The labour market dilemma of young urban women in India: An outcome of family welfare optimization

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The labour market dilemma of young urban women in India:
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Abstract  
This paper explains the patterns and determinants of labour market participation behaviour of young urban women in India using a theoretical model. Based on the National Sample Survey (NSS) data, and through probit regression results, it argues that the labour market participation decision of young women is an outcome of the joint utility maximization behaviour of their family. The standard of living of the family, market wage, other family characteristics including number of children, adult women in the family, elderly members, and occupation, and gender of the head etc., are significantly determining their labour market participation; apart from women’s individual characteristics like age (experience) and level of education and training. The empirical result also reflects that the “discouraged worker effect” is stronger than “added worker phenomenon”. In this context, measure to create jobs in modern services could help to boost the stagnant female labour force participation upward in urban India.

1. Introduction

The Indian economy has been experiencing a period of structural transformation starting from 2004-05 (Mehrotra & Parida, 2021), and the country is also experiencing a demographic surplus as of now with a relatively higher share of youth (James, 2008; Misra, 2015; Singh, S Kumar, 2021). The optimal utilisation of this surplus, to convert it into a dividend can help boost the transformation and aid the growth of the economy. For this to happen, increasing the labour force participation rate of women (which has reached at the lowest) is necessary. The role of government is very crucial in this context. Moreover, the endogenous growth models, starting with the Solow model of economic growth (Solow, 1956 & 1992), have also emphasized the role of an increasing female workforce participation in fostering growth and development of an economy (Ali, et al., 2021; Apostol et al., 2022; Barro, 2000; Ehrlich & Lui, 1997; Ha & Howitt, 2007; Martin & Sunley, 1998; Walters, 1995; Winter-Ebmer, 1994).

The Female Labour Force Participation Rates (hereafter referred to as FLFPR) in India have however been exhibiting declining and stagnant trends in both rural and urban areas, even in the face of a demographic surplus and structural transformation of the economy. The declining participation rates in the rural areas have been attributed to the structural transformation and transition of the Indian economy from a low income to low middle income country in the second half of the 2000s (Mehrotra and Parida, 2017). Post the second stage of reforms in 2004-05, not only the contribution of agriculture to the GDP decreased, but so did the work participation rate. This was in response to increasing growth rates and income levels, leading to withdrawal of women from labour force to cater to domestic duties (Mehrotra and Parida, 2017), or to participate (girls previously used to engage in agriculture and allied works) in various levels of education (Hirway, 2012; Kannan & Raveendran, 2012). The percentage of women having attained higher education has increased substantially (from about 14 percent to about 40 percent during 2004-05 and 2019-20) suggesting an increased number of skilled female workers. High-skilled and newly educated females stand a greater chance of securing employment in high-status jobs in the post transition period.
However, even after a decade of structural transformation, the labour force participation rate of urban women has almost remained stagnant. This suggests a gap in employment and training of these females in the urban context (Sundari, 2020; Desai & Joshi, 2019; and Mehrotra & Parida, 2017). This should be a cause of concern as the ability of the urban women with better opportunities and lesser social restrictions enable them to secure better access to labour market and better employment. The urban women who thus, are currently neither enrolled in education nor training (passed out girls) nor in jobs, are either unemployed or constitute the added and discouraged workers (Parida and Pattayat, 2022). This poses an important policy question before the state, with regard to securing the educated and skilled females with non-farm jobs and gaining from the gender dividend. This paper develops a theoretical model to understand the work participation behaviour of urban young women, and empirically examines factors determining their labour market participation decision. Moreover, it identifies a few prospective sub-sectors (within the manufacturing and service sectors) in which educated young women could be accommodated.

The rest of the paper is organized into six sections. Section two provides a brief review of past studies and it outlines the contributions of this study. Section three provides the broad trends and patterns of urban young women’s labour market participation. The theoretical model of the study is explained in section four. Section five explains the data and econometric methodology. The empirical results and discussion on the factors determining labour force participation decision of young urban women is given in section six. Section seven, identifies the prospective sectors in which employment opportunities for young women could be generated. Finally, section eight concludes the paper along with the policy suggestions.

