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**MISSING LABOUR FORCE OR
'DE-FEMINIZATION' OF LABOUR
FORCE IN INDIA ?**

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ABSTRACT

Reported as 'Missing labour force in India' the recent fluctuations in the labour participation are probably due to the short-term shifts in activities of women responding to favorable economic conditions. Such fluctuations need to be placed in the context of structural change in labour participation wherein the share of women in labour force, as well as labour participation rate of women had been declining for the last quarter of a century; while women had been increasingly confined to unpaid household domestic activities with improvement in economic well being of the household. Apparently, the gendered division of household labour, stigma attached to paid labour and status production has precipitated withdrawal from paid work as a strategy to reduce the double burden of women. Upward social mobility in the Indian patriarchal society in the wake of growing incomes is probably symbolized by women's withdrawal from paid labour. Female participation in school education has increased substantially, yet women's withdrawal from the labour market is positively associated with levels of education. This may indicate that patriarchal norms are probably modernized, internalized and mediated through women themselves. It also signals discouraged worker effect probably attributable to gender discrimination in the labour market and gendered progression in education. Even under such adverse conditions employment growth of women is not stagnant. Those who do enter and remain in the labour market are women from the most vulnerable households, as marginalized informal paid labour, thus feminizing the most precarious forms of labour in the country.

Key words: De-feminization; labour force participation; domestication; India;

JEL Classification: J01, J16, J21

Introduction

The decline in female labour force participation has been identified as the single most important component that accounted for the decline in aggregate labour force during the period 2004-05 to 2009-10 (Chandrasekhar and Ghosh, 2011; Chowdhury, 2011; Neff et;al, 2012; Kannan and Reveendran, 2012, Rangarajan et.al, 2011). Further, while some have portrayed this decline as a positive effect caused mainly due to rising participation in education among young females (Rangarajan et.al; 2011) others have been pessimistic, claiming it to be crowding-out of women labour in the face of agricultural stagnation and slow down of economic growth (Kannan and Raveendran, 2012). A third argument put forward is that this decline may be the reversal of an exceptional increase in distress-driven female labour force participation during the earlier period 1999-2000 to 2004-05 (Abraham, 2009, Himanshu, 2011). To appreciate such short-term changes in female labour participation it may be necessary to view such fluctuations from a gender perspective of the economic development process.

Very low and yet declining female labour participation rate (LFPR) has been the persistent long term structural trend in India at least since 1972-73. What arguments explain this long term trend of declining female LFPR? An exploration of the phenomenon of this persistent decline in female labour force participation rates in India is attempted in this paper.

The reports and unit level records of various rounds of the National Sample Survey on employment and unemployment in India published

by the Central Statistical Organisation, India are utilised to do the analysis. For the analysis the period chosen is a long span of more than quarter of a century, from 1983 to 2009-10, the period for which unit records are available. Interpolated population projections using compound annual growth rates, from the Census of India were used to arrive at Labour force after estimating them separately for sectoral and sex categories.

The paper is organised in the following format. After the introduction the second part takes a re-look at the case of the missing labour force followed by the analytical context of the paper. The fourth section examines the empirical dimensions of de-feminization of labour force in India. The fifth section analyses the participation of women in unpaid domestic activities and next section looks into the role of education in women's labour participation. The seventh section, by way of implication of withdrawal, looks into the casualisation and marginalisation of female work force. The last section offers broad conclusions of the study.

2. A Re-look at the Case of the Missing Labour Force

The growth rate in India's total labour force had declined substantially from 2.88 percent during 1999-2000 to 2004-05 to 0.14 percent during 2004-05 to 2009-10, using the Usual Principal and Subsidiary Status (UPSS) measure (Table 1). The total labour force had marginally increased from 466.6 million to 469.6 million as per the UPSS measure during this period.

However, the labour force and the Labour force participation rate (LFPR) declined for females and urban males during 2004-05 to 2009-10. This decline was termed as the 'missing labour force' in recent literature (Kannan and Reveendran, 2012, Rangarajan et.al, 2011) . The LFPR declined from 25 percent to 20.8 percent for rural females and from 14.9 percent to 12.8 percent for urban females during 2004-05 to

2009-10 (Table 2). This represented a decline from 151.9 million (UPSS measure) to 130.9 million during 2004-05 to 2009-10, at growth rate of -2.94 percent even while the male participation increased from 314.7 million to 339.1 million (Table 1). The decline was much larger in case of rural females from 125.2 million to 105.5 million during the same period, a decline of 19.7 million labour market participants¹.

But this decline in the female labour force and female LFPR had occurred immediately following a period of exceptional rise in female labour participation. During the period 1999-2000 to 2004-05 the rural female labour force had increased by 18.9 million and the urban female labour force had increased by 7.6 million, both being the highest increment in labour force between two NSS rounds. For urban males too we find this rise in 2004-05 followed by a decline in 2009-10. Also it is noteworthy that when, for the rural males there had been no particular rise in LFPR during 1999-2000 to 2004-05, there was no unusual decline during 2004-05 to 2009-10, but only a regular increase for this segment.

Studies have argued that the rise in LFPR during the period 1999-2000 to 2004-05 has been due to the distress driven work seeking behavior, especially among women (Abraham 2009, Himanshu 2011) creating a negative income effect on labour participation among households (Daniel et.al, 2012; Klasen and Pieters, 2012). With the rise in incomes the entire rural female labour that had added during the previous period, 1999-2000 to 2004-05 seems to have withdrawn from the labour force, the decrement in the second period (2004-05 to 2009-10), 19.4 million, being almost as equal to the increment in the previous period, 18.9 million.

1. The LFPR of urban males also declined marginally from 56.6 percent to 55.6 percent during the same period.

Table 1: Labour Force Participation (in millions) and Growth Rate (in percent)

| | Rural Male | | Rural Female | | Urban Male | | Urban Female | | Total | |
|-----------------------------|------------|-------|--------------|-------|------------|-------|--------------|-------|-------|-------|
| | PS | PSSS | PS | PSSS | PS | PSSS | PS | PSSS | PS | PSSS |
| Labour force in millions | | | | | | | | | | |
| 1983 | 150.7 | 154.8 | 66.7 | 90.5 | 47.8 | 48.6 | 10.2 | 12.6 | 275.4 | 306.6 |
| 1987-88 | 161.6 | 166.8 | 72.7 | 94.8 | 54.5 | 55.1 | 11.8 | 14.9 | 300.7 | 331.5 |
| 1993-94 | 185.5 | 189.6 | 75.3 | 105.1 | 66.6 | 66.7 | 14.5 | 18.2 | 342.0 | 379.6 |
| 1999-00 | 198.5 | 201.2 | 82.7 | 106.3 | 77.9 | 78.3 | 16.4 | 19.1 | 375.5 | 404.9 |
| 2004-05 | 216.9 | 220.4 | 94.0 | 125.2 | 93.5 | 94.3 | 22.4 | 26.7 | 426.6 | 466.6 |
| 2009-10 | 230.4 | 233.7 | 82.8 | 105.5 | 104.8 | 105.3 | 22.2 | 25.4 | 440.2 | 469.9 |
| Compound Annual Growth Rate | | | | | | | | | | |
| 1983 to 93-94 | 2.10 | 2.05 | 1.22 | 1.51 | 3.37 | 3.22 | 3.55 | 3.70 | 2.19 | 2.16 |
| 93-94 to 09-10 | 1.09 | 1.05 | 0.48 | 0.02 | 2.29 | 2.31 | 2.15 | 1.69 | 1.27 | 1.07 |
| 93-94 to 99-00 | 1.14 | 0.99 | 1.58 | 0.18 | 2.65 | 0.81 | 0.60 | 0.25 | 1.57 | 1.08 |
| 99-00 to 04-05 | 1.78 | 1.85 | 2.59 | 3.32 | 3.71 | 3.77 | 6.43 | 6.94 | 2.58 | 2.88 |
| 04-05 to 09-10 | 1.22 | 1.18 | -2.50 | -3.36 | 2.31 | 2.24 | -0.11 | -1.03 | 0.63 | 0.14 |
| 99-00 to 09-10 | 1.50 | 1.51 | 0.01 | -0.08 | 3.01 | 3.00 | 3.11 | 2.88 | 1.60 | 1.50 |

Source: Estimated from LFPR reported in various NSS reports on *Employment and Unemployment Situation in India* and *Census of India*, various years.

Table 2: Labour Force Participation Rates from the NSS (in percent)

| | Rural Male | | Rural Female | | Urban Male | | Urban Female | |
|---------|------------|------|--------------|------|------------|------|--------------|------|
| | PS | PSSS | PS | PSSS | PS | PSSS | PS | PSSS |
| 1972-73 | 55.2 | | 32 | | 52.6 | | 14.3 | |
| 1977-78 | 54.9 | 55.9 | 26.2 | 33.8 | 53.2 | 53.7 | 15 | 17.8 |
| 1983 | 54 | 55.5 | 25.2 | 34.2 | 53.1 | 54 | 12.9 | 15.9 |
| 1987-88 | 53.2 | 54.9 | 25.4 | 33.1 | 52.8 | 53.4 | 12.9 | 16.2 |
| 1993-94 | 54.9 | 56.1 | 23.7 | 33.1 | 54.2 | 54.3 | 13.2 | 16.5 |
| 1999-00 | 53.3 | 54 | 23.5 | 30.2 | 53.9 | 54.2 | 12.6 | 14.7 |
| 2004-05 | 54.6 | 55.5 | 25 | 33.3 | 56.6 | 57.1 | 14.9 | 17.8 |
| 2009-10 | 54.8 | 55.6 | 20.8 | 26.5 | 55.6 | 55.9 | 12.8 | 14.6 |

Source: NSS Reports on Employment and Unemployment Situation in India.

The growth rate of agriculture sector during 1995-96 to 2004-05 was 2.30 percent per annum, the lowest rate since the ushering in of green revolution, the rate picked up during the period 2004-05 to 2010-11 to 3.31 percent per annum (Chand and Parappurathu, 2012). While the real wages growth during 1999-2000 to 2004-05 stagnated in both rural and urban areas, (Abraham, 2007) during 2004-05 to 2009-10 real wages grew at very high rates (Thomas, 2012). Along with this tightening of labour market due to rising demand for education, livelihood diversification and most importantly, public employment programmes (Himanshu 2011, Kannan and Reveendran 2012 and Thomas 2012) probably improved the economic conditions and in turn encouraged withdrawal of women from the labour force.

In fact, analysis of a longer period shows that the decline in LFPR for the rural and urban females during 2004-05 to 2009-10 is in line with the long- term trend path, rather than breaking away from the trend. The rural female LFPR (PS) had been declining by and large continuously since the first quinquennial survey in 1972-73 from 32 percent to 20.8 percent in 2009-10 except for the distress affected year 2004-05 (Table 2). For urban female the LFPR (PS) had been stagnant in the extremely low and narrow range of 12.6 percent and 13.2 percent for nearly three decades starting from 1983, again, except for the year 2004-05 when it jumped to 14.9 percent, and since then have returned to levels within its long term equilibrium range at 12.8 percent. Using the UPSS measures for the rural and urban females also bring out similar trends. Thus withdrawal of females from labour force, namely, defeminization of the labour force; seems to be the long term consistent structural trend while occasional spurts in female labour participation, as described earlier, is a subsistence strategy of joint utility maximizing households under distress conditions. It is to this persistent defeminization of labour force that we turn to now.

3. Analytical Background

Decline in female labour force participation rates in the course of economic development has been theorised on diverse frameworks of neo-classical feminist arguments that predict efficient division of labour, socialist-feminist arguments highlighting exploitation of women labour and marginalization of women through housewifization and cultural theories that explain this as efforts towards upward social mobility in patriarchal societies.

