

MARRIAGE FACTOR AND WOMEN'S EMPLOYABILITY IN INDIA: A MACRO ANALYSIS

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Abstract: This study attempts to carry out an empirical investigation regarding the role of marriage as a structural constraint to women's employability in India. The National Sample Survey data based analysis shows that the heterogeneity of women's employment is significantly controlled by their orientation to work where marriage acts as an important mediating factor. Significant differences are observed between the workforce participation of currently married and never married women across different educational attainment and socio-demographic segments. However, the way marriage operates as a formal barrier to women's workability merely depends on the historically available opportunities and constraints experienced by them.

Key words: Structural Constraint, Mediating Factor, Workforce, Educational Attainment.

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Introduction

The structure of employment of men and women is always a detectable issue in social sciences. Women are supposed to be less benefitted by their educational attainments in terms of employability because of their choices and constraints to work (outcome of certain exogenous determinants). Marriage is regarded as one of the strongest determinants. The effect of marriage is conspicuous, tough to ascertain whether related to women's conscious choices in entering the labour market to accrue benefits at the pre-marital stage or act as selective choices or constraints at the post marital stage. Sociologists explain that marriage act as a structural constraint on women's employment opportunities.

It has recently been claimed that women's disadvantaged position in the labour market is not only a consequence of the institutional and/or structural disadvantages but of their varying choices (Hakim, 1995). Another scholar (Harris, 1998) suggests that occupational segregation in the labor market by sex due to marriage is largely determined by some post-marital constraints like childbearing and childrear-

ing. Both of these theoretical explanations have been subjected to critical replies and changing empirical considerations. However, the representation can be more complex (Figure 1).

A number of studies have briefed the structure of female workforce participation in India regarding the way it is differently mobilized than men (Banerjee, 1998, Ghosh, 2009, Jain, 1985, Mazumdar, 2007 and 2008). These studies critically examine the growth in female workforce participation and the issues of domestic and unpaid laborers. However, very few attempts have seen to link these issues to marriage, which is historically regarded as one of the main explanatory factor to construct the work-life biographies of women.

The basic objective of this paper is to analyze the role of marriage to explain the structure of female workforce participation. It also attempts to enquire the interplay of both choices and constraints in shaping the work life of women.

Database and Methodology

The present study is based on the National Sample Survey (NSSO) 66th Round unit level records¹ (Employment and Unemployment situation in India). As this source does not provide the desired family related information, the NFHS III data² has also been used

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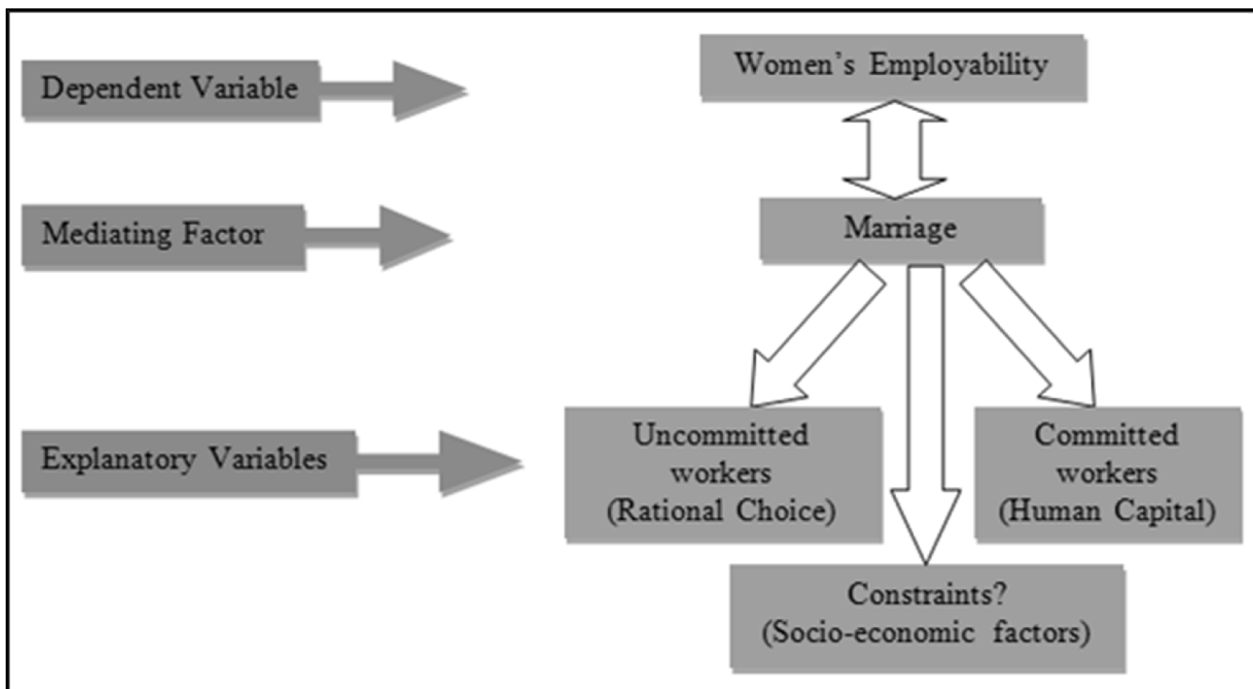