2. A brief review of literature

2.1 Review of theoretical literature

The review of past studies reveals that there exist mainly two strands of theoretical literature (viz., the macro and micro theories), which explain the women’s labour market participation. First, the macroeconomics framework analyses the relationship between FLFPR and economic growth over the years. We begin with the modernization-neoclassical approach. This suggests that a direct and proportional relationship between the FLFPR and economic growth exists. While, the second set of studies (cross-country) have highlighted the U-shaped curve hypothesis (Yildirim & Akinci, 2020). Among the two, the latter has been principal to the understanding of the relationship between the female labour force participation and economic growth, ever since the pioneering work of Goldin (Goldin, 1994), in which he observed a U-shaped relationship between FLFPR and economic growth. Implicit in this relationship were the income and substitution effects – a stronger negative income effect over positive substitution effect results in the decline of female labour force participation as a country starts moving from low income to middle income phase. While the opposite starts happening as the country progress further in the path of economic development. It is due to rising education and creation of service sector jobs for women, which results in upward part of the U-shaped curve (Goldin, 1994).

The second strand of theoretical studies argues about the role of individual characteristics and family level factors. According to this view, women participate in the labour market either to maximize their own utility function or to maximize their households’ total welfare (see Becker, 1965; Bardhan 1979; Franz and Kawasaki, 1981; Goldin 1983; Heckman and MaCurdy, 1980; Renaud and Siegers, 1984; and Kooreman and Kapteyn, 1984). The findings

2.2 Review of empirical studies

Several panel studies conducted by Yildirim and Akinci (2020) for 79 middle income countries; Altuzarra, et al (2019) for 28 European Union countries; Choudhry and Elhorst (2018) for 40 countries; Verick (2018) for 172 countries; Lechman (2014), and Lechman and Kaur (2015) for 162 countries; Tam (2011) for 130 countries; Luci (2009) for 184 countries; Olivetti (2013) for OECD countries; Tsani, Paroussos, Fragiadakis, Charalambidis, & Capros (2013) for South Mediterranean countries; Fatima and Sultana (2009) for Pakistan; Tansel (2001) for Turkey; Suh (2016) for South Korea; Mehrotra and Parida (2017) for India; Su, Li, Tao, and Lobont (2018) for 6 Asian economies including India, empirically proved this hypothesis. Few other studies, however, did not find evidence supporting the u-shaped relationship in case of certain countries (Costagliola, 2021; Sundari, 2020; Lahoti and Swaminathan, 2016; and Verme, 2015). Gaddis and Klasen (2014), too, claimed that the evidence in favour of the hypothesis was feeble while Bhalla and Kaur (2011) found evidence for an inverted U-shaped relationship instead.

The studies conducted in India, by and large, have noted the falling FLFPR (rural and urban areas) during the periods of higher economic growth (Chaudhary and Verick, 2014; Mehrotra and Parida, 2017; and Mehrotra and Sinha, 2017). In a bid to understand these decreasing trends, the extant literature has heavily focussed on the determinants of FLFPR. While traditionally, supply side factors have been invoked to explain the drop in FLFPR, some studies have emphasised on the role of demand side factors (Chatterjee, Murgai & Rama, 2015). Lack of sufficient alternative employment opportunities for women in the face of a shift in employment pattern away from agriculture as the employment pattern changes in the economy has been identified as the principal long run determinant of the fall in FLFPR (Chatterjee et al, 2015; Rustagi, 2013; Deshpande and Singh, 2021; Sundari, 2020; Roychowdhary, 2021; and Kapsos, Bourmpoula & Silberman, 2014). Technological changes restricting the movement of women across sectors (Mahapatro, 2013), gender stereotypes and occupational segregation coupled with other challenges to women in the workplaces (Mehrotra and Sinha, 2017; Mahapatro, 2013; Bhalla and Kaur, 2011; and Rustagi, 2013) are other deterrents of female participation operating on the demand side.