The most celebrated theoretical proposition that links women's labour force participation with economic development, the U-shaped feminization hypothesis, argue that at initial stages of economic development women withdraw from the labour force and thereafter beyond a minimum threshold the participation rates of women in labour force starts rising (Sinha, 1967, Durand 1975, Goldin 1995, Mammen and Paxson 2000). The U-shaped curve takes this form owing to the substitution effect and income effect on women's choice between domestic unpaid work and paid work. At initial stages of development women contribute labour towards subsistence agricultural production as unpaid family labour. With the rise of commercialised agriculture, structural transformation of economies, sectoral specialisation and division of labour, unpaid family labour acts as a barrier to productivity and output growth. Hence wage labour replaces unpaid labour as the predominant form of labour. Unpaid family labour of women is also discouraged due to emergence of gender based wage differentials related to productivity differentials and rising opportunity cost of domestic activities. The withdrawal of women accentuate with the deepening of market based relations in labour and sectoral specialization. The sectoral specialisation into manufacturing sector, especially, discourage women from entering the labour force due to skill mismatches from lower educational attainment among women and the binding nature of time and space for work in

manufacturing sector (Goldin, 1995). Thus with rising level of income associated with productivity growth in the manufacturing sector women tend to withdraw from the labour force, termed as the 'income effect'. However, with the rise of services sector white collar jobs, child care support and other services that support domestic activities, expansion of education among women, rising absolute wages and declining wage differentials with males they 'substitute' domestic activities for paid work and hence tend to reenter the labour market, called the 'substitution effect'. Evidences of such a U-shaped female participation pattern have been verified in many studies. In her influential work Goldin (1995) shows temporal and cross-sectional patterns of U-shaped participation among women in US.

Yet couched in these arguments of efficient allocation of human resources and the resultant household division of labour the fundamental gender relations is ignored in the above framework. Socialist-feminist construct of capitalist development exploit gender relations of power to explain de-feminization. With the development of capitalist organisation of production in a patriarchal social system progressively female labour undergoes 'female marginalization' (Hartman 1976, Boserup, 2008; Mies, 1982). The rise of capitalist agriculture led to consolidation of land holdings on the one hand, while it led to marginalisation and proletarianisation of peasants on the other. The shift from the attached labour system in the feudal agricultural production system to wage labour in the capitalist farming realigned the household division of labour among worker households. Wage labour is appropriated by males from the reserve army of labour produced through the above process, while female labour is directed towards unpaid domestic activities. Technological change and mechanisation in the production process created skill biased demand for labour. However, gender biased progression in education and skill enhancement ensured that males absorbed such opportunities while women, in the process, either

withdrew from the labour force or entered as secondary workers². The shift of work from the home and homestead to the factory and shops outside the homes pushed women out of the labour force (Hartmann 1976) and made them economically dependent on men.

In patriarchal societies, with economic development and rising household income, increasingly social status gets attached to the position of the male worker in the labour market, who becomes the main bread winner for the household, while women's paid work is stigmatised. In turn, domestication of women and marginalisation of women in the labour force also symbolised upward social mobility. With rising income levels these cultural preferences find expression through withdrawal of women from the labour market and domestication. In India studies show that women undergo poorer mobility and express cultural preferences to remain within their domestic space (Kala, 1976; Mies, 1982). Social status linked to women's mobility is ingrained in the caste system as well. Probably rising from the need for sexual purity, women belonging to upper castes in India were domesticated, with virtually no interaction with the world outside their domestic space, while lower caste women typically engaged in agriculture labour and non-farm income generating activities (Boserup 2008).

Women's role in status production for the household (Papenak, 1979) through education of children, health care of the members of the family, engaging in rites and rituals, also expand with rising incomes. Eswaran et.al (2011) follows this argument and do find evidence that in rural India women's labour participation is impeded by status production

2. Agarwal, Bina (1984) argued that technological change in the agriculture did not decline the female labour force participation, rather it increased the female participation. But Nayyar (1989) had viewed this as a stage of economic development in agriculture wherein spread of irrigation produces a scale effect in employment, through the extension and intensification of agriculture. However, at a later stage with income rise women withdraw from the labour force due to substitution effect caused by male wage workers and capital.

activities. Further, education may be perceived and exploited as a means to enhance the efficiency of status production process of women, rather than a route to autonomy. Jeffery and Jeffery (1994) had argued that education may be enabling women to internalize patriarchal norms, and thus reproduce status more efficiently.

The segment of the female population that remained at the bottom of the class and caste hierarchy remained within the labour force, relegated to casualised jobs in the subsistence fringe through the process of job segregation; occupational discrimination, wage discrimination and educational discrimination (Hartman 1976; Scott 1986). This segment of the female labour class who are unable to withdraw is another form of reserve army of labour to be tapped through various flexible accumulation strategies such as putting-out system and home based production. They become the source of competitiveness for a large number of labour intensive industries in the developing countries that depend on cost cutting strategies.

The State being a reflection of the institutions of the society, women's stigma to visibility in public spaces also gets manifest in the gender biased data enumeration process and invisibility of women in the statistical data as well. After being domesticated, women's contribution to income generating activities gets interpreted as 'leisure' and 'domestic activities' in case of home based production (Mies, 1982). Hirway (2012) has argued that this indeed is the case in India with increasing informalisation of work, that home based work of women is becoming invisible in the official data sets. Status production roles, may not be directly generating income in the household, but status production is integral to income earning potential of the household as remarked by Papanak (1979). Yet the economic worth of such domestic activities does not find reflection in national income as well as labour market estimation in India. Mazumdar and Neetha (2011) among others have shown this fallacy in data collection in India.

Given this background, it is argued in this paper that withdrawal of women from the labour force with income rise in India is aimed at reducing the double burden of work and at the same time seeking social mobility. Rising incomes allow women to withdraw from paid labour market giving them relief from the double burden of paid work and unpaid work. It also enables women to act in conformity to the patriarchal norms of being invisible in gendered public spaces. Further, with rising Income, along with withdrawal from labour market women increasingly engage in status production activities for the household which enhances social mobility for the household. We shall now trace the process of withdrawal of women from Indian labour force, their process of domestication and marginalisation in the labour market. The role of education in this process is also dealt in some detail.

4. Defeminization of Labour Force

De-feminization Trends: During the period 1983 to 2009-10 the male labour force increased from 198.5 million to 335 million, while for females the increase was from 77 million to 105 million by UPS criteria reducing the share of females in the labour market from 28 percent to 24 percent (Tables 1 and 3)³. During the same period the LFPR of rural females declined from 25.2 to 20.8 percent and for the urban females it was stagnant at around 13 percent. This phenomenon of defeminization of labour force is noticed even in regions that enjoy greater gender parity in various social indicators. Kodoth and Eapen (2005) have empirically shown that this is the case in Kerala. This study noted that the work participation rates (WPR) and number of days of work of urban

3. In fact the process of de-feminization could be noticed from as early as 1972-73 itself. The share of females in the labour force declined from 32.6 to 27.9 percent during the period 1972-73 to 1983. We restrict the analysis from 1983 to 2009-10 as detailed unit records are not available for previous periods. Parthasarathy and Nirmala (1999) shows that the process of marginalisation of women had started before the 1990s as well, while Varghese (1993) argued that the process had been on from 1950s itself though the data used for this analysis requires further validation.

females in Kerala had declined during the period 1993-94 to 1999-2000, which coincided with a rise in the male WPR and high wage rates. The declining share of female participation can be divided into two phases.

In the first phase (1983 to 1993-94) the rural female LFPR declined from 25.2 to 23.7 percent while urban female remained at 13 percent (Table 2). Also, number of both male and female members in the labour force increased but at different rates such that the share of females in the labour force continued to deteriorate. The share of female labour force in the rural areas declined from 31 percent to 29 percent and that of urban from 19.6 percent to 18 percent during this period (Table 3).

During the second phase (1993-94 to 2009-10) the rural female LFPR declined from 23.7 to 20.8 percent and the urban female LFPR remained at 13 percent. Also, the number of female participants in the labour market almost stagnated while the male participation continued to increase, though at a much reduced rate. The growth rate of rural female labour force was 0.48 percent and for urban females it was 2.15 percent, compared to 1.09 percent and 2.29 percent for males. The overall growth rate of female labour force during this period was 0.79 while male labour force growth was nearly double at 1.4 percent (Table 1). The share of females in the rural labour force declined from 28.8 to 26.4 percent, while in the urban areas it declined marginally from 18 to 17.5 percent. Overall the share of females declined from 32.5 to 28.5 percent during this period (Table 3). In this period the urban female labour force was growing at 2.15 percent using UPS measure, more or less on par with the male rate of 2.3 percent. Yet it can be seen that this rise in the urban female Labour Force (LF) growth was due to the very high growth during 1999-2000 to 2004-05, while the periods before and after were having stagnant LF growth among urban females. Between 1993-94 and 1999-2000 the growth rate was 0.60 percent (PS) and the period 2004-05 to 2009-10 the growth rate was negative at -0.11 percent,

essentially stagnant during the period 1993-94 to 2009-10, with a big spurt in the brief period 1999-2000 to 2004-05, as described above, a period of economic hardships. Female labour force completely stagnated in the rural areas, at a growth rate of 0.02 percent during the period 1993-94 to 2009-10, with even a negative growth of -0.08 percent during the period 1999-2000 to 2009-10. It is all the more noticeable that this stagnation in labour force growth among females had been during the period when the female population growth was marginally higher than males⁴.

There are two dimensions to the above described process of 'de-feminization' of the labour force. Firstly, women were withdrawing from the labour force and entering other activities as depicted by the low and declining female LFPR. Secondly, women were also competed out by male labour as depicted by the declining share of females in the labour force. The declining share of females in the labour force during the first phase implied that women were being replaced by men in the incremental labour force while the decline in the share in second phase may be interpreted as the period when labour force growth declined substantially and under these conditions female labour force stagnated almost completely while the share of male labor force increased. Thus it can be viewed that the second phase is an accentuation of the process of de-feminization of the labour force that had already been in place by 1983.

Level of Income and withdrawal of female labour: A key theoretical argument put forward, as described in the analytical background, is the inverse relation between income levels and female LFPR. To look into the relation between income levels and female participation we divide the households into decile classes based on the level of household monthly per capita consumption expenditure

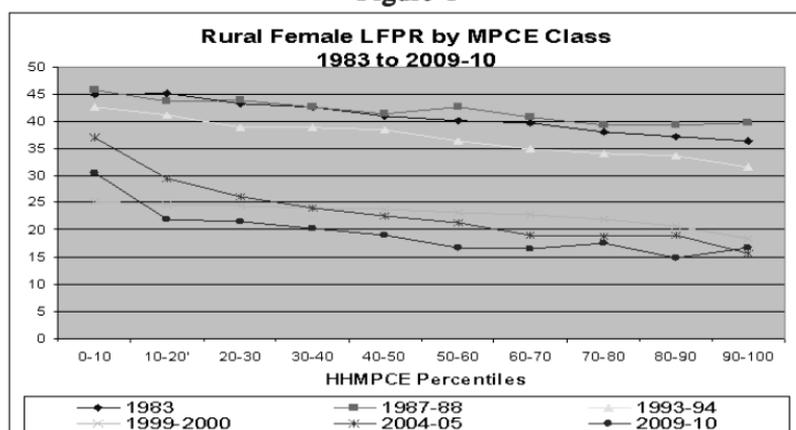
4. Estimated population growth for females was 2.01 and 1.68 per annum respectively during 1991-2001 and 2001-2011 respectively compared to that of 1.94 and 1.6 per annum for males for the same period (calculated from the Census of India, 2012).