Figure 1. Schematic representation of Occupational segregation by sex due to Marriage

Source: Authors

to find effect of childbearing in shaping the marital effects on women's employability.

Appropriate bivariate analyses have been taken into consideration along with a multivariate binary logistic regression model, which attempts to estimate the effects of selected background variables on the labour force participation of women. Three separate models have been computed for women's who are in their working age (15-59 years), as well as women who are not married and currently married.

The binary logistic regression estimates the differential probability of the effect incurred by selected explanatory factors on the dependent variable which is dichotomous in nature (whether women are participating in labour force or not). The logit model is based on *cumulative logistic probability function* which does not assume linearity of relationship between the dependent and independent variables, does not require normally distributed variables, does not assume homoscedasticity, and in general has less stringent requirements.

The multivariate binary logit model is specified as:

$$P = F(z) = \frac{1}{1 + e^{-z}}$$

Where $z = \alpha + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k$ where e represents the base of natural logarithms, which is approximately equal to 2.718 and P is the estimated probability of women's being in labour force. It is noteworthy that z is not the response variable but a linear function for a set of predictor variables.

$$\frac{P}{1-P} = e^z = \Omega = Odds \quad (1)$$

$$\text{and, } \logit P = \log \frac{P}{1-P} = z = \log \Omega = \text{Log Odds} \quad (2)$$

$$\text{hence, } \log \Omega = \alpha + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k \quad (3)$$

Thus $\log \Omega$ is calculated first, then $\Omega = e^{\log \Omega}$. The 'Odds ratio', which is the relative odds of two explanatory variables, can be computed by raising the base of the natural log to the b^{th} power (e^b), when b is the slope of the logistic regression equation.

In a binary logit model, each individual observation has a probability, and the overall likelihood is the product of these individual probabilities. Hence, a very small likelihood does not necessarily mean a very poor fit. The binary dependent variable model is not likely to yield a R^2 close to 1 (Morrison, 1972; Pindyck and Rubinfeld, 1998).

Analysis

The section comprises four parts: the first part explains the general relation between women's level of education and the types of employment. The second section enquires- whether women use their education as the conscious choice to accrue marriage benefits or marriage acts itself as a formal barrier to their employability. The third part enquires about some of the possible reasons of these post-marital barriers of women's employability. The final section deals with the multivariate analysis which portrays the inde-

pendent effects of selected socio-economic factors on the labour force participation of women in India; together as well as classified by their marital status.

Education and female workforce structure: the general situation

This section explains the relation between women's general level of education and their working status by usual principal activity³. The very first observation is that women are less likely to be engaged into any gainful economic activities as nearly 73% of women are observed to be out of the labour force. It can also be observed that women appear to be more unemployed at the higher educational status, nearly 13% of the female population seem to have seeking for work despite having a formal graduate degree or above educational status. The labour force participation among the women who have secondary or higher than secondary but not graduate level of education appears to have least participation in the workforce, providing the fact that they become married before further education and entering the labour force; especially in rural areas, where nearly 59% of girls aged 15-25 are married having at least a primary or secondary level of education. However, a large portion of them are attending educational institutions (if not married) but remains out of labour force and engaged largely in domestic duties when they become married, as shown in the following sections.