Supply side factors, though dominant in conventional literature, are equally significant. Studies like Desai and Joshi (2013), Rustagi (2013), Neff, Sen and Kling (2012), Klasen and Pieters (2015), Andres, Dasgupta, Joseph, Abraham, & Correia (2017), and Su, et al. (2018), suggested that rising income of the households’ results in withdrawal of women from workforce (a strong income effect) hinting that India is currently operating on the left side of the U-curve. Dhanaraj and Mahambare (2017), Abraham (2013), Chatterjee and Sircar (2021), Costagliola (2021), Sosra, Mares, Didier, Guimarães, Rabate, Tang, & Tuske (2015), Mehrotra and Sinha (2017), and Jayachandran (2020) found patriarchal influences and gender norms which keep women engaged in unpaid domestic work as significant hurdles in women’s labour force participation. Chakraborty and Lokhandwala (2021)
emphasised on rising crimes against women as another factor keeping women away from paid work, especially in the urban milieu. Das and Zumbyte (2017) provided evidence that motherhood and responsibility of a child, too, keep women out of the workforce.

In spite of differing and often conflicting notions of what determines FLFPR, most studies like Andres, et al. (2017), Ghai (2018), Klasen and Pieters (2012), Afridi, Dinkelman, & Mahajan (2018), Bhalla and Kaur (2011), Neff, et al. (2012), and Mehrotra and Parida (2017) have observed a positive education effect on FLFPR. This is suggesting that acquiring higher levels of education by women results in increased workforce participation by them. Sosra, et al. (2015) however, suggested a negative relationship between education and participation rates due to lack of opportunities for high skilled females. As per Goldin (1994), the relationship between education levels and participation rates of women is significant in explaining the relationship of the latter with economic development. When the growth rate is low, male education levels rise more than that of the females resulting in lower and falling participation of women due to income effect. As women start attaining higher and higher levels of education and with the economy being able to provide employment opportunities to the now skilled women, their labour force participation increases (Goldin, 1994; Klasen and Pieters, 2012, 2015). This relationship has been observed in India by Kingdon and Unni (2001), Kanjilal-Bhaduri and Pastore (2018), Klasen and Pieters (2012, 2015), Andres, et al. (2017), and Shah (2021). Chatterjee, et al. (2018) have ascribed the low levels of participation at moderate education levels to the income effect. In the face of rising number of women with higher levels of education and still stagnant rates of participation, Klasen and Pieters (2015) suggested that this is due to the fact that women attain higher levels of education with a motive other than securing gainful employment i.e., increasing the odds of marrying a better educated and well earning spouse. Costagliola (2021) is, however, of the opinion that social norms restricting women from working can explain this paradox.

From the above review of both theoretical and empirical studies, it is clear that existing literature in India, by and large have focus on the macro level trends, patterns and determinants of female LFPR. Moreover, though a few other studies have tried to examine the impact of micro level factors (household and individual characteristics) on female labour force participation, their behavioural aspects are completely ignored in the existing literature. This study argues that the young women’s labour market participation is an outcome of the joint utility maximization behaviour of their family. Following the intra-household bargaining argument, this study develops a theoretical model, which helps to answer the broad question: whether the educated young women in urban India are the “added family labour” or they are “the discouraged workers” whose threshold wage is much higher than the prevailing market wage rate? What factors do constrain them, on the supply side, to participate in the labour market despite their higher level of education or a lower social restriction (as compared to their urban counterparts)? What are the prospective non-farm sectors, in which the young and educated girls can be accommodated in order to improve the overall female LFPR in urban India?

3. Labour force participation of urban women

3.1 Stagnant labour force participation despite rising educational attainments:

In urban India, the labour force participation rates of women declined as the economy passed through initial stages of development till 1993-94. However, the participation rates did not rise significantly in the post-transformation era as warranted by the literature. The labour force participation rates have remained stagnant for the last three
decades ranging between 15 to 17 percent. Though the FLFPR of young women is slightly higher than the overall women LFPR (1 to 2 percentage points), it has also remained stagnant. LFPR of females aged 0-14 years has exhibited a continually declining trend suggesting that the segment of child labour has been declining (Figure 1: Panel A). In the context of a transforming economy, the stagnant women LFPR should be a cause of concern given the fact that other countries of the Global North which experienced a demographic dividend in the past had witnessed rising trends.