Table 3: Female Labour Force as a percent of Total Labour Force

| | Rural | | Urban | | Total | |
|---------|-------|-------|-------|------|-------|-------|
| | PS | PSSS | PS | PSSS | PS | PSSS |
| 72-73 | 35.48 | | 18.9 | | 32.68 | |
| 77-78 | 31.20 | 36.48 | 19.6 | 22.5 | 28.94 | 33.84 |
| 1983 | 30.68 | 36.89 | 17.6 | 20.6 | 27.92 | 33.63 |
| 1987-88 | 31.03 | 36.24 | 17.8 | 21.3 | 28.13 | 33.06 |
| 1993-94 | 28.87 | 35.66 | 17.9 | 21.4 | 26.26 | 32.48 |
| 1999-00 | 29.41 | 34.57 | 17.4 | 19.6 | 26.38 | 30.97 |
| 2004-05 | 30.23 | 36.23 | 19.3 | 22.1 | 27.26 | 32.55 |
| 2009-10 | 26.44 | 31.10 | 17.5 | 19.4 | 23.85 | 27.85 |

Source: NSS reports on *Employment and Unemployment Situation in India*, various years.

(MPCE), a robust proxy for income level, given that income data is not available from the NSS surveys. Further we estimate the female labour force participation using the UPS criteria for the period 1983 to 2009-10 for all the deciles.

Figure 1

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th, 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

From such an income based classification, Figure 1 that pertains to rural areas shows the following. Firstly, female labour force participation rate in rural areas (Y axis) is negatively related to level of income, as can be seen from the negative slope of all lines in the graph above. Higher the level of income, lower the participation rate and vice versa. This is true across all years, from 1983 to 2009-10. Secondly, the female participation across almost all income decile groups have also been declining through out the period 1983 to 2009-10. It also can be noticed that 1993-94 is a break period in the levels of participation. The levels drop significantly after 1993-94 compared to earlier periods. Now, assuming that the household real income level had increased substantially during the period 1983 to 2009-10, it can be stated that

Table 4: Table 5 Ratio of Female Labour Force Participation Rate (in percent) by MPCE Class 1983 to 2009 -10

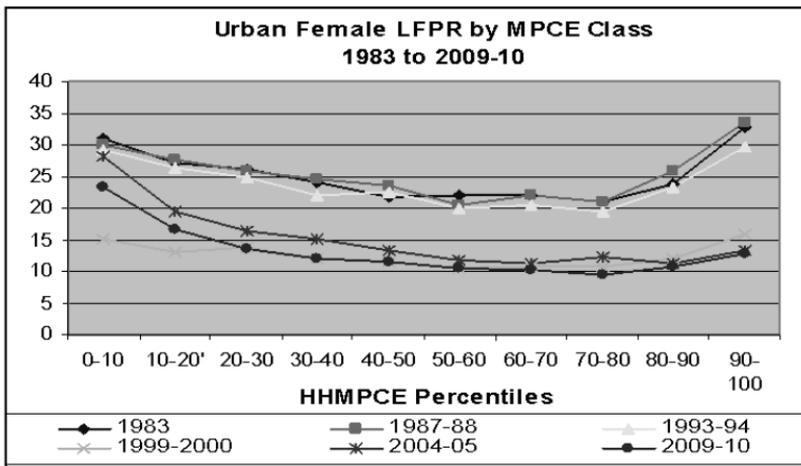
| | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
|-----------------|-------|---------|---------|-----------|---------|---------|
| | Rural | | | | | |
| 5th decile FLPR | 41.04 | 41.34 | 38.57 | 23.79 | 22.65 | 19.04 |
| 1st/10th Decile | 1.24 | 1.15 | 1.35 | 1.37 | 2.35 | 1.82 |
| 1st/5th Decile | 1.10 | 1.11 | 1.11 | 1.06 | 1.63 | 1.61 |
| 5th/10th Decile | 1.13 | 1.04 | 1.22 | 1.29 | 1.44 | 1.13 |
| | Urban | | | | | |
| 5th decile FLPR | 21.77 | 23.68 | 22.55 | 11.6 | 13.46 | 11.43 |
| 1st/10th Decile | 0.95 | 0.89 | 0.98 | 0.95 | 2.12 | 1.80 |
| 1st/5th Decile | 1.43 | 1.27 | 1.30 | 1.30 | 2.10 | 2.03 |
| 5th/10th Decile | 0.67 | 0.70 | 0.76 | 0.73 | 1.01 | 0.88 |

Source: Same as Figure 1.

whether it is a cross sectional view or inter-temporal view taken the female participation seems to be negatively related to income levels⁵.

In the urban areas firstly, urban female labour force participation rate, unlike the rural areas, seems to show a ‘U’ shaped curve in its relation with MPCE levels (Figure 2). Female LFPR has a negative relation with income levels till about middle income groups, thereafter the relation becomes positive with income levels. Thus, at low levels of income, female participation rate is high in urban areas as in rural areas and participation rate declines till about middle income group, thereafter with rise in income, labour participation rate seems to increase. This U-shaped participation curve seems to be true across all years, through out the period 1983 to 2009-10.

Figure 2



Source: Same as Figure 1.

5. Eapen (2004) had shown that even after accounting for definitional and measurement issues related to women's work voluntary decline in the female work participation associated with improvement in economic well being was visible in Kerala.

Secondly, though the persistent pattern for urban female LFPR is that of a non-linear relationship to MPCE classes, over time the participation rates seems to decline across almost all decile classes, implying that while the U shaped pattern of participation seems to be the overwhelming pattern across income group, with income rise the labour participation seems to decline in each of these deciles. The largest decline in the LFPR across all income classes was noticed during the period 1993-94 to 1999-2000, thereafter there had been only marginal decline in the LFPR among urban females.

Thirdly, even though there exists a u-shaped pattern in urban participation rates, since 1999-2000 the curve is increasingly becoming flatter, implying that positive relation between income levels and female LFPR among higher income groups is disappearing and proportion of women entering the labour market among the richer segments of the economy have reduced after 1993-94 compared to the previous periods. The ratio of the LFPR of the 5th decile to 10th decile increased from 0.67 in 1983 to 0.88 by 2009-10, showing the declining gap in LFPR between the median income group and the richest (Table 4). Moreover, the declining gap between these two groups is converging to a much lower participation rate in 2009-10 compared to 1983. For the median group the LFPR declined from 21.7 to 11.4 during this period. While the ratio of the 1st decile to the 10th decile increased from 0.95 to 1.80 during the same period which shows that the participation rate for the poorest group, which was equal to the richest in 1983 had risen much above the richest group by 2009-10.

Apparently, the trend in rural areas, namely a negative and linear relation between income levels and female LFPR and the disappearance of the non-linear relation in urban areas, especially after 1993-94, is not in conjunction with the feminization-U hypothesis which predicted higher LFPR at poorest and richest strata of the economy. We turn to the two other important activities of females, domestic household activities and education to explore this issue further.

5. Women's Participation in Unpaid Domestic Activities: Is it life Cycle or Social Status?

Trends in Participation in Unpaid Domestic Activities of Women: With the decline in the labour force participation the commensurate rise is in participation in education, participation in unpaid domestic activities and allied activities related to domestic activities. But the prominent activity that largest share of women seem to engage with is in domestic activities (including allied activities), and moreover, its prominence is rising at a very fast pace through out the period. The share of females attending educational institutions increased from 7.6 percent in 1983 to 23.8 percent in 2009-10 for the rural areas and for urban areas it increased from 18.2 to 25.6 percent during the same period (Table 5). The unpaid domestic activities accounted for 30 percent of the women in 1983 and by 2009-10 it increased to 40 percent among the rural women. The corresponding rise in share among the urban women was from 38.5 to 48.2 percent.

Table 5: Total Female activity Status Distribution (UPS)

| Activity Status | Rural | | | | | |
|--------------------------------------|-------|---------|---------|-----------|---------|---------|
| | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
| Self employed/ Unpaid Family work | 21.0 | 22.0 | 18.5 | 11.4 | 13.6 | 10.2 |
| Regular Wage Work | 1.6 | 2.1 | 1.3 | 0.9 | 1.2 | 1.1 |
| Casual Wage Work | 18.0 | 17.0 | 17.0 | 11.0 | 9.0 | 9.0 |
| Unemployed | 0.6 | 1.4 | 0.5 | 0.0 | 0.8 | 0.5 |
| Education | 7.6 | 7.2 | 11.7 | 18.4 | 21.3 | 23.8 |
| All Domestic (a+b) | 29.8 | 27.3 | 34.4 | 36.3 | 35.5 | 39.9 |
| a. Domestic Activities only | 15.9 | 15.1 | 15.7 | 20.3 | 17.5 | 22.0 |
| b. Domestic + allied work | 13.9 | 12.2 | 18.7 | 16.0 | 18.0 | 17.9 |
| Others | 21.4 | 23.1 | 16.2 | 22.4 | 18.4 | 15.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

cont'd

| | Urban | | | | | |
|--------------------------------------|-------|------|------|------|------|------|
| Self employed/ Unpaid Family work | 8.3 | 8.5 | 7.9 | 4.5 | 5.4 | 4.2 |
| Regular Wage Work | 8.4 | 9.0 | 7.8 | 4.6 | 5.7 | 5.3 |
| casual Wage Work | 7.0 | 6.0 | 6.0 | 3.0 | 2.0 | 2.4 |
| Unemployed | 1.5 | 1.9 | 1.8 | 0.9 | 1.4 | 0.9 |
| Education | 18.2 | 18.4 | 21.8 | 25.1 | 25.1 | 25.6 |
| All Domestic (a+b) | 38.5 | 38.1 | 40.2 | 45.4 | 45.7 | 48.2 |
| a. Domestic Activities only | 30.8 | 29.5 | 30.5 | 38.4 | 35.0 | 39.9 |
| b. Domestic & allied work | 7.7 | 8.6 | 9.7 | 7.0 | 10.7 | 8.3 |
| Others | 18.1 | 17.9 | 14.1 | 16.9 | 14.5 | 13.4 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Source: NSS reports on Employment and Unemployment Situation in India, various years.

The feminization-U hypothesis argues that the rise of domestic activities among females occurs as a result of the deepening sexual division of household labour in the course of economic development wherein young adult segment of the female life cycle withdraws from the labour market for biological reproduction while males and older females engage primarily in production. To understand this effect we look at the age wise participation rates in economic activities.