Another conspicuous feature is that the proportion of women self-employed is much lesser in comparison to men. However, even a smaller proportion of female are engaged in regular salaried or paid jobs, the figure is only 18% if they have a graduate degree and less than 30% if they have a degree equivalent to post graduate and above. On the other end, proportion of women engaged as casual laborers or helpers in household enterprises are higher among not literate or low literate women.

The most common thing appeared to all of these differently educated women is that a large proportion of them are all attending domestic duties (nearly 14% of women who have graduate or higher level of education are engaged in domestic duties). Moreover, very few of them are likely to be employed according to the level of education they achieved, rather engaged in low-level jobs or being out of the labour force. These factors, however, has differentiation according to rural-urban dimension.

Role of marriage as a mediating factor

This section introduces marriage as an explanatory factor in addition to education in order to describe the workforce structure of women. It can be seen from Figure 2 that the ratio of labour force participation between male and female aged 15-59 years highly

varies according to their marital status. The gap of LFPR⁴ between males and females has risen sharply as their status changes from never-married to currently married, so as their workforce participation. The change in the gap of LFPR seems to be higher than WPR, as the proportion of women seeking or available for work drops sharply in case of women when they get married (Figure 2).

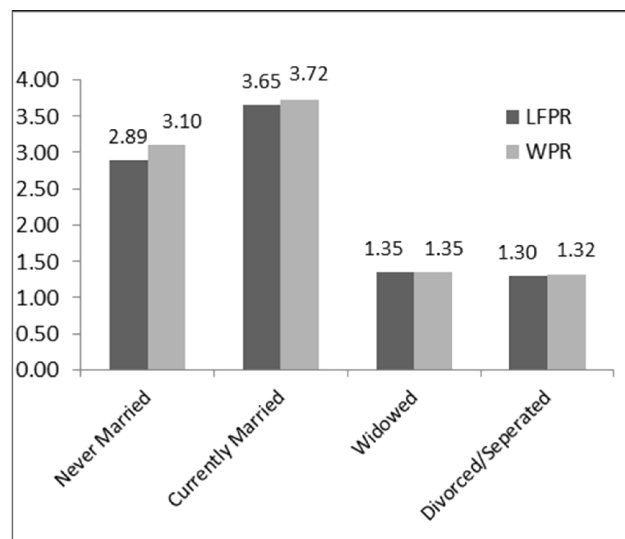


Figure 2. Ratio of LFPR and WPR between males and females (15-59 years) according to marital status (2009-10)

However, while looking the situation of women's employment according to their educational level and marital status, it can be seen that currently married women are supposed to be more employed than the women who are never married, which is subjected to further disaggregation. It can be seen from Table 2 that a larger proportion of currently married women who have not or minimal literate, are engaged in activities like casual laborers or helpers at household enterprises. In most cases, they serve as unpaid laborers in husbands' home as well as engaged in significant amount of domestic duties. However, it is interesting to see how women's activity status changes rapidly with marriage; women having a graduate or post graduate (and above) degree are reported to be engaged in household domestic duties in only 15% to 18% cases, which rises to 60%-80% when they get married. On the other hand, about 10%-15% women are found to seeking or available for work when they are not married but their percentage drops to 1%-4% under the category currently married.

This result indicates a very startling fact; women receiving higher level of education are reported to be satisfied or constrained with lower status of employment after their marriage than their bachelorhood. Most of the highly educated women who are either seeking/available for work or engaged to achieve better education during their bachelorhood are satisfied with domestic duties or their role of unpaid workers in husband's household enterprise.