To understand the stagnant trend, the FLFPR of young women is split into Workforce Participation Rate (WPR) and Unemployment Rate (UR). Furthermore, we have compared WPR and UR, with participation rates in “Domestic Duties” and “Education”. These figures reveal a slightly disturbing picture. The participation in domestic duties has been declining and that in education is increasing. In fact, the participation in education increased massively from 25.1 percent in 2004-05 to about 32 percent in 2011-12 and further to 36 percent during 2018-19. This suggests that women are moving out of the domestic arena to participate in education. But those are currently participating in education, will soon enter the labour market in search of work. This is a positive trend. However, the WPR has exhibited a declining trend and remained stagnant at around 13 percent. The open unemployment, as measured through UPSS, is increasing significantly and it has increased from 13 percent in 2011-12 to 27 percent in 2017-18 (Figure 1: Panel B). The increase in open unemployment and stagnancy of WPR in the face of rising participation in education can become problematic unless policy interventions are made in time.

<Figure 1 about here>

3.2 Exploring the socio-economic gradients of female LFPR

The patterns of LFPR of young urban females for the year 2019-20 shows that the participation rate of females belonging to the ST group is the highest (about 23 percent) as compared to women from other social groups. The participation rates of women from SC, OBC and other social groups are roughly about 20 percent (Figure 2, Panel A). This is in line with the literature warranting a higher participation rate among women of lower castes (socially marginalised) as it is more socially acceptable, while women from higher castes are ostracized from working (Kingdon & Unni, 2001 and Chatterjee et al, 2018). There is also a possibility that the lower caste women are engaged in informal and low paying jobs due to their low human capital endowments. More importantly they tend to face a relatively low level of social constraints as compared to the women who belong to the socially upper (in social hierarchy) caste families. The lack of access to formal job opportunities could also be a reason behind this.

Continuing with the social restriction arguments, we have examined the labour market participation of young women by their religious group. It is noted that the Muslim women have the lowest participation rates (Figure 2, Panel B), followed by Hindu. While the women belonging to religion “other” has the highest participation rate. This is revealed again, as religious/social norms often restrict Muslim women from venturing out of their homes (Bhalla & Kaur, 2011).

The participation rates of Divorced/Separated and widowed women were found to be the highest at 58 percent and 24 percent respectively (Figure 2 Panel C). This can be explained by their need to sustain themselves and

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1 Mainly Christian, Sikh and Others.
support their families. On the other hand, currently married women’s LFPR was 22 percent. These women are mostly having higher participation in domestic duties, care and familial responsibilities. This restricts their labour market participation. Furthermore, it is found that the participation of women who have never been married was the lowest among the group. This is as expected, owing to their participation in education (Rustagi, 2013 and Bhalla & Kaur, 2011).

To assess the pattern of LFPR of young women by economic group, MPCE (monthly per capita expenditure) data was used to form quintile categories. It is observed that with higher family income, the participation rates of women in labour market also increase (Panel D, Figure 2). A similar pattern was observed by Rustagi (2013) as well. It is possible that the rising standard of living allows women to pursue higher education goals and thus enhances their labour force participation rates. There is also the possibility of a reverse causal relationship between MPCE and women LFPR. As increased participation of women also leads to increase family income and hence the living standards of individuals and families. This aspect is further examined in the next section through econometric analysis.

Panel E of Figure 2 shows the LFPR of young women by their level of educational attainment. The U-shaped curve relationship between the level of education and women’s LFPR as suggested by the extant literature and works of Goldin (1994), Kingdon and Unni (2001), Klasen & Pieters (2012, 2015), Chatterjee et al (2018), and Shah (2021) can be observed in case of India as well.

3.3 Education and female LFPR

To examine the u-shaped trend pattern between labour force participation rates of young urban women and their level of educational attainment. A decomposition of labour force participation rates into workforce participation rates and unemployment rates has been done (Table 1). From the trends of LFPR, it can be observed that the labour force participation rates satisfy a U-shaped relationship with the education levels even across time – it declines as we move from illiterate to primary, middle and secondary level of education, but then it starts rising with the increasing educational attainments. It can also be seen that the labour force participation of illiterate women is high. But it is declining over the years (from about 29 to 20 percent during 2004-05 and 2019-20). The labour force participation of women with graduate and above level of general education, with formal vocational training, and technical qualifications has been higher across the years.