Table 6 shows the age specific participation rates in various activities. Across cross-sectional data, the younger women are engaged in education or domestic activities compared to older women in both rural and urban areas in all years. These patterns do adhere to the arguments of women's life cycle related aspects of participation including marriage, child bearing and child rearing. However, this pattern is questionable when we make inter-temporal comparisons. Firstly, the share of women in domestic activities had been increasing across all age

Table 6: Female Usual Principal Activity Status Rates by Age Groups (in percent)

| | Rural | | | | | Urban | | | | |
|---------|-------|------|------|------|-----|-------|------|------|------|-----|
| | I | II | III | IV | V | I | II | III | IV | V |
| Age | | | | | | | | | | |
| 1983 | 20.1 | 28.9 | 18.1 | 33.0 | 100 | 7.9 | 61.7 | 12.0 | 18.4 | 100 |
| | 52.3 | 4.3 | 42.8 | 0.7 | 100 | 27.8 | 21.7 | 49.7 | 0.8 | 100 |
| | 54.7 | 0.6 | 44.1 | 0.6 | 100 | 33.7 | 3.1 | 62.6 | 0.6 | 100 |
| | 60.9 | 0.1 | 38.5 | 0.6 | 100 | 39.9 | 0.3 | 59.2 | 0.6 | 100 |
| | 56.7 | 0.0 | 36.7 | 6.5 | 100 | 39.5 | 0.1 | 52.6 | 7.9 | 100 |
| | 14.7 | 0.1 | 18.6 | 66.6 | 100 | 12.4 | 0.4 | 20.6 | 66.6 | 100 |
| 1993-94 | 13.1 | 51.2 | 12.7 | 23.1 | 100 | 5.0 | 77.5 | 7.4 | 10.2 | 100 |
| | 44.6 | 9.4 | 44.9 | 1.1 | 100 | 23.3 | 34.5 | 40.8 | 1.4 | 100 |
| | 48.2 | 0.9 | 50.6 | 0.4 | 100 | 33.5 | 6.1 | 59.6 | 0.8 | 100 |
| | 53.2 | 0.1 | 46.3 | 0.4 | 100 | 36.2 | 0.3 | 63.1 | 0.5 | 100 |
| | 52.6 | 0.0 | 43.6 | 3.8 | 100 | 36.6 | 0.2 | 57.8 | 5.5 | 100 |
| | 16.4 | 0.2 | 29.4 | 53.9 | 100 | 10.4 | 0.5 | 29.4 | 59.7 | 100 |
| 2009-10 | 1.8 | 84.5 | 4.6 | 9.1 | 100 | 0.9 | 91.4 | 2.8 | 5.0 | 100 |
| | 18.4 | 34.7 | 45.3 | 1.5 | 100 | 9.1 | 58.5 | 31.2 | 1.2 | 100 |
| | 26.6 | 4.2 | 68.7 | 0.6 | 100 | 19.3 | 15.9 | 64.1 | 0.8 | 100 |
| | 33.1 | 0.1 | 66.2 | 0.5 | 100 | 20.9 | 0.7 | 77.8 | 0.6 | 100 |
| | 36.4 | 0.1 | 57.9 | 5.6 | 100 | 19.5 | 0.1 | 74.0 | 6.5 | 100 |
| | 9.8 | 0.1 | 33.0 | 57.2 | 100 | 2.7 | 0.0 | 37.0 | 60.3 | 100 |

Source: Same as Figure 1.

Note: The roman numerals denote activity status UPS rates per 100 female population I – labour; II – Education; III-Domestic; IV- Others; V- Total.

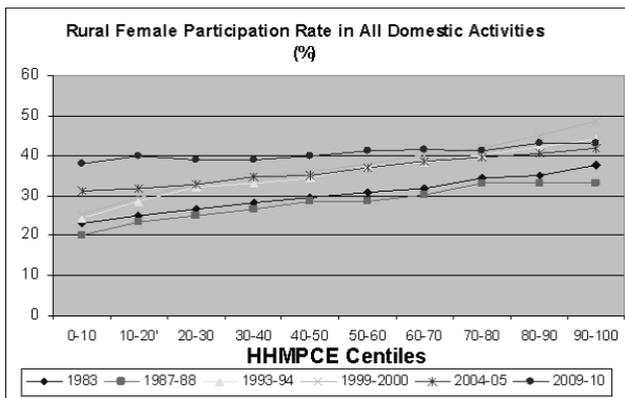
groups, except 5-15, where female children attended educational institutions⁶. If child bearing and caring was the explanation, then with declining fertility rate of women⁷ in the country we should have expected that the share of domestic activities would be declining over the years. Secondly, if there were age specific effects, such as longer period of child rearing, then domestic activity share would have increased in specific age groups. However, this is not the case. The increase in domestic activity share and the decline in labour participation rate had been occurring across all age groups, except the school going age group and have been declining continuously with no respite. Based on the above observations it can be argued that while sexual division of labour does play an important role in the age structure of labour participation and domestic activity participation, this does not explain the secular decline in labour participation and increase in domestic activity.

Level of Income and Domestication of Women: However, the relation between household income level and women's participation in domestic activity seems to be more robust. There is a positive relation between level of income and domestic activities as can be noticed from Figures 3 & 4. Greater share of women seem to enter into domestic activities at higher level of income, be it in the rural or urban areas. This progression in domestic participation related with income levels is visible

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6. The share of females in the age group 5-15 and above 65 in the category 'Others' is substantial. This category includes population that is neither working nor engaged education or domestic activities. Typically they are either too young to undergo schooling, are in poor health, are pensioners, rentiers, or engage in sundry activities such as beggary, prostitution etc (codes 95 to 97). They also include a group of females whose activity status is not traceable, hence coded '99' in the NSS schedule. From the Table 6 it may be noticed that the 'Others' category is shrinking in size over the period, indicating that, probably with better economic well being, better schooling and health this category is declining. Data (not presented but analysed) shows that category 99 still is sizeable, while the remaining others have declined.
 7. The Total Fertility Rate (TFR) had declined from 4.4 per woman in the early 1980 to 2.5 in 2010 (downloaded from <http://censusindia.gov.in/2011-Common/srs.html> on 25-2-2013).

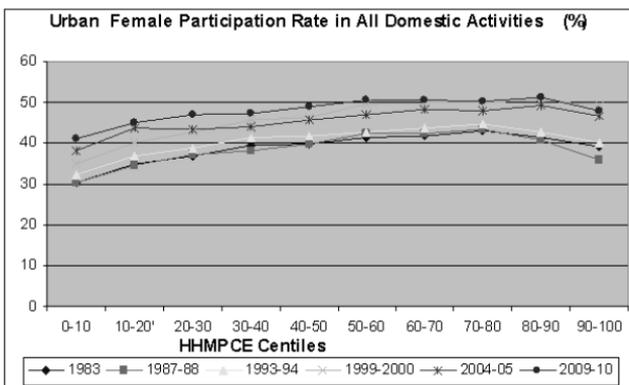
in all years, both for rural and urban areas. Though in the initial years there was a tendency of decline in domestic participation of urban women in the high income groups this trend has been reversed in the more recent periods. Thus it may be argued that the overwhelming persistent tendency is towards withdrawal from labour force and enter into domestic activities with increasing income levels, as shown across different income class and across time period.

Figure 3



Source: Same as Figure 1.

Figure 4



Source: Same as Figure 1.

The above analysis suggests that rather than the life cycle hypothesis, gender relations may throw more light on the declining labour participation and increasing unpaid domestic activity participation among women. The declining labour participation across all adult age groups, with rising income levels may be a strategy to reduce the 'double burden' of paid and unpaid work among women. The historical process in patriarchal societies has attributed gender specific roles wherein most unpaid domestic activities are assigned as women's work. Societies incentivize such roles through the social mechanism of valorizing domestic activities and stigmatising paid work among women such that social mobility is linked to the gender roles played out. Rising income levels apparently provides women and men similar options of choosing between paid and unpaid work. Yet, even after considering the opportunity costs of wages and probability of finding jobs, the household decision may be for women to withdraw from the labour force responding to the incentives for improving social status. Disaggregation of the domestic activity provides us with further evidence that could probably link the rise in domestic activity among females with double burden and social stigma.

Within the domestic related activities, an important feature is that over the period 1983 to 2009-10 there is a tendency for urban female activity to get increasingly concentrated in domestic activities alone, than domestic and allied activities. Allied activities, as per NSS definition consists of activities such as "...*engaging in free collection of goods (vegetables, roots, firewood, cattle feed, etc.), sewing, tailoring, weaving, etc. for household use*". Allied activities of domestic activities can be viewed as a third dimension to the double burden of women's work. In the urban areas the share of women with domestic and allied activities had remained between 7 and 11 percent through out the period 1983 to 2009-10, while pure domestic activities alone increased from 31 percent to 40 percent (Table 5). The relatively lower level of participation in domestic allied activities among urban women may be due to expanding

service delivery and amenities such as cooking gas, tap water etc, thus availing some relief from the double burden. However the break from allied activities in urban areas is not redirected to the labour market, rather to pure domestic activity.

For the rural areas, the domestic and allied activities had been higher than urban areas fluctuating in the range of 14 to 19 percent, while pure domestic activity remained between 15 and 22 percent. Though women are withdrawing from work in rural areas too, they do not seem to withdraw from the 'domestic and allied activities' but get involved in pure domestic activity and allied activities in almost equal shares. The low level of monetization of economic transactions and the need for high levels of social interactions for subsistence may require that rural women largely belonging to agriculture households engage with the world outside their domestic household frequently and consistently. Yet, at higher levels of income even rural women seem to withdraw from other allied activities. Consistently we see that it is the share of lower income group women that is higher in allied activities while pure domestic activities share seems to be very high for higher income group women (Table 7). This pattern in the rural areas too is suggestive of strategies to reduce the double burden. Yet, as mentioned above, even the richest segment of the population, both in the rural and urban areas always entering only pure domestic activities and not the labour market probably point towards gender norms associated with paid work.

The caste-gender axis is such that upper caste rural women had traditionally restricted mobility and remained within the house while women belonging to the lower rung of the caste hierarchy and particularly belonging to the depressed castes engaged in paid agricultural employment or as unpaid family worker in small subsistence farms (Boserup, 2008; Jose, 1989). Recent empirical studies on rural India too argue in favour of the role of caste and social status in

stigmatizing women's paid work (Eswaran et.al, 2011). Thus caste society assigned isolation, restriction and complete domestication as the gender role of higher castes. Upward social mobility, from the perspective of such gender and caste notions, necessitated domestication of women.

Social status related domestication of women is not limited to caste based mobility. With the rise in income level too, the stigma imposed by the society seems to be more stringently followed. Unlike pure domestic activity, other activities such as allied activities, unpaid family labour and paid labour require greater interaction with the local world outside the household. It is this type of an engagement with the locale outside their place of residence that is losing preference among urban women and rural women in the higher income groups⁸. Such

Table 7: Women Engaged in only Domestic activities as Share of Domestic and other Works

| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
|--------------------|-------|---------|---------|-----------|---------|---------|
| | Rural | | | | | |
| 0-10 | 42.4 | 50.2 | 43.0 | 50.8 | 46.3 | 51.3 |
| 10-20' | 47.0 | 50.4 | 43.6 | 51.8 | 44.9 | 52.9 |
| 20-30 | 51.1 | 52.5 | 44.5 | 54.3 | 47.2 | 54.9 |
| 30-40 | 52.1 | 53.9 | 44.3 | 55.3 | 49.2 | 56.0 |
| 40-50 | 53.7 | 54.5 | 44.1 | 55.4 | 50.2 | 57.7 |
| 50-60 | 53.9 | 56.3 | 46.1 | 58.1 | 50.0 | 56.1 |
| 60-70 | 56.9 | 58.0 | 47.1 | 56.5 | 52.4 | 57.8 |
| 70-80 | 56.2 | 58.7 | 48.0 | 59.4 | 54.5 | 53.5 |
| 80-90 | 58.4 | 60.1 | 47.8 | 59.8 | 52.6 | 59.5 |
| 90-100 | 59.3 | 61.4 | 47.9 | 65.2 | 52.2 | 58.9 |
| Total | 53.3 | 55.4 | 45.6 | 56.5 | 49.5 | 55.3 |

cont'd.....