Table 1. Usual Principal Activity Status of Females (15-59 years) according to Educational Level and Marital Status

Educational Level	Never Married						Currently Married					
	I	II	III	IV	V	VI	I	II	III	IV	V	VI
Not literate	11.30	1.60	17.70	0.65	55.47	13.33	15.54	1.00	15.68	0.16	67.07	0.54
Literate without formal schooling	10.18	1.36	1.19	0.00	80.52	6.76	9.99	1.97	10.41	0.00	76.41	1.22
Below primary	11.22	3.20	16.09	0.53	51.20	17.76	12.95	1.03	15.59	0.13	69.68	0.62
Primary	10.82	2.34	10.23	1.52	46.78	28.31	14.04	1.77	10.41	0.12	73.29	0.36
Middle	7.28	1.72	5.58	1.41	29.08	54.92	12.83	2.09	6.84	0.73	76.86	0.64
Secondary	3.02	1.94	2.02	1.86	17.56	73.60	9.82	3.04	3.58	1.11	81.28	1.17
Higher Secondary	2.60	3.60	0.44	3.79	14.32	75.26	7.55	3.95	1.18	1.43	82.13	3.76
Graduate and Others	2.10	20.17	0.37	10.72	15.77	50.87	5.12	16.46	0.20	3.91	72.68	1.64
PG and above	4.69	33.05	0.65	14.98	18.19	28.44	4.23	28.18	0.67	3.82	61.69	1.41
Total	5.98	4.35	5.38	2.87	28.04	53.39	12.95	2.83	10.63	0.64	72.08	0.86

I: Self-employed, II: Regular salaried/wage employees, III: Casual wage labourers, IV: Seeking/Available for work, V: Attending domestic duties, VI: Others

Source: Computed from NSSO Unit level records, 66th Round, Employment and Unemployment Situation in India

The situation is almost constant in both pre and post marital stages for the women who have medium level of educational attainment, i.e. neither illiterate and having more than middle or secondary level of education. These women are reported to be largely associated in household domestic duties or act as casual wage laborers in both pre and post marital stage (Table 1).

Effect of other socio-demographic factors

This general relation between marriage, educational status and employability of women shows different results, while controlling by a number of socio-demographic factors like age-group or places of residence. It can be seen that LFPR according to usual principal activity is less in any level of education among the currently married women than those who are not married, especially in 25-35 years of age. However, the gap rises as the educational level rises, vindicating the factor that highly educated women are more likely to withdraw themselves from the labor force after marriage. This factor has not only supposed to be driven by constraints like child care and domestic duties after marriage but also preferred choices by a portion of women who does not like to be part of active workforce after marriage, rather prefer part-time jobs (Hakim, 1991, 1995, 1996).

Table 2 provides some insights in support of Hakim's argument as it can be seen that proportion of women having graduate or above level of education are more likely to absorb jobs having no contract or less than one years of contract than the never married women. However, for the women who are not literate or literate below primary level, the situation is nor-

mal, as they mostly works as casual laborers that does not have any permanent working contracts (Table 2).

In addition to age group, the place of residence is another important factor that significantly affects the employability of women. The rural and urban areas possess different characteristics in terms of women's employability. It can be noted that in rural areas, the labor force participation rate of women goes down sharply as the marital status changes; the change being more pronounced where women have secondary or higher secondary level of education. Urban areas possess an opposite feature, except in case of low educated or illiterate women. However, this feature underscores a very interesting fact; women who are illiterate or low educated in rural areas used to be employed in the same way after their marriage as well, whether the fruit of education is not perpetuated to the highly educated groups. Extracting evidences from the above tables, it can be opined that low educated women used to engage as casual laborers and continued to serve their households, parental households in pre-marital stage and husband's households in the post-marital stage.

However, an overview of the industrial and occupational classification of the female workforce according to their marital status pinpoints some important observations. It can be seen that participation of women in primary workforce is highest in both pre and post marital stage, and they remain almost same in both cases. Participation in all other sectors records a drop in female workforce in case of currently married women than never married; sharpest drop is recorded in case of women engaged in manufacturing sector. This is because of the labour intensive nature of the primary sector in India which requires a large amount of unskilled laborers.