The WPR and UR however, suggest that the increasing trend of female labour force participation, especially for those women who have received technical training at above graduation level, is due to the rise in unemployment rates (from 29 percent in 2004-05 to 40 percent in 2019-20). The WPR have remained more or less stagnant and increased only slightly. For graduate and above, it has increased from 19 to 21 percent during 2004-05 and 2019-20. For formally vocational trained, it has declined from 37 percent to 35 percent during 2004-05 and 2019-20. For technically trained women (above graduation level), it has increased from 36 to 38 percent during 2004-05 and 2019-20. The lower levels of participation at middle and secondary levels of education are in tandem with the low workforce participation rates – this is in tune with the extant literature focussing on the U-shaped hypothesis (Klasen and Pieters, 2012 & 2015). The table 1 also suggests a rising trend in unemployment rates for women at
all levels of education across years. Another interesting aspect here is that the rate of increase in unemployment is much higher than the rate of decline in workforce participation. This is significant and requires policy attention to allow the economy to fully utilise the demographic dividend.

4. The optimization behavior of young urban women: A joint utility maximization model

Let’s assume that there are two agents in this model, the young women (W) and the other members of their family (O), who gain utility from the consumption of their own basket of composite goods ($X_W$ and $X_O$ respectively). The young women’s decision to participate in the labour market depends not only on their own utility function, but also in that of their family members. If their labour force participation increases the utility of their family, they would prefer it over spending their time in leisure and domestic duties. The opposite will be the case if the family members’ utility is inversely affected.

The joint utility maximization of the family and young urban women is explained with the help of Figure 3. The utility maximization of young females and other members of the family is portrayed in the second and fourth quadrants respectively, while the joint utility maximization of the entire family is shown in the first quadrant. The point “a” in the third quadrant represents the utility maximization position of the young women in case of their non-participation in the labour market and complete allocation of their time to domestic chores ($ik$) at wage $W_0$ (represented by $ky$), their reservation wage. At this stage, if the other members’ utility maximization is at “a’”, with the number of hours worked by them being “mo”, the joint utility ($U_F$) is maximized at point $A$.

Now suppose that the market wage increases to $W_1$ (represented by $lz$). Assuming non-participation of young women in the labour market (the initial point), keeping all other things constant, there are two possibilities. First, an increase in wage to $W_1$ may result in an increase in the hours spent in work by the other members of the family (from $mo$ to $no$) due to the domination of a stronger substitution effect over the income effect (represented by the movement of utility maximization point from “a” to “b’” in Quadrant II. Second, the increased wage may cause for them to continue spending the same amount of time in wage earning activities, if their substitution and income effects are equal. The case of a stronger income effect is not possible in the context of India, given that it is still in the developing phase with large scale informality. In the first case, the family’s utility would be maximized at point $B$ while in the second one, it will be maximized somewhere around point $B’$ (Quadrant I). However, neither of these points represents the highest utility attainable by the family. Given this context, there are two choices ahead of women: (i) to not participate in the labour market, and (ii) to participate in the labour market. If the increase in the wages and corresponding increase in the utility of the family results in a positive income effect for women, they will choose not to participate in the labour market. Instead, they will reduce the time allocated to domestic chores (by $ij$) and choose either education or leisure. This aspect is reflected by point $c$ in Quadrant II. If, however, they decide to participate in the labour market ($ih$), with their substitution effect dominating the income effect, the utility maximization point of women will shift to point $b$, and this will also result in the joint utility of the family reaching the highest possible point $C$ in Quadrant I (the point where young women as well as the other members of the family are participating in the labour market).
In addition to the diagrammatic explanation, the theoretical model is further explained through differential calculus. Assume that the young women aim at maximizing the joint utility function of their family subject to income and expenditure constraints. The formal representation model starts with the specification of the utility functions of the young women (W), other members of the family (O) and the joint utility function of the family (F). The utility functions of young females and other members are expressed as functions their respective composite commodities ($X_W$ and $X_O$ respectively) given in Equations 1 and 2. The joint utility function of the entire family when young women participate in the labour market is articulated in Equation 3, which is the additive function of utilities of young women and other members, expressed below:

$$U_W = f(X_W) \quad (1)$$

$$U_O = f(X_O) \quad (2)$$

$$U_F = U_W + U_O = f(X_W) + f(X_O) \quad (3)$$

where, $U_W$, $U_O$ and $U_F$ are the utility functions of young females, other members, and family respectively.