8. Boserup (2008) had related this to the practice of veiling. She identified such social practices of women hiding from the public gaze as a symbol of social status in other cultures as well. (Boserup, 2008, p.36).

| | Urban | | | | | |
|--------|-------|------|------|------|------|------|
| 0-10 | 76.3 | 73.9 | 69.4 | 79.8 | 72.8 | 74.3 |
| 10-20' | 79.2 | 76.1 | 73.0 | 80.3 | 75.4 | 77.0 |
| 20-30 | 79.3 | 79.0 | 78.1 | 82.2 | 75.1 | 79.7 |
| 30-40 | 80.2 | 77.9 | 76.0 | 83.2 | 74.0 | 82.5 |
| 40-50 | 80.5 | 78.7 | 75.9 | 84.5 | 77.2 | 83.8 |
| 50-60 | 81.8 | 76.6 | 77.1 | 85.9 | 73.4 | 85.3 |
| 60-70 | 81.5 | 77.9 | 75.8 | 86.3 | 78.7 | 82.9 |
| 70-80 | 82.3 | 78.3 | 75.8 | 86.6 | 78.8 | 83.8 |
| 80-90 | 80.8 | 78.4 | 78.7 | 88.1 | 77.0 | 85.2 |
| 90-100 | 77.2 | 77.3 | 80.7 | 89.8 | 80.8 | 88.5 |
| Total | 80.0 | 77.4 | 75.9 | 84.6 | 76.6 | 82.8 |

Source: Same as Figure 1.

cultural preferences of females to remain with their domestic space rather than engaging with activities outside have been argued much earlier (Kala, 1976, Mies, 1982).

6. Women's Education and its Role in Women's Activity

Between 1983 and 2009-10 the share of female children of age group 5-10 attending schools had increased from 34 percent to 86 percent in the rural areas and from 66 percent to 92 percent in the urban areas (Table 8). For the age group 11-15 it increased from 23 percent to 83 percent in rural areas and from 57 percent to 90 percent in urban areas. Correspondingly child labour and illiteracy had substantially reduced in these age groups during this period. Very important public interventions aimed at improving education among females such as Sarv Shiksha Abiyan, National Programme for Education of Girls at an Elementary Level, Kasturbha Gandhi Balika Vidyalaya, Mahila Samakhya Programme etc. have been in place, some of these programmes

running at least since mid 1980s. These programmes and policies seem to have played an important role in increasing the participation of female children in educational activities upto secondary school level.

For the age group 16-25 too the participation rate in education increased from 2.5 percent to 20 percent in rural areas and from 13 percent to 37 percent during 1983 to 2009-10⁹. With the rise in educational attendance among this age group interestingly, a large share of young adult females had been successful in postponing their entry into the labour market and domestic activity. In the rural areas the participation rate in domestic activities increased from 43 percent to 58 percent between 1983 and 1999-2000, thereafter it had remained at the same level till 2009-10. For the urban areas remarkably, this rate had even declined after the peak in 1999-2000 from 57 percent to 48 percent. This decline in domestication had been entirely compensated by increase in attending educational institutions and not entry into the labour market in both rural and urban areas, as also argued by Rangarajan, et.al (2011). Thus attending educational institutions is increasingly becoming the priority, compared to domestic activities or labour market participation among female children and young female adults.

Education is widely regarded as one of the key tools of empowerment of women that enhances their agency and autonomy. The change in preference among the female children and young adult females towards education, should essentially prepare females for entry into the labour market equipped with more years of education and skills than their preceding generations. However, data does not support this argument that more years of education would entail women's entry into the labour market. On the contrary what is noticed is that women in the age group of above 25 had been continuously withdrawing from the labour market

9. Yet it needs to be noted that education beyond school age is still unapproachable to nearly 80 percent of females in the age group 16 to 25 in rural areas and 65 percent in urban areas even in 2009-10.

in both rural and urban areas. The labour force participation rates of women above the age group of above 25 declined from 56 percent to 33 percent and 38 to 19 percent respectively in rural and urban areas during the period 1983 to 2009-10, while domestic participation rate increased from 36 percent to 59 percent and from 53 to 72 percent in rural and urban areas during the same period. This is especially true in the latest period 2004-05 to 2009-10 which shows that the entire decline in the labour market participation was compensated by increase in the domestic activities among females. Thus while share of females attending education in their respective age groups is increasingly becoming a priority, education does not per se prepare these young females to participate in the labour market, rather it seems to increase their probability of engaging in domestic activities.

Participation in Education and Level of Income: While participation in the labour market is negatively related to income levels, there is a positive relation between education participation and income classes for the relevant age groups. In general, as expected the low income groups have lower participation while higher income groups have higher participation in education. Moreover, both in the rural areas and urban areas the participation in education has risen considerably during the period 1983 to 2009-10 (Table 9).

However, an important aspect of the participation in education is that while education participation seems to increase with income levels in a linear manner during 1983, we see that the income based difference is phased out, and by 2009-10, the gap between the lowest income decile group and highest income decile group in all age groups of rural and urban areas had declined and had become more or less uniform across income groups. This implies that female education is increasingly becoming universal in nature, and independent of their income levels females were engaged in educational pursuits. This, for the girl children, is probably because of the state driven policies aimed at school education through Sarva Shiksha Abhiyan and other programmes.

Table 8: Female Activity Rates (UPS) by Age group (in percent)

| | Age 5 to 10 | | | | Age 11 to 15 | | | | Age 16 to 25 | | | | Age above 25 | | | |
|---------|---------------|-----------|---------------------|--------|---------------|-----------|---------------------|--------|---------------|-----------|---------------------|--------|---------------|-----------|---------------------|--------|
| | Labour market | Education | Domestic activities | Others | Labour market | Education | Domestic activities | Others | Labour market | Education | Domestic activities | Others | Labour market | Education | Domestic activities | Others |
| Rural | | | | | | | | | | | | | | | | |
| 1983 | 6.6 | 33.7 | 7.6 | 52.1 | 37.7 | 22.6 | 31.9 | 7.8 | 53.4 | 2.5 | 43.4 | 0.6 | 56.0 | 0.1 | 36.4 | 7.5 |
| 1987-88 | 3.7 | 27.1 | 3.1 | 66.1 | 31.4 | 30.8 | 25.8 | 12.0 | 54.4 | 3.4 | 41.2 | 1.1 | 59.4 | 0.1 | 34.0 | 6.5 |
| 1993-94 | 4.0 | 57.2 | 3.6 | 35.2 | 25.2 | 43.1 | 24.7 | 7.1 | 46.3 | 5.2 | 47.7 | 0.8 | 51.2 | 0.1 | 44.0 | 4.7 |
| 1999-00 | 1.0 | 64.2 | 1.7 | 33.2 | 10.5 | 59.6 | 18.8 | 11.1 | 30.5 | 10.1 | 57.7 | 1.7 | 38.0 | 0.1 | 53.1 | 8.9 |
| 2004-05 | 0.4 | 78.4 | 1.2 | 20.1 | 8.2 | 70.2 | 16.1 | 5.5 | 30.1 | 12.7 | 56.1 | 1.1 | 40.8 | 0.1 | 51.1 | 8.0 |
| 2009-10 | 0.22 | 85.99 | 0.64 | 13.15 | 3.9 | 82.62 | 9.65 | 3.84 | 22.23 | 20.44 | 56.26 | 1.07 | 33.49 | 0.08 | 59.13 | 7.3 |
| Urban | | | | | | | | | | | | | | | | |
| 1983 | 2.0 | 65.9 | 3.2 | 28.9 | 15.3 | 56.5 | 22.9 | 5.3 | 30.6 | 12.9 | 55.8 | 0.7 | 38.1 | 0.2 | 53.4 | 8.3 |
| 1987-88 | 1.5 | 68.6 | 1.8 | 28.1 | 13.0 | 63.0 | 16.4 | 7.6 | 31.7 | 14.8 | 52.3 | 1.2 | 37.7 | 0.1 | 54.5 | 7.6 |
| 1993-94 | 1.2 | 81.5 | 1.6 | 15.7 | 9.5 | 72.8 | 14.1 | 3.6 | 28.2 | 20.9 | 49.8 | 1.1 | 35.1 | 0.2 | 58.4 | 6.3 |
| 1999-00 | 0.3 | 82.0 | 0.7 | 17.1 | 3.8 | 78.8 | 11.4 | 6.0 | 14.7 | 26.7 | 56.6 | 2.0 | 19.9 | 0.2 | 70.4 | 9.6 |
| 2004-05 | 0.2 | 88.5 | 0.7 | 10.6 | 3.9 | 83.9 | 9.3 | 2.9 | 17.3 | 28.7 | 52.9 | 1.1 | 22.2 | 0.1 | 69.1 | 8.6 |
| 2009-10 | 0.05 | 92.28 | 0.36 | 7.31 | 1.72 | 90.4 | 5.58 | 2.3 | 14.11 | 37.4 | 47.5 | 1 | 18.7 | 0.3 | 72.6 | 8.42 |

Note: Activity Rates has been estimated for the specific age groups separately.

Source: Same as Figure 1.

Yet even in the upper age group of 16 to 25 we find this type of convergence, but to a low level of female participation. Education participation is converging to a low level of around 22 to 25 percent across all income groups by 2009-10. This implies that educational pursuits for the young adult females above 15 years did not increase much in the later period, moreover, even if the income levels are high share of women in educational pursuits remained at the education participation levels of the middle income level. In other words, there was not much of incentive to follow higher educational pursuits among females. Even in middle income and high income households women's education beyond the age of 15 was not encouraged, whether it was urban areas or rural areas. Only school education seems to be considered worthwhile educational pursuit but not beyond school, universally.

Now, to get a clearer picture of the role of education on women's activity status we look at the labour participation patterns by levels of educational attainment (Table 10). To calculate the LFPR here we exclude those who are undergoing education as they are not potential entrants to the current labour market though they may enter the future labour market¹⁰. From the table it can be inferred that the incentive for the educated to join the labour force had been declining through out the period. During the period 1987 to 2009-10 the LFPR for the highest educated , graduates and above, declined from 63 to 32.4 percent in the rural areas while it declined to 61.6 to a mere 26 percent in urban areas.

10. This would make no change in the numerator but it would include only the actual labour market participants, domestic activity participants and the category 'others'. The category 'others' had been shrinking over the years and account for only nearly 15 and 13 percent of the total in rural and urban areas respectively. Essentially, so this is a comparison of LF with LF + Domestic activity workers. This can avoid the problem of comparing educational category wise LFPR only using age classification, say 15+ age group, wherein in the denominator we end up adding up the population in educational transition as well, who are not potential entrants to the current labour market. This classification can also throw light on the argument that the decline in LFPR is essentially due to rise in participation in education among females (Rangarajan, et, al 2011).

