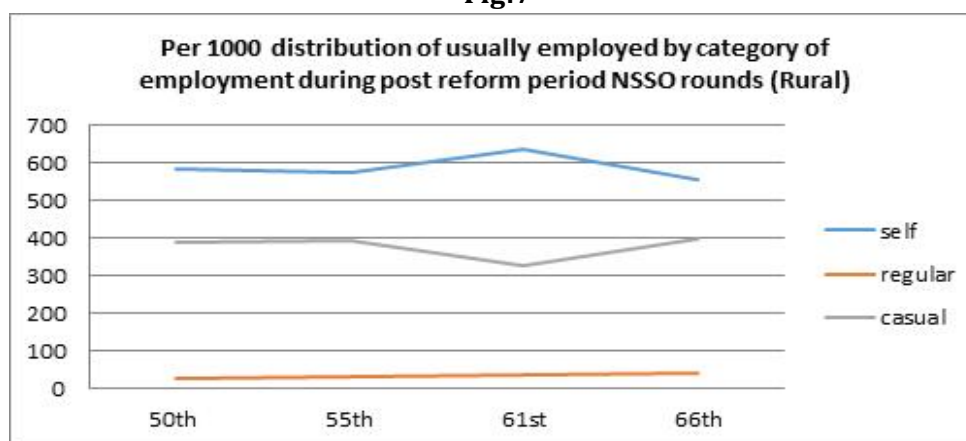
- II. The *‘positive own wage effect’* applies only in case of highly educated women, who are attracted to the labour market by higher expected earnings.

The decline in WPRs as education increases can be partly explained by the fact that educated women are more likely to get married to men with higher incomes and hence are restrained from participating in the labour market. *Only at very high levels of education, does their positive own wage effect dominates over the negative unearned income effect and as a result a steep rise in WPRs is observed.*

However, for the low educated group of females, the unearned income effect works as a push factor, while own earning potential plays no role. The recent rise in participation rates among these females reflects that push factors dominate the decisions of poorly educated women to work. Data also reveals that while for a part of the highly educated, there seems to exist only limited attractive employment opportunities in private and public services, the poorly educated increasingly work as domestic servants thereby constituting a very vulnerable group with low earnings and little security. Despite India’s economic boom, it appears that for all but the very well educated, the labour market conditions for women have not improved yet.

The following charts show the distribution women across different categories of employment:

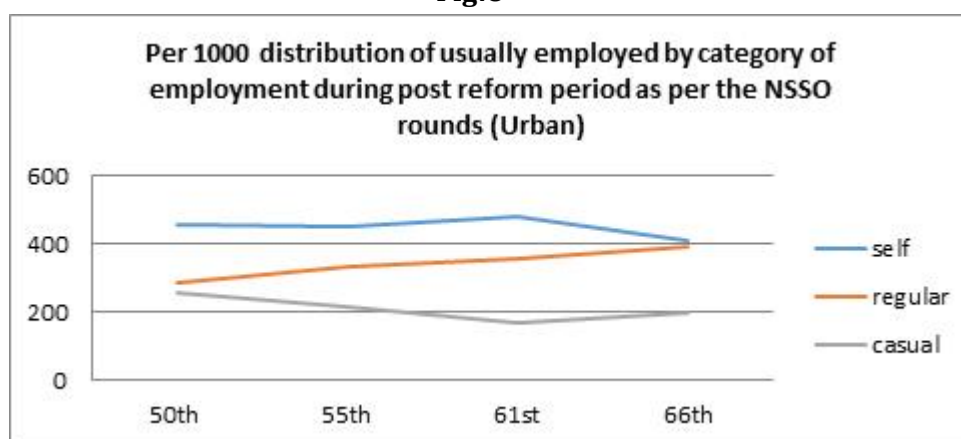
Fig:7



This clearly shows that most of the rural women are working as self-employed followed by casual labours and the proportion employed as regular employees is very less. This implies the increasing participation of women in low earning and insecure jobs.

A similar situation can be seen even in the urban areas only a slight variation i.e., a greater no. of urban females are found to be regularly employed compared to casual labours.

Fig:8



Also, if we compare the pattern over the different NSSO rounds, urban areas show an impressive increase in the no. of regular employed women accompanied by a decrease in the no. of self-employed.

6. CONCLUSION

The overall picture emerging from the above study suggests that education seems to show different impacts on the workforce participation of females belonging to high and low education groups. Hence, there exists an unconditional U-shaped relationship between education and female work force participation rates revealing the negative effect of education on workforce participation of females of the low education groups.

The unemployment trends reflect that the unemployment of highest order is found in highly educated women showing their preference for highly paid white-collar jobs, which is scarce compared to its overwhelming demands. Also, among those working, an increasing participation is found in agriculture & manufacturing, self-employment & in domestic services, which are often poorly paid and highly insecure jobs. Hence, it remains debatable whether increased participation in low paying and informal jobs should be seen as an improvement over non-participation.

The current situation, therefore, calls for structural adjustments to be made in a direction so as to accommodate the overwhelming preference for formal sector jobs among the educated women. More efforts should be put in to draw more and more of these women into the labour force for future growth of the economy or else the realisation of our so called 'demographic dividend' would be a distant dream.

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