Table 2. Type of Job Contract according to Marital Status and Educational Level of Females

Educational Level	Never Married				Currently Married			
	I	II	III	IV	I	II	III	IV
Not literate	84.30	8.70	3.80	3.20	85.70	10.67	2.21	1.42
Up to Primary	76.21	12.23	1.40	10.16	70.31	10.59	11.81	7.43
Up to Secondary	60.76	14.61	7.21	17.56	64.31	12.65	8.32	4.12
Higher secondary	54.31	12.54	20.10	13.21	45.12	9.04	20.13	24.87
Graduate and above	24.13	30.10	10.07	35.70	29.81	35.41	9.08	15.70

I: No written job contract, Written job contract for; II: 1 year or less, III: 1-3 years, IV: More than 3 years

Source: Computed from NSSO Unit level records, 66th Round, Employment and Unemployment Situation in India

Table 3. Industrial Classification of Female Workers by Marital Status

Marital Status	I	II	III	IV	V	VI	VII	VIII	IX	X
Never Married	40.88	0.61	2.23	13.64	0.18	12.39	13.80	5.30	3.33	7.65
Currently Married	51.42	0.74	1.95	8.60	0.36	9.74	11.12	5.05	2.20	8.82
Widowed	60.03	0.52	2.68	6.57	0.21	8.30	7.08	1.68	0.55	12.39
Divorced/Separated	48.06	0.25	4.31	9.15	0.16	10.32	7.39	3.08	1.34	15.93

NIC Classification, I: Agriculture, Forestry and Fishing, II: Mining and Quarrying, III: Agro-processing, IV: Other manufacturing, V: Electricity, Gas and Water Supply, VI: Construction, VII: Wholesale and Retail Trade, Hotels and Restaurants, VIII: Transport, Storage and Communication, IX: Finance, Insurance, Business and Real Estate, X: Community, Social and Personal Services.

Source: Computed from NSSO Unit level records, 66th Round, Employment and Unemployment Situation in India

Women in rural areas who are not literate or low educated continued to be the part of this unskilled labour force even after marriage, especially in landless and sharecropper households. The NSSO estimates show that nearly 35% of the female workers aged 15-59 are engaged in unpaid family works of which 40% is married. The estimate becomes significantly high in agriculture and allied services. On the contrary, since the manufacturing and service sector activities are largely capital intensive and requires highly skilled workers, the withdrawal of highly educated women from the labour force after marriage reduces the female participation in the secondary or tertiary sectors. The occupational classification also supports the same; a drop is recorded in case of service workers, whereas the proportion of primary workers and related laborers remain almost the same between never married and currently married women. Another interesting fact is that proportion of women engaged in managerial jobs or high ranking jobs are less likely to withdraw themselves from the labor force after marriage, denoting the class differentiation in the general relation (Tables 3 and 4).

This section attempts to explain one of the very possible factors affecting women's differential employability between pre and post marital period. The factor of child care is regarded as the main constraint of women affecting their withdrawal from the labor

market during the post marital phase of their life. It can be seen from the following table that as the number of living children (below 5 years of age) increases, workforce participation of currently married women registers a fall in proportion. However, as the two-child family is a norm now days for most of the families, sharpest change can be observed in this category. It can be seen that almost 70%-80% women in all kinds of occupational categories are likely to be not engaged in workforce if they have two or less than two living children (Table 5).

It is quite evident from the above table that the withdrawal from the labor force due to childbearing and childrearing purposes is higher in case of unskilled or agricultural laborers than white-collar, highly-paid workers. This factor underscores an interesting fact that the question of constraint is more pronounced among low-employed, low-educated women than highly-employed or highly-educated women whose withdrawal from the labor force is mainly driven by choices rather than constraints.

Results from the Multivariate Model

This penultimate section shows the differential effect of a number of individual as well as household level socio-economic and demographic factors over the possibility of labour force participation of females.