If, the female members do not participate in the labour market, the utility function of the family would be $U_F^*$. Young women are expected to participate in the labour market only when the difference between $U_F$ and $U_F^*$ is positive, i.e., only when the overall utility of the family registers an increase due to participation in the labour market by them. In case this difference is positive, females would further aim to maximize this difference in order to maximize the overall utility of their family as expressed (in Equation 4) in the Stone-Geary form (Geary, 1951; Stone 1954).

$$U_F > U_F^* = U_F - U_F^* > 0 \quad (4)$$

The maximization of the difference in family’s utilities in case of the varying decision of participation in the labour market by the women takes place under the consideration of the income and expenditure of the women and other members of the family. Equations 5 and 6 represent the income equations of these two groups – with $Y_W$, the income of the female members, being positively affected by the wage earnings ($h_Ww$) and negatively affected by the implicit cost of separation from their family and children ($\alpha C_O$); and $Y_O$, the income of other members of the family, being positively affected by the wage earnings ($h_0w$), rental income ($\delta N$), capital returns ($rK$), and other transfers ($\gamma$).

$$Y_W = h_Ww - \alpha C_O \quad (5)$$

$$Y_O = h_Ow + \delta N + rK + \gamma \quad (6)$$

The utility maximization function, thus, can be expressed as in Equation 7, which is a Lagrange function of the form: $\Phi(X_W, X_O, \mu_1, \mu_2)$

$$L = \Phi(X_W, X_O) - \{\mu_1 ((h_Ww - \alpha C_O) - P_0X_W) + \mu_2 ((h_Ow + \delta N + rK + \gamma) - P_0X_O)\} \quad (7)$$

Maximizing the above equation, we get the household’s or family’s demand/consumption function which is expressed as a vector ($Z$) of the variables like wages of the women ($h_Ww$) and other family members ($h_Ow$), the cost (subjective) borne by women due to separation from their family due to work participation ($\alpha C_O$), the rent accruable from land possessed ($\delta N$), the returns from capital investments ($rK$), and several other socio-cultural
norms ($\gamma$), including the expenditure by the family in the purchase of composite goods. Furthermore, solving the household demand functions would allow us to derive the labour supply function of young women, which can be written as (Equation 8):

$$h_W = f(w, h_D, x, k_D, \delta N, rK, \gamma, p_0X_w, p_0X_D, Z) \quad (8)$$

The estimation of equation 8, empirical results and their discussions are given in the section six.

### 5. Data and methods

To explore the determinants of labour force participation of young urban young (Y), the simple probit regression model along with the instrumental variable (IV) probit regression model – to cater to the problem of endogeneity – have been estimated with NSS Data for 2004-05, and 2011-12; and PLFS data for 2017-18 and 2018-19. The simple probit model expressed in Equation 9 would be considered more suitable in case the latent variable ($Y^*$) can be expressed as a function of exogeneous regressors only. The exogeneous regressors in this case, include logarithmic value of monthly per capita consumption expenditure (MPCE) – ($\log(MPCE)$), logarithmic value of MPCE square ($\log(MPCE)^2$), logarithmic value of the daily wage ($\log(W)$), a vector of individual level characteristics (Xi) of young women like education level, age, job experience, marital status, and a vector of family level characteristics (Zi) like education and occupation of the head of the household, religion, social group, gender of the household head, number of dependents and adult women in the household, etc.

$$Y^* = \alpha + \beta(\log(MPCE)) + \delta(\log(MPCE)^2) + \zeta(\log(W)) + \eta X_i + \lambda Z_i + \epsilon_i \quad (9)$$

where $Y^* = \begin{cases} 1, & \text{if } Y^* > 0 \\ 0, & \text{if } Y^* \leq 0 \end{cases}$

However, the variables log (MPCE) and log (MPCE2) are expected to be dependent on the labour force participation decision of the females. Also, female labour force participation decision is also expected to be dependent on the former. This would result in a positive correlation between these two variables and the stochastic disturbance term, thus making them endogenous. To avoid this, we consider the IV probit model over the simple probit mode by first estimating an OLS regression as expressed in Equation 10, which represents the two endogenous variables as a function of some household level characteristics ($z_i$) and a stochastic disturbance term ($\epsilon_i$). These predicted values of log (MPCE) and log (MPCE2) are then used as regressors in the original probit model (Equation 9).