Table 9: Female Participation in Education and Income Classes

| | Rural | | | | Urban | | | | | | | |
|---------------|------------------|-----------------|----------|-----------------|------------------|-----------------|----------|-----------------|------|------|------|------|
| | Age less than 16 | | 16 TO 25 | | Age less than 16 | | 16 TO 25 | | | | | |
| | 1983 | 1993-94/2009-10 | 1983 | 1993-94/2009-10 | 1983 | 1993-94/2009-10 | 1983 | 1993-94/2009-10 | | | | |
| 0-10 | 9.2 | 22.0 | 51.8 | 7.9 | 14.4 | 15.2 | 28.5 | 37.8 | 58.0 | 17.1 | 21.7 | 19.2 |
| 10-20 | 11.5 | 27.5 | 57.2 | 9.8 | 16.2 | 22.4 | 34.5 | 46.7 | 63.7 | 20.7 | 25.3 | 24.0 |
| 20-30 | 15.6 | 31.2 | 59.9 | 11.7 | 17.6 | 24.3 | 38.6 | 52.1 | 61.4 | 21.9 | 27.1 | 24.4 |
| 30-40 | 18.2 | 34.4 | 60.7 | 12.3 | 18.6 | 25.1 | 41.3 | 57.0 | 62.9 | 22.5 | 28.9 | 25.8 |
| 40-50 | 19.6 | 38.1 | 63.2 | 13.8 | 19.7 | 26.7 | 49.3 | 59.7 | 66.5 | 25.9 | 30.0 | 26.9 |
| 50-60 | 23.4 | 42.9 | 65.0 | 14.9 | 20.9 | 27.5 | 49.6 | 68.0 | 69.2 | 25.8 | 32.6 | 26.7 |
| 60-70 | 26.5 | 45.4 | 64.3 | 16.1 | 21.5 | 26.8 | 53.8 | 64.1 | 68.4 | 27.5 | 30.9 | 26.9 |
| 70-80 | 30.3 | 46.4 | 61.8 | 16.9 | 21.5 | 26.2 | 56.7 | 65.5 | 71.4 | 28.5 | 32.9 | 28.3 |
| 80-90 | 32.4 | 50.8 | 63.3 | 17.5 | 22.5 | 26.8 | 61.4 | 71.6 | 68.2 | 29.5 | 33.4 | 26.1 |
| 90-100 | 38.3 | 51.8 | 63.3 | 19.0 | 23.1 | 24.9 | 63.7 | 66.4 | 66.3 | 26.7 | 32.5 | 26.6 |
| Total | 20.7 | 35.7 | 60.4 | 13.7 | 19.1 | 23.8 | 44.6 | 55.9 | 65.6 | 24.2 | 29.1 | 25.6 |
| Decile Ratios | | | | | | | | | | | | |
| 0-10 /90-100 | 0.24 | 0.43 | 0.82 | 0.41 | 0.62 | 0.61 | 0.45 | 0.57 | 0.87 | 0.64 | 0.67 | 0.72 |
| 0-10/40-50 | 0.47 | 0.58 | 0.82 | 0.57 | 0.73 | 0.57 | 0.58 | 0.63 | 0.87 | 0.66 | 0.72 | 0.71 |
| 40-50/90-100 | 0.51 | 0.74 | 1.00 | 0.73 | 0.85 | 1.07 | 0.77 | 0.90 | 1.00 | 0.97 | 0.92 | 1.01 |

Source: Same as Figure 1.

The decline in the LFPR of more educated women had been such that currently there is hardly any difference between the less educated and more educated in labour market participation rates. Whatever the level of education, the LFPR for women had been declining through out the period. During the period we do not see any change in the specific skill related preference for labour market participation by women. The only consistent pattern is that across all levels of education, and even among the non-literates women are withdrawing from the labour market.

The above analysis throws up apparently a paradoxical situation. On the one hand female education upto school level seems to be valued and more women are getting educated, at least through schooling, while on the other hand, the labour participation trends seems to show that women are increasingly withdrawing from the labour market with higher levels of education. Swaminathan (2008) had shown evidence of the same phenomenon using Census data in Tamil Nadu. In her detailed analysis she had shown that the participation rate seems to worsen with even higher levels of education. Kodoth and Eapen (2005) had shown that the work participation among women was negatively related with educational attainment in Kerala as well. Arguably, the incentive for females to undergo education for entering the labour market seems to be declining as seen in the labour participation rates, yet more share of females are undergoing education, at least till school level.

The obverse of the figures in Table 10 also represents participation in domestic activities since women undergoing education are not counted (see footnote 9). As is evident from the table, female educational attainment and participation in domestic activities move in the same direction. Females engaged in domestic activities had been increasing continuously through out the period 1983 to 2009-10. Whatever the level of education the share of women engaged in domestic activities seems to have by and large increased through out the period 1983 to 2009-10. This probably points that education, arguably a liberating

Table 10: Level of Education Attainment and LFR of Women excluding those undergoing Education

| | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009 -10 |
|--------------------------------|------|---------|---------|-----------|---------|----------|
| Rural | | | | | | |
| Not literate | 44.8 | 46.5 | 43.1 | 28.7 | 30.8 | 25.8 |
| Literate but less than primary | 44.7 | 35.6 | 44.0 | 28.6 | 33.2 | 30.0 |
| Primary | 43.0 | 45.3 | 41.9 | 30.8 | 33.2 | 30.6 |
| Middle | 37.5 | 41.8 | 36.2 | 25.5 | 32.2 | 28.7 |
| Secondary | 50.2 | 53.8 | 40.3 | 26.2 | 32.0 | 24.9 |
| Graduate and above in | 56.7 | 63.0 | 61.2 | 46.2 | 41.9 | 32.4 |
| Total | 44.6 | 45.7 | 42.8 | 28.6 | 31.7 | 27.2 |
| Urban | | | | | | |
| Not literate | 29.3 | 28.7 | 28.1 | 15.6 | 17.4 | 13.8 |
| Literate but less than primary | 29.3 | 27.4 | 28.5 | 15.0 | 19.2 | 16.6 |
| Primary | 26.0 | 26.9 | 27.1 | 14.4 | 19.6 | 17.6 |
| Middle | 22.4 | 25.1 | 23.8 | 13.5 | 15.3 | 16.0 |
| Secondary | 42.8 | 40.6 | 34.6 | 16.8 | 15.1 | 12.5 |
| Graduate and above in | 61.1 | 61.6 | 57.2 | 33.7 | 32.3 | 26.0 |
| Total | 30.9 | 31.4 | 30.6 | 16.8 | 19.8 | 17.3 |

Source: Same as Figure 1.

process, per se does not guarantee entry to the labour market for the educated.

Three lines of argument support this trend. Firstly, studies do point out that education among women does not necessarily increase their 'autonomy' in substantive ways, rather it may only lead to modernisation and internalisation of patriarchal norms. Jeffery and Jeffery (1994) conclude thus "Education for girls, for example, seems to be about the inculcation of manners and middle class morality, of newer forms of respectable behavior. They may have the effect of subduing women even further." (p. 166). Basu (2002) too argue that schooling seem to inculcate in girls discipline, self restraint, patience, routine and obedience to authority. Thus modernising through education that is designed to perpetrate patriarchal values may only subordinate women rather than empower. Kodoth and Eapen (2004) too argue in similar lines, that education seems to be calibrated towards the demands of domesticity in Kerala.

Secondly, the withdrawal of women from labour market across all levels of education, especially the most conspicuous withdrawal of women with educational attainment of graduation and above probably point towards discouraged worker effect owing to various forms of discriminations within the labour market including occupational segregation, wage discrimination and social stigma towards women's work.

Thirdly, it may also be due to the gendered patterns of parental investment in education. Women are encouraged to enter general arts and science education, which have much lower labour demand, compared to technical and professional education. But technical and professional education also incurs substantial costs compared to general arts and science education and therefore maybe preferentially allocated to males in the society. Moreover, education for women in patriarchal societies may be aimed at enhancing the women's status reproduction capacity and hence may not require technical and professional education.

In effect, be it modernisation of patriarchal norms through education, discouraged worker effect or gendered educational patterns, all these apparently suggest that the gender norms in India's patriarchal society provide the ground rules for women's withdrawal from the labour force. Further in depth studies in this direction may provide conclusive evidence of the arguments made above.

7. Casualisation and Marginalisation of Women Workers at the Lower Spectrum

In this backdrop of withdrawal of women from the labour market with rising income and education, the residual that lie within the labour market do so, under various conditions of duress. About 80 percent of total rural women who were working engage largely in the agriculture sector without any major shift in their activity through out the period 1983 to 2009-10 (Table 11). The only visible change was in the recent period when about 5 percent share of women shifted to construction sector. During the same period however the rural male employment share in agriculture declined from 77.5 percent to 62.5 percent (NSSO, 2009-10), and diversified into other sectors, especially the services sector. It is probably the case that women from households that suffer from multiple and overlapping modes of marginalisation through caste, class, physical disabilities and other forms of exclusion enter the workforce in non-traditional sectors and occupations as low paid vulnerable workers in sectors such as 'construction' and 'other services' of which paid domestic help is one of the most important component, in search of eking out a living.

The process of entry of this vulnerable segment of women into the labour market is by and large through the transition from feudal agrarian economies to capitalist agricultural practices. The share of households with no land for cultivation or marginal landholding had been increasing since 1982-83 from 51 percent to 66.5 percent in 2008-09 while the share of all larger classes had been declining (GOI, 2011). Along with

Table 11: Industrial Classification of Women Workers (UPS) as percent share

| Industry | Agriculture | Mining & quarrying | Manufacturing | Electricity Gas & Water | Construction | Trade, Hotel & restaurant | Transport Storage and Communication | Other Services | Total |
|--------------|-------------|--------------------|---------------|-------------------------|--------------|---------------------------|-------------------------------------|----------------|-------|
| Rural | | | | | | | | | |
| 1983 | 86.2 | 0.4 | 6.5 | - | 0.9 | 2.2 | 0.1 | 3.4 | 100 |
| 1987-88 | 82.5 | 0.5 | 7.5 | - | 3.2 | 2.4 | 0.1 | 3.7 | 100 |
| 1993-94 | 84.7 | 0.5 | 7.5 | - | 1.1 | 2.2 | 0.1 | 4 | 100 |
| 1999-2000 | 84.1 | 0.4 | 7.7 | - | 1.2 | 2.3 | 0.1 | 4.3 | 100 |
| 2004-05 | 81.4 | 0.4 | 8.7 | 0 | 1.7 | 2.8 | 0.2 | 4.6 | 100 |
| 2009-10 | 78.9 | 0.3 | 7.6 | 0 | 4.2 | 3.1 | 0.3 | 5.7 | 100 |
| Urban | | | | | | | | | |
| 1983 | 25.5 | 0.8 | 26 | 0.2 | 3.7 | 9.9 | 1.7 | 31.4 | 100 |
| 1987-88 | 21.8 | 0.9 | 26.9 | 0.3 | 4.3 | 10.9 | 1.2 | 33.6 | 100 |
| 1993-94 | 19.3 | 0.7 | 23.6 | 0.3 | 4.9 | 10.7 | 1.5 | 38.8 | 100 |
| 1999-2000 | 14.6 | 0.4 | 23.2 | 0.2 | 5.5 | 16.4 | 2 | 37.8 | 100 |
| 2004-05 | 14.7 | 0.2 | 25.4 | 0.2 | 4.5 | 13.1 | 1.6 | 40.2 | 100 |
| 2009-10 | 11.8 | 0.3 | 25.8 | 0.4 | 5.1 | 12.4 | 1.5 | 42.7 | 100 |

Source: Same as Figure 1.

the rise in land less and marginalised land holding there had been a widening of inequality in rural landholdings (Rawal, 2008), wherein the Gini coefficient of ownership of land other than homestead increased from about 0.73 to about 0.76 during 1992 to 2003-04. With consolidation of land holdings by the capitalist farmers on the one hand, land alienation and land fragmentation on the other, peasant households enter into monetized labour relations. The peasant households now alienated from land search for other livelihood options which include remaining as agriculture worker, searching for employment options in other sectors, and migrating to other regions.

The position of women, whether in landed or landless households, is vulnerable. In landed peasant households they participate as unpaid family labour. In landless agricultural households they participate as wage labour, mostly casual wage workers. The share of casual wage labour among female workers in landless households is about 80 percent through out the period 1983 to 2009-10 (Table 12). As the land size increased this share declines and reaches just less than ten percent, correspondingly unpaid family labour increased to 90 percent. Thus while landlessness led to casualisation of women labour, household's ownership of land encouraged unpaid family labour.

The dominant trend is that both among the landed and the landless there is an increasing tendency to withdraw female labour power with the passage of time (Table 12). Between 1983 and 2009-10 the participation rate of women declined from 40.7 percent to 20.2 percent. But the share of women population among the landless increased from 29.7 percent to 40.4 percent during the same period. This would mean that even if the female LFPR of the landless households declined substantially, the number of women actually participating in the labour market among the landless may not have reduced substantially, while for women with landed households, especially larger households, the number of women actually participating in labour would be shrinking.