Table 4. Occupational Classification of Female Workers by Marital Status

Marital Status	I	II	III	IV	V	VI	VII
Never Married	4.71	8.02	2.34	9.38	22.12	21.37	32.05
Currently Married	5.98	7.08	2.10	7.03	29.91	15.18	32.72
Widowed	3.80	4.45	1.41	5.41	25.09	10.04	49.79
Divorced/Separated	3.19	7.51	1.68	8.76	14.61	12.98	51.27

NCO Classification, I: Administrative, Executive and Managerial Workers, II: Professional, Technical and related Workers, III: Clerical and Related Workers, IV: Sales and Service Workers, V: Farmers, Fishermen, Hunters, Loggers and related Workers, VI: Production related Workers, VII: Elementary Workers and Labourers

Source: Computed from NSSO Unit level records, 66th Round, Employment and Unemployment Situation in India

Table 5. Occupational Classification of Currently Married Women (15-40 years) according to the Number of Living Children (below 5 years) (2005-'06)

	No. of Living children			
	1	2	2-4	4+
Not working	23.91	35.62	30.21	10.26
Prof., Tech., Managerial.	34.03	49.80	14.99	1.17
Clerical	42.48	33.99	20.26	3.27
Sales	12.92	35.62	32.88	18.59
Agric-employee	14.08	27.57	39.78	18.57
Services	18.76	27.65	36.05	17.54
Skilled & unskilled manual	17.64	29.23	36.71	16.42

Source: NFHS III, Unit level records

Results of the three separate models, denoting the differences in labour force participation among all, never married and currently married women, have been summarized in Table 6. It is evident that urban women significantly possess higher odds to withdraw themselves from the labour force than their rural counterparts, and the probability of such withdrawal is higher among the currently married cohorts. This finding goes in complementary with the earlier bivariate analyses which show that females with comparatively lower educational attainment in rural areas are used to participate in work largely in their nuptial households even after marriage.

In terms of age, it is found that larger proportions of women are out of the labour force at lower age groups. In other words, women who are married early also retire fast from the labour force. The effect of marital status is well-surmised, currently married women has 17.2% higher odds to be out of labour force than the never marrieds. However, what is more intriguing is that widowed and divorced/separated women have higher probability to be in labour force than the never married ones. This seems important which vindicates lesser intention of younger women to work or even seeking for work.

The effect of general education level of the individuals shows that women who are not literate has higher odds to be included in labour force, which denotes the largely unskilled structure of female

workforce participation in India. The role of marriage is constant in this regard, as the LFPR of both never married and currently married women seems to be higher if they remain illiterate.

Coming to the household level factors, it can be observed that women belonging to socially and economically backward groups have higher odds to stay in the labour force. Females belonging to the lower MPCE (monthly per capita consumption expenditure) quintiles have higher LFPR than the richer households. These findings go in conformity with our earlier results; the female LFPR is higher in underprivileged rural and agricultural households. Among the religious groups, female LFPR tends to be lower among Muslim households but comparatively higher among Christian minorities. Smaller and female headed households provide better environment for women to be engaged in labour force. Casual labourer households, as expected, provide lowest odds for females to withdraw themselves from the labour force, followed by regular/salaried and self-employed households (Table 6).

It can be denoted that the selected individual and household level factors have shown very little difference in terms of their effects possessed on never married and currently married women. In other words, marriage seems to be the strongest determining factor that is responsible for largely altering the nature

and structure of female labour force in India. Its effect can be hardly modified by any other social or economic factors. The general perception of marriage as a social norm rather than a process has made its effect more stringent.

Conclusion

The above discussions explain the situation of women's employability in terms of their achieved level of education and marital status. The general opinion is that the relationship between women's education and

Table 6. Odds Ratios from the Binary Logistic Regression Analysis denoting Determinants of Labour-Force Participation among Women (15-59 years)