$$\log(MPCE) = \omega_1 + \omega_2 z_i + v_i \quad (10)$$

While the results of both probit and IV probit estimated using the above procedure are presented in Table 3 in the next section, all the variables used in the simple probit and the instrumental variable probit model are summarised in Table 2 below:

<Table 2 about here>
6. Econometric results and discussion

The stagnation of workforce and labour force participation rates at higher levels of educational attainment could be due to either supply side or demand side factors, or both. This section focuses on understanding each of these determinants starting with the supply side factors.

The supply side factors affecting the female labour force participation include demographic and skill traits of women like their age, education levels and marital status; socio-economic traits like religion, caste, economic status; family traits like the number of adult women in the family, number of elderly, number of infants and toddlers, the type of family set up, and the occupation, gender and education levels of the head of the household; certain other state specific and location factors like region of residence may also play a significant role in the decision of the women to participate in the labour market.

The statistically significant and negative value of the coefficient for log MPCE is consistent with the existing literature hinting at a negative income effect as a determinant of declining female labour force participation. This suggests that women who were earlier participating in the labour force due to low income of the household, eventually withdrew themselves as the income of the family increased. These women, thus exhibited the added worker effect phenomenon. The significant and positive value of the variable logarithm of daily wage suggests at a positive wage effect or substitution effect. Women are more likely to substitute leisure with work in exchange for a higher wage.

The individual level determinants of labour force participation like – age, level of education, and marital status of women are all significant determinants of labour force participation. The increasing absolute values of coefficients of education levels signify that as level of educational attainment rises, the labour force participation rate increases. This is in line with the theoretical background. Married women stand a lower chance of deciding to participate in the labour market when compared with unmarried and/or divorced women. It can further be seen that the married women with higher levels of formal education (technical education and formal vocational education) are more likely to participate in the labour market.

Household level characteristics – number of children, adult women, and elders in the family are all significant. This could mean that while living in a joint family and having a child in the family negatively affects the participation rates of younger women– again in agreement with the studies hinting at a motherhood penalty (Das and Zumbyte, 2017). However, having more elderly and adult females in the family can act as a positive stimulant to labour force participation as they can help look after the young children in the family.

The education levels of the household head and the head’s occupation also are significant determinants of LFPR. The values of both these variables’ coefficients reflect an income effect and are in line with the overall income effect. As the parents/ household heads are employed in higher occupations like – administrators and other professional occupations, they earn more deterring the participation of young women. These women may instead engage in education. The gender of the household head also affects the LFPR – if the head is a female member, she may allow the younger women in the family to participate in the labour market.
Based on the above findings, it is argued that the labour market participation decision of young women in urban India is an outcome of their joint utility maximization behaviour within the family. While the standard of living of their family has a negative (income) effect, the market wage rate has a positive substitution effect, on their labour market participation, all other thing remaining unchanged. This joint utility maximization behaviour is also reflected by the coefficients of the other family characteristics including number of children, other adult women in the family, elderly members, higher occupation of the family head, and gender of the head etc. While the young women’s own labour market characteristics like age (experience) and level of education and training has positive impacts on their labour market participation, a relatively smaller absolute value of log MPCE coefficient (negative) as compared to the coefficient of log wage (positive), reflects the fact that the stagnant labour force participation of young women in urban India is probably due to the “discouraged worker effect” instead of the “added worker effect”.

This supply side behavioural aspects of young urban women, at the micro level, can be influenced through a set of demand side measures. The availability of jobs is a very important demand side indicator. At the macro level, it is also likely to boost the stagnant LFPR of women upward in urban India. For this to happen, we need to identify the major employment generating sectors, which could offer quality jobs i.e., regular and formal employment contracts along with a relatively better wage premium.

**7. Generating jobs for young urban women**

It is noted that the number of women engaged in agriculture and allied sectors has been declining in urban areas over last one and half decades. Though construction sector employment has gone up until 2011-12, the job growth in this sector has become stagnant (almost) during the post 2012 periods. Even though construction sector starts giving job to women, it can only accommodate the low skilled job aspirants, and migrant women who moved along with their spouse. Majority of the jobs in this sector is highly informal and casual in nature.