Table 12: Distribution of Estimated Female Population, Labour Participation Rates, Type of Work and Land Size (in percent)

| | landless | < 4 hectares | 4 to 1 | 1 to 2 | 2 to 4 | > 4 hectares | Total |
|---|-----------|--------------|-----------|-----------|----------|--------------|-----------|
| Distribution of Estimated Female population | | | | | | | |
| 1983 | 29.7 | 15.2 | 18.0 | 15.8 | 11.9 | 9.4 | 100 |
| 1987-88 | 30.1 | 34.2 | 21.0 | 8.8 | 4.2 | 1.7 | 100 |
| 1993-94 | 33.5 | 34.1 | 20.4 | 7.7 | 3.1 | 1.2 | 100 |
| 1999-2000 | 35.6 | 38.5 | 16.9 | 5.8 | 2.4 | 0.8 | 100 |
| 2004-05 | 37.3 | 17.4 | 20.5 | 12.8 | 7.8 | 4.2 | 100 |
| 2009-10 | 40.4 | 19.0 | 19.3 | 10.8 | 7.3 | 3.3 | 100 |
| LFPR of females | | | | | | | |
| 1983 | 43.4 | 38.6 | 40.8 | 38.1 | 39.8 | 40.5 | 40.7 |
| 1987-88 | 42.1 | 40.9 | 40.4 | 39.4 | 42.1 | 39.3 | 41 |
| 1993-94 | 39.3 | 37.1 | 35.8 | 35 | 35.4 | 33 | 37.3 |
| 1999-2000 | 23.4 | 21.6 | 25 | 23.8 | 23.1 | 20.3 | 23 |
| 2004-05 | 23.3 | 19 | 21.7 | 24 | 24.2 | 27.2 | 24.2 |
| 2009-10 | 20.1 | 16.3 | 21.6 | 23.3 | 22.2 | 22.9 | 20.2 |
| Share of Wage Labour in all Employment | | | | | | | |
| 1983 | 80 | 64 | 42 | 23 | 12 | 4 | 47 |
| 1987-88 | 77 | 47 | 26 | 13 | 9 | 5 | 47 |
| 1993-94 | 81 | 49 | 24 | 8 | 3 | 2 | 50 |
| 1999-2000 | 79 | 49 | 20 | 5 | 3 | 1 | 50 |
| 2004-05 | 75 | 59 | 48 | 40 | 27 | 12 | 43 |
| 2009-10 | 78 | 52 | 36 | 19 | 6 | 5 | 50 |

Source: Same as Figure 1.

And given that nearly 80 percent of the women who remain in the labour market among the landless and nearly 60 percent among the marginal land cultivators are wage workers, essentially casual wage workers, these trends shows the rising monetisation of women's work among poor vulnerable agricultural households.

The rise in landlessness and marginal farms made it necessary for females to move out of their households, leave their traditional status as unpaid family labour in search of casual employment. Though the share of women in labour force is declining, those who enter or remain in the labour market are increasingly women who do paid labour, rather than the conventional unpaid family labour. They are increasingly casual workers in the rural areas while they consist of both casual and regular workers in the urban areas. On an average about half of the women workers in each of the economic sectors are wage laborers, except for services sector in the urban areas, where the share of wage labour is as high as 70 percent or more.

8. Summary and Conclusion

The female LFPR had been very low and yet declining in India at least since 1972-73. There had been a steady de-feminization of labour force such that the share of females in the labour force had been declining. This declining female LFPR also has a negative linear relation with income levels, visible both in cross-sectional and inter-temporal comparisons. This is not in conjunction with the feminization-U hypothesis which predicts higher female LFPR at poorest and richest strata of the economy. Inter-temporal analysis of women LFPR across age categories also rejects the life cycle hypothesis as an explanation to the long term decline in female labour participation rates.

Gender relations may throw more light on the phenomenon of declining labour participation and increasing unpaid domestic activity participation among women. The declining labour participation with rising income levels seems to be a strategy to reduce the 'double burden'

of work among women. Valorization of domestic activities and stigmatisation of paid work among women by the patriarchal society limits their choice to domestic activities rather than paid work. The quest for social status and social mobility, with rising incomes, seems to be associated with domestication of women and discouragement of women's participation in the labour market. The traditional caste based stigma on women's participation in gendered public spaces, especially paid work, may be gaining strength with rising well being in India's patriarchal society. Some evidence on this direction comes from the fact that with increasing monetization of labour market relations women's labour participation is found declining. Also, even participation in domestic allied activities, that require spatial mobility and interaction with the local world outside their home, is low with high income levels.

There is little evidence to support the argument that rising participation in education is empowering women to enter the labour market. While share of girl children and young adult females attending education in their respective age groups is increasingly becoming a priority, education does not perse prepare them to participate in the labour market, rather it seems to increase their probability of engaging in domestic activities. Education, it seems, does not necessarily empower and enhance women's autonomy in India, but may be helping in modernising and internalising the patriarchal norms. In an economy where employment growth has been more or less stagnant in the long run, the declining labour market participation among the educated women probably also points to discouraged worker effect and discrimination in the market for education.

Given this backdrop of female withdrawal from the labour market with increasing income levels, the residual that enter the labour market are amongst the most vulnerable households. Probably, women in households that suffer from multiple and overlapping modes of marginalization of caste, class, physical disabilities and other forms of

exclusion enter the workforce in search of eking out a living. This needs to be substantiated with further analysis. But preliminary evidence show that landlessness and land marginalisation encourages women's entry in the labour market as casual labour and women's work among poor vulnerable agricultural households is increasingly being transacted through the labour market, than as unpaid family labour.

The feminization-U hypothesis essentially predicts rise in female participation with increasing market efficiency in the course of economic development. However, the rise in labour participation of women in many countries of the Nordic Europe, has been the result of public funded efforts at freeing women from care-giving responsibilities and at the same time generating public funded employment for women. In Cuba the high and rising female labour force participation was propelled mainly by educational policies that especially aimed at increasing technical and professional skills of women and enhancing public employment opportunities (CDA, 2013). Given the above analysis, in India, the turn around in female labour participation cannot be addressed without taking cognizance of the gender and social norms attached to women's work, and the State itself becoming the habinger of change, instead of mirroring the existing gendered norms and patriarchal institutional arrangements.

In India, state policies, yet, seem to perpetuate the gender roles assigned to women. Firstly, the statistical data collection process in itself conceals much of the economic activities of women. The subsidisation of final products in value added through unpaid family work by women in own account enterprises, or through underpaid work of women in all other establishments gets reflected in the Net Value Added as profits. The unpaid work and home based work, probably does not get enumerated in the employment surveys as well, being accounted as unpaid domestic activity. Secondly, the government itself does not provide the 'Scheme Workers', women workers that are involved in

various government development and welfare schemes, the identity of being workers. Workers in interventions such as Integrated Child Development Scheme (ICDS) and Accredited Social Health Activist (ASHA) are identified as care givers and development volunteers, and not as workers thus reinforcing their social reproduction roles.

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Appendix 1

Coverage of Women's Work in NSS Data in the context of 'Defeminization'.

The declining trends in female participation as viewed in NSS data had been under the scanner for some time due to many issues. One, the definition of work as defined by NSS does not take women's unpaid domestic work into consideration. Secondly, there are reporting deficiencies wherein both the enumerator and the head of the household tend to under-report women's participation in the labour market due to stigma attached to women's paid work. Thirdly, newer forms of work that are flexible and are home based work are also under-reported as they are accounted as leisurely activity and not work. Hirway (2012) shows that the category code 93, pertaining to domestic activities and allied activities, are a non-negligible segment of the activity status, especially among women when time use survey data is analysed. Many of the allied activities are supporting activities to the household's income generating activities. However, they get accounted as domestic work.

Another indicator that women's work is probably not captured from NSSO data comes from the NREGS data set. Sudarshan (2011) shows that in many regions the share of women registered as NREGS workers is much higher than the males, and in comparison to the census figures the potential female participants in NREGS work is much higher. Despite NREGS however, the participation rate of females have declined in the period 2004-05 to 2009-10 when the NREGS was implemented. However, the number of days of employment provided through NREGS per person is typically around 40 to 45 person days per household in a year, hence may not get reflected in NSS definitions of work, either in principal or subsidiary type.

In the current work too the issues raised in Hirway (2012) is pertinent. In terms of cross sectional data analysis the definition of work, and under-reporting would provide lower estimates of labour force participation. Yet it is only reasonable to argue that when we compare

labour force participation across time periods, since the definitions do not change and magnitude of under-reporting remains more or less the same, the trends and patterns that are visible over a time are consistent and not a statistical artifact. In other works while the estimated numbers may be large or small depending on the definitions and coverage, the directions of these trends are consistent and not affected by these issues.

Secondly, there is also reason to believe that the measure of under-estimation though high may be declining. Hirway (2012) had shown that the domestic and allied activities are closely linked to income generating livelihood activities but since women are involved they get reported as allied activities. Yet, it needs to be noted that within the total domestic activities the share of pure domestic activities is consistently high for both rural and urban areas, while the share of allied activities is comparatively small. In rural areas more than 50 percent of the women engaged in activity code 93 is doing domestic activities only while in the urban areas it is as high as 75 percent or more throughout the period 1983 to 2009-10. Secondly, even among the poorest segments of the population this share is more than 45 percent and 70 percent throughout the period for rural and urban areas respectively. Thirdly, the share of pure domestic activity had been consistently rising both in the rural and urban areas, among the poor as well as the better off. From the above observations, it can be argued that while indeed women's work is underestimated there is increasingly a consistent mobility towards pure domestic activities rather than mixed activities, among all income categories in both rural and urban areas. Thus the segments that are probably underestimated are shrinking.

Time use survey results are considered superior in understanding women's labour participation. In support of the de-feminization story, Eswaran et al (2012) too find evidence, using Time Use Survey of 1998, that with women tend to withdraw time allocation towards livelihood related activities as income levels rise as a way to improve social status.