Background Variables		All Women	Never Married	Currently Married
Place of Residence	Rural®			
	Urban	1.891***	1.323***	2.092***
Age	15-25®			
	25-35	0.590***	0.252**	0.667***
	35-50	0.508***	0.318***	0.545***
	50+	0.744***	0.468***	0.670***
Marital Status	Never Married®			
	Currently Married	1.172***		
	Widowed	0.721***		
	Divorced/Separated	0.280**		
General Educational Level	Not Literate®			
	Literate without Formal Schooling	1.253***	2.055***	1.318***
	Below Primary	1.063***	0.994***	1.078***
	Primary	1.131***	1.300***	1.131***
	Middle	1.401***	2.165***	1.303***
	Secondary	1.871***	3.943***	1.516***
	Higher Secondary	1.871***	3.190***	1.624***
	Graduate	0.723***	0.808**	0.795***
Social Group	PG and above	0.365***	0.367***	0.403***
	General®			
	SC	0.778***	0.914***	0.764***
	ST	0.389***	0.539***	0.356***
Religion	OBC	0.679***	0.861***	0.645***
	Hindu®			
	Muslim	2.253***	1.425***	2.637***
	Christian	0.694***	0.653***	0.682***
MPCE Quintiles	Other Minorities	1.582***	1.496***	1.684***
	Q1®			
	Q2	1.011***	1.001	1.033***
	Q3	0.993***	1.087***	0.976***
	Q4	0.972***	1.263***	0.938***
	Q5	1.117***	1.729***	1.029***
Sex of the Household Head	Male®			
	Female	0.327**	0.348***	0.321***
Household Size	>2®			
	2-4	1.437***	2.578***	1.399***
	4-6	1.614***	3.263**	1.432***
	6+	1.870***	4.639**	1.644***
Household Type	Self Employed®			
	Regular Salaried	0.948**	0.643***	1.062**
	Casual Wage Labourer	0.691***	0.662**	0.696***
	Others	2.999**	2.120**	2.737**
Constant		2.647***	0.934***	3.305***
χ^2		4621.74***	8387.69***	2606.77***
Cox & Snell R ²		0.140	0.133	0.128
Nagelkerke R ²		0.203	0.216	0.196
N		141076	31028	102045

® Reference Category, ***Significant at 1% level, **Significant at 5% level

Dependent Variable Categories: 1= Not in Labour force; 0= In Labour Force

Source: Computed from NSSO Unit level records, 66th Round, Employment and Unemployment Situation in India

work participation significantly varies due to marriage. Highly educated women are more likely to withdraw themselves from workforce after marriage due to their preferences, whereas child care constraints are important factor for withdrawal of low educated women. A large proportion of currently married women are found to be engaged in domestic duties albeit they have achieved high level of education. Women who are illiterate or having very low level of educational attainment are likely to be more in the labor force than highly educated women during post marital stage, as in most of the cases they continue to serve their husband's household as unpaid family workers or casual wage laborers.

The present study therefore concludes that the employability of women is structurally affected by the marriage patterns. Heterogeneity of women's workforce participation is a complex outcome of their orientations to work or some other exogenous determinants like parental background or economic situations. In most cases, women's work orientations are not single-stranded; they are driven by both constraints of family and not conscious but some exercise of choices. Therefore, the occupational segregation by sex according to marriage cannot be explained either by choices or constraints alone. It is the value of female labour that becomes most important to determine the opportunities and constraints to women's work, which is in turn controlled by a number of factors like social norms and poverty.

Notes

- ¹ National Sample Survey Organization (2011); 'Employment and Unemployment Situation in India (2009-'10), Ministry of Statistics and Programme Implementation.
- ² International Institute of Population Sciences and ORC Macro (2007); 'National Family Health Survey III (2005-'06)', Ministry of Health and Family Welfare, Government of India.
- ³ The 'Usual Principal Activity' refers to the principal gainful economic activity by the respondent during 365 days prior to survey.
- ⁴ 'LFPR' refers to the 'Labour Force Participation Rate' which means number of persons/person-days in the labour force per 100 persons.

However, number of persons 'in labour force' means persons who are currently employed+ persons who are currently seeking/available for work. Therefore, LFPR takes into account the unemployed persons, i.e. who are not employed but seeking/available for work. On the other hand, 'WPR' refers to the 'Worker-Population Ratio' which defines only the number of persons/person days employed per 100 persons/person-days. It excludes the unemployed persons.

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