The service sector and the manufacturing sector are at two ends of the employment spectrum with the former one generating most prospective opportunities for the young and educated women in urban India. But the latter mostly employing the less educated ones in low-skilled, and low-paid jobs. These two have, however, generated the maximum employment as reflected from the increasing workforce in these sectors. The participation rate in education is rising suggesting that a greater number of young women will soon be out looking for jobs (also see Parida and Pattayat, 2022), but the increasing numbers of those in employment or neither in employment nor in education and training (NEET) suggest that the jobs are less in number.

**Figures 4 and 5 show the sub-sectoral compositions of women workforce in both manufacturing and services sectors. Within manufacturing the subsectors: manufacture of leather and related products, textiles, and food and tobacco industry accounted for maximum share of workforce (Figure 4). These subsectors are mostly labour intensive in nature and are traditional as well. On the other hand, relatively modern and relatively capital-intensive subsectors like computer, electronic and optical products, manufacturing of chemical, non-metallic, plastic and rubber products and pharmaceutical products are prospective sectors, in which young and educated women in**
urban areas could be accommodated. These sub-sectors have the potential to offer regular jobs with social security benefits. Hence, promotion of these industries is necessary.

In the service sector on the other hand, the subsectors like: retail trade, education, domestic and personal services and public administration etc., together accounted for a relatively larger share of women workforce (Figure 5). These are mostly traditional services (expect education partly) in which women are found engaged in India. However, the modern services including the healthcare, finance and insurance, food and beverage services, computer programming and consultancy, information and technology etc., have the potential to generate quality jobs for young educated urban women. Hence, development of these would likely to help overcome the problem of “discouraged worker effect” among young educated women in urban India.

<Figures 4 & 5 about here>

8. Concluding Remarks

The main objective of this work was to explore the labour force participation behaviour of young women in urban India, and to identify the underlying factors behind it. The broad labour force participation trend suggests that it has remained been stagnant for over three decades now, despite there is a rise in number of skilled young women, which is reflected through a higher share of educated and trained women in the recent years. The main finding of the paper suggests that the labour market participation decision of young women in urban India, is an outcome of the joint utility maximization behaviour of their family. The standard of living of the family has a negative (income) effect on their labour market participation, whereas the market wage has a positive substitution effect (on individual’s choice to sacrifice leisure for work), ceteris paribus. As expected, labour market participation behaviour of young women also determined by their own characteristics like age (experience) and level of education and training. The other family characteristics including number of children, other adult women in the family, elderly members, higher occupation of the family head, and gender of the head etc., have significant influence on the labour market participation of young women. This is substantive evidence in favour of the fact that young women’s labour market participation behaviour is an outcome their family welfare maximization process.

Since the absolute value of log MPCE coefficient (negative) in the regression result is relatively smaller than that of the coefficient of log wage (positive), this reflects the fact that a stagnant labour force participation of young women in urban India is probably due to the “discouraged worker effect” instead of the “added worker phenomenon”.

Hence, measures to create formal/regular jobs with better wage premium in the emerging manufacturing (like computer, electronic and optical products, manufacturing of chemical, non-metallic, plastic and rubber products and pharmaceutical products etc.) and in the modern service sectors (including the healthcare, finance and insurance, food and beverage services, computer programming and consultancy, information and technology etc.) could help to boost the stagnant female labour force participation upward in urban India.
Conflicts of Interest:

We do hereby, declare that we don’t have any conflict of interest with any individual or any institution. This manuscript is an outcome of our independent research work.

References


**Figure 1**

Trends and patterns of labour market participation of women in urban India

Source: Authors’ estimation from various rounds of NSS and PLFS Data
**Figure 2**

Patterns of young female labour force participation in urban India, 2019-20

Source: Authors estimation from PLFS Data 2019-20 Round
Figure 3

Labour Force participation behaviour (joint utility maximising model)
Figure 4

Sub-sectoral decomposition of women employment (%) in manufacturing sector

Source: Authors’ estimation from PLFS Data for 2019-20
Figure 5

Sub-sectoral decomposition of women employment (%) in services sector

Source: Authors’ estimation from PLFS Data for 2019-20