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APPENDIX 2

Table 1: Female Labour Force Participation Rate (in percent) by MPCE Class 1983 to 2009 -10

| HHMPCE Percentiles | Rural | | | | | | | | | |
|--------------------|-------|---------|---------|-----------|---------|---------|--|--|--|--|
| | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 | | | | |
| 0-10 | 45.06 | 45.91 | 42.77 | 25.21 | 36.98 | 30.63 | | | | |
| 10-20 | 45.1 | 43.82 | 41.27 | 24.7 | 29.5 | 21.93 | | | | |
| 20-30 | 43.4 | 43.96 | 38.93 | 24.55 | 26.24 | 21.47 | | | | |
| 30-40 | 42.67 | 42.73 | 39 | 23.99 | 23.99 | 20.25 | | | | |
| 40-50 | 41.04 | 41.34 | 38.57 | 23.79 | 22.65 | 19.04 | | | | |
| 50-60 | 40.21 | 42.62 | 36.46 | 23.26 | 21.38 | 16.82 | | | | |
| 60-70 | 39.75 | 40.76 | 34.93 | 22.83 | 19.06 | 16.59 | | | | |
| 70-80 | 38.01 | 39.36 | 34.03 | 22.01 | 18.86 | 17.52 | | | | |
| 80-90 | 37.31 | 39.28 | 33.61 | 20.66 | 19.04 | 14.88 | | | | |
| 90-100 | 36.38 | 39.75 | 31.65 | 18.4 | 15.74 | 16.82 | | | | |
| Total | 41.2 | 42.36 | 37.77 | 23.34 | 24.94 | 20.75 | | | | |
| 0-10 /90-100 | 0.81 | 0.87 | 0.74 | 0.73 | 0.43 | 0.55 | | | | |
| 0-10/40-50 | 1.10 | 1.11 | 1.11 | 1.06 | 1.63 | 1.61 | | | | |
| 40-50/90-100 | 1.13 | 1.04 | 1.22 | 1.29 | 1.44 | 1.13 | | | | |

cont'd.

| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
|--------------------|-------|---------|---------|-----------|---------|---------|
| Urban | | | | | | |
| 0-10 | 31.03 | 30.11 | 29.23 | 15.04 | 28.25 | 23.23 |
| 10-20' | 27.25 | 27.63 | 26.29 | 12.95 | 19.58 | 16.75 |
| 20-30 | 26.11 | 25.97 | 24.76 | 13.97 | 16.46 | 13.71 |
| 30-40 | 24.23 | 24.69 | 21.96 | 11.96 | 15.04 | 12.08 |
| 40-50 | 21.77 | 23.68 | 22.55 | 11.6 | 13.46 | 11.43 |
| 50-60 | 22.11 | 20.5 | 19.94 | 10.59 | 11.7 | 10.49 |
| 60-70 | 21.97 | 22 | 20.63 | 10.66 | 11.35 | 10.18 |
| 70-80 | 21.09 | 20.98 | 19.57 | 10.77 | 12.25 | 9.42 |
| 80-90 | 23.96 | 26.02 | 23.27 | 12.09 | 11.16 | 10.75 |
| 90-100 | 32.7 | 33.66 | 29.73 | 15.81 | 13.32 | 12.92 |
| Total | 25.39 | 25.59 | 23.9 | 12.62 | 14.82 | 12.84 |
| 0-10 /90-100 | 1.05 | 1.12 | 1.02 | 1.05 | 0.47 | 0.56 |
| 0-10/40-50 | 1.43 | 1.27 | 1.30 | 1.30 | 2.10 | 2.03 |
| 40-50/90-100 | 0.67 | 0.70 | 0.76 | 0.73 | 1.01 | 0.88 |

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th, 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

Table 2: Level of Income and Participation of Women in Domestic activities

| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
|--------------------|-------|---------|---------|-----------|---------|---------|
| Rural | | | | | | |
| 0-10 | 23.11 | 20.09 | 24.3 | 25.19 | 31.18 | 38.08 |
| 10-20' | 25.1 | 23.43 | 28.64 | 29.61 | 31.72 | 39.8 |
| 20-30 | 26.48 | 24.82 | 32.2 | 32.68 | 32.69 | 38.77 |
| 30-40 | 28.37 | 26.48 | 33.21 | 34.83 | 34.63 | 38.8 |
| 40-50 | 29.61 | 28.4 | 34.37 | 36.16 | 35.17 | 39.98 |
| 50-60 | 30.89 | 28.69 | 37.14 | 37.92 | 36.96 | 41.08 |
| 60-70 | 31.67 | 30.1 | 38.23 | 40.28 | 38.6 | 41.51 |
| 70-80 | 34.52 | 32.96 | 40.36 | 41.97 | 39.65 | 41.27 |
| 80-90 | 35.11 | 33.24 | 42.25 | 45.08 | 40.63 | 43 |
| 90-100 | 37.49 | 33.23 | 44.22 | 48.68 | 42 | 43.16 |
| Total | 29.78 | 27.27 | 34.35 | 35.84 | 35.3 | 40.08 |

cont'd..

| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 |
|--------------------|-------|---------|---------|-----------|---------|---------|
| | Urban | | | | | |
| 0-10 | 30.43 | 30.45 | 32.27 | 34.92 | 38.04 | 41.02 |
| 10-20' | 34.97 | 34.41 | 36.9 | 40.27 | 43.78 | 45.13 |
| 20-30 | 36.83 | 37.02 | 38.95 | 42.67 | 43.47 | 47 |
| 30-40 | 39.51 | 38.24 | 41.49 | 45.52 | 43.99 | 47.29 |
| 40-50 | 39.91 | 39.76 | 41.58 | 46.15 | 45.74 | 48.89 |
| 50-60 | 41.42 | 42.54 | 42.87 | 49.52 | 47.09 | 50.69 |
| 60-70 | 41.87 | 42.35 | 43.8 | 50 | 48.11 | 50.63 |
| 70-80 | 43.13 | 43.37 | 44.69 | 49.73 | 47.89 | 50.33 |
| 80-90 | 41.48 | 40.74 | 42.87 | 50.49 | 49.1 | 51.15 |
| 90-100 | 39.07 | 36.01 | 39.95 | 49.36 | 46.48 | 48.01 |
| Total | 38.46 | 38.1 | 40.19 | 45.32 | 45.61 | 48.18 |

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th, 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

Table 3: Female Participation in Education and Income Classes

| | | Rural | | | | | | | |
|--------------------|-------|---------|---------|-----------|---------|---------|--|--|--|
| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 | | | |
| 0-10 | 3.68 | 4.1 | 8.39 | 15.76 | 12.37 | 15.15 | | | |
| 10-20' | 4.46 | 5.27 | 9.6 | 17.1 | 18.78 | 22.43 | | | |
| 20-30 | 5.85 | 5.8 | 10.64 | 17.96 | 20.84 | 24.28 | | | |
| 30-40 | 6.66 | 6.79 | 11.27 | 17.84 | 22.96 | 25.11 | | | |
| 40-50 | 7.26 | 7.56 | 11.98 | 18.84 | 23.76 | 26.7 | | | |
| 50-60 | 8.62 | 7.75 | 13.06 | 18.85 | 24.81 | 27.51 | | | |
| 60-70 | 9.23 | 8.8 | 13.85 | 19.83 | 25.62 | 26.76 | | | |
| 70-80 | 10.09 | 9.23 | 13.51 | 19.91 | 24.56 | 26.2 | | | |
| 80-90 | 10.82 | 10.49 | 13.81 | 20.37 | 23.3 | 26.83 | | | |
| 90-100 | 11.96 | 10.8 | 13.95 | 20.72 | 25.26 | 24.92 | | | |
| Total | 7.59 | 7.22 | 11.65 | 18.42 | 21.33 | 23.79 | | | |
| 0-10 /90-100 | 3.25 | 2.63 | 1.66 | 1.31 | 2.04 | 1.64 | | | |
| 0-10/40-50 | 0.51 | 0.54 | 0.70 | 0.84 | 0.52 | 0.57 | | | |
| 40-50/90/100 | 0.61 | 0.70 | 0.86 | 0.91 | 0.94 | 1.07 | | | |

| | | URBAN | | | | | | |
|--------------------|-------|---------|---------|-----------|---------|---------|--|--|
| HHMPCE Percentiles | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009-10 | | |
| 0-10 | 12.6 | 12.48 | 16.3 | 21.0 | 15.3 | 19.2 | | |
| 10-20 | 14.92 | 14.3 | 19.0 | 23.6 | 20.5 | 24.0 | | |
| 20-30 | 16.46 | 16.4 | 20.4 | 24.1 | 23.2 | 24.4 | | |
| 30-40 | 16.87 | 17.92 | 22.0 | 26.7 | 24.8 | 25.8 | | |
| 40-50 | 20.36 | 19.38 | 22.4 | 26.0 | 25.8 | 26.9 | | |
| 50-60 | 19.87 | 21.63 | 26.0 | 25.8 | 28.5 | 26.7 | | |
| 60-70 | 20.78 | 21.08 | 23.9 | 26.3 | 27.8 | 26.9 | | |
| 70-80 | 21.65 | 22.65 | 24.7 | 27.5 | 26.7 | 28.3 | | |
| 80-90 | 22.52 | 22.45 | 24.4 | 26.7 | 27.3 | 26.1 | | |
| 90-100 | 19.27 | 20.32 | 21.4 | 25.2 | 27.6 | 26.6 | | |
| Total | 18.18 | 18.4 | 21.8 | 25.13 | 25.11 | 25.64 | | |
| 0-10 /90-100 | 0.65 | 0.61 | 0.76 | 0.83 | 0.55 | 0.72 | | |
| 0-10/40-50 | 0.62 | 0.64 | 0.73 | 0.81 | 0.59 | 0.71 | | |
| 40-50/90/100 | 1.06 | 0.95 | 1.05 | 1.03 | 0.93 | 1.01 | | |

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

Table 4: Level of Education and LFPR of Women

| | 1983 | 1987-88 | 1993-94 | 1999-2000 | 2004-05 | 2009 -10 |
|--------------------------------|-------|---------|---------|-----------|---------|----------|
| | Rural | | | | | |
| Not literate | 44.4 | 46.3 | 42.6 | 28.1 | 29.9 | 25.2 |
| Literate but less than primary | 27.8 | 23.5 | 22.6 | 11.6 | 12.8 | 11.9 |
| Primary | 25.8 | 33.1 | 29.4 | 18.3 | 20.0 | 18.4 |
| Middle | 28.8 | 31.6 | 27.0 | 17.7 | 22.9 | 19.9 |
| Secondary | 39.9 | 44.2 | 31.3 | 19.2 | 23.8 | 17.5 |
| Graduate and above in | 45.9 | 55.9 | 56.7 | 40.7 | 32.0 | 23.2 |
| Total | 32.1 | 42.4 | 37.8 | 23.4 | 24.9 | 20.8 |
| | Urban | | | | | |
| Not literate | 28.7 | 28.3 | 27.6 | 15.2 | 16.7 | 13.4 |
| Literate but less than primary | 14.1 | 13.7 | 13.2 | 6.1 | 7.9 | 6.4 |
| Primary | 17.7 | 18.1 | 17.3 | 8.6 | 12.0 | 10.7 |
| Middle | 16.0 | 17.9 | 16.8 | 9.3 | 11.1 | 11.6 |
| Secondary | 34.1 | 32.3 | 25.6 | 12.3 | 11.4 | 9.5 |
| Graduate and above in | 56.9 | 57.5 | 52.7 | 30.3 | 26.0 | 20.4 |
| Total | 25.3 | 25.6 | 23.9 | 12.6 | 14.8 | 12.8 |

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

Table 5: Per 1000 Distribution of Workers (UPSS) According to Category of Employment

| | Males | | | Females | | |
|---------|---------------|--------------|-------------|---------------|--------------|-------------|
| | self employed | regular wage | casual wage | self employed | regular wage | casual wage |
| | Rural | | | | | |
| 2009-10 | 535 | 85 | 380 | 557 | 44 | 399 |
| 2004-05 | 581 | 90 | 329 | 637 | 37 | 326 |
| 1999-00 | 550 | 88 | 362 | 573 | 31 | 396 |
| 1993-94 | 577 | 85 | 338 | 586 | 27 | 387 |
| 1987-88 | 586 | 100 | 314 | 608 | 37 | 355 |
| 1983 | 605 | 103 | 292 | 619 | 28 | 353 |
| | Urban | | | | | |
| 2009-10 | 411 | 419 | 170 | 411 | 393 | 196 |
| 2004-05 | 448 | 406 | 146 | 477 | 356 | 167 |
| 1999-00 | 415 | 417 | 168 | 453 | 333 | 214 |
| 1993-94 | 417 | 420 | 163 | 458 | 284 | 258 |
| 1987-88 | 417 | 437 | 146 | 471 | 275 | 254 |
| 1983 | 409 | 437 | 154 | 458 | 258 | 284 |

Source: Estimated from NSS unit level data, 38th, 43rd, 50th, 55th, 61st and 66th round on CDROM published by Central Statistical Organisation, Government of India.

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