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Working Paper

The anomaly of women's work and education in India

Working Paper, No. 368

Provided in Cooperation with:

Indian Council for Research on International Economic Relations (ICRIER)

Suggested Citation: Ghai, Surbhi (2018) : The anomaly of women's work and education in India, Working Paper, No. 368, Indian Council for Research on International Economic Relations (ICRIER), New Delhi

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Working Paper 368

**The Anomaly of Women's Work and
Education in India**

Surbhi Ghai

December 2018



INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS

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Acknowledgement

I am extremely grateful to Dr. Shashi Bala, Fellow, V.V. Giri Institute of Labour Studies, Ministry of Labour and Employment and Ms. Aparna Sahay, Director, Society for Research on Education and Development for their invaluable inputs and suggestions. I would like to express my heartfelt gratitude to Serene Vaid for her inputs, suggestions and unflinching support throughout. A special thank you to Ujjwal Krishna and Raavi Aggarwal for patiently going through the draft and providing helpful inputs and comments. Lastly, my gratitude to Dr. Radhicka Kapoor and Dr. Rajat Kathuria for their encouragement and support.

Abstract

This paper utilizes a large cross-section of data sets such as the ILOSTAT, NSSO Quinquennial Employment and Unemployment Survey, Labour Bureau Annual Employment and Unemployment Survey, National Family Health Survey and CMIE Consumer Pyramid Household Survey to comment on the falling female labour force participation rates in India. It is found that not only has there been a fall in the female labour force participation rates, but the size of the total female labour force has also shrunk in recent years. Besides presenting a series of demand and supply side factors that might possibly explain this trend, it aims to look at it particularly in conjunction with education and provide a commentary on the same. It is proposed that prevailing social norms and patriarchy hinders the participation of women in the economy despite high levels of education. Bivariate and multivariate analyses is conducted on state level cross-sectional data and it is found that patriarchy is indicative of the large proportion of women out of the labour force at high levels of education. It is concluded that education in the current form alone might not be sufficient to spur growth in female labour force participation rates in India. Government schemes must target the fundamental cultural and social forces that shape patriarchy. These coupled with policies that simultaneously address some of the other demand and supply side constraints will go a long way in bolstering the participation of women in the economy.

Keywords: *Female Labour Force Participation Rate, Education, Patriarchy*

JEL classification: *J16, J21, J24*

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The Anomaly of Women's Work and Education in India

Surbhi Ghai

1. Introduction

There has been an increasing clamor over the fall in the female labour force participation rates in India over the past few years. The irony of this stubborn phenomenon is thus, this: India has grown at an unparalleled rate in the past two decades with growth rate surpassing 9 percent per annum between 2004-05 and 2007-08 and averaging about 7 percent per annum between the time periods 2012-13 and 2016-17. Concomitantly, there has been a marked improvement in the human development indicators, with sizeable decline in fertility rates, illiteracy and gender education gap. All of this should ordinarily have led to higher female labour force participation for conventionally, in the long run, fall in female fertility rates, rising income levels and improvement in education outcomes have been associated with rising share of women in the labour force. Thus, it is indeed puzzling, for policy makers and academicians alike, that against this opportune background, female labour force participation in India is continuously declining and has languished at about 27.4 percent in 2015-16 (Labour Bureau Employment and Unemployment Survey). This precarious phenomenon has set the Indian development experience apart from that of other developing countries.

Numerous empirical studies have been conducted in the last few years to quantify the extent of the drop in the female labour force participation rates. The paper attempts to contribute to the existing literature by exploiting a large cross section of previously tapped and untapped international and national data sources such as the ILOSTAT, NSSO Quinquennial Employment and Unemployment Survey, Labour Bureau Annual Employment and Unemployment Survey, National Family Health Survey and CMIE Consumer Pyramid Household Survey to comment on the state of the female labour force participation rates (FLPR) in India. Besides presenting a series of factors that might possibly explain the falling FLPR, it aims to look at it particularly in conjunction with education and provide a commentary on the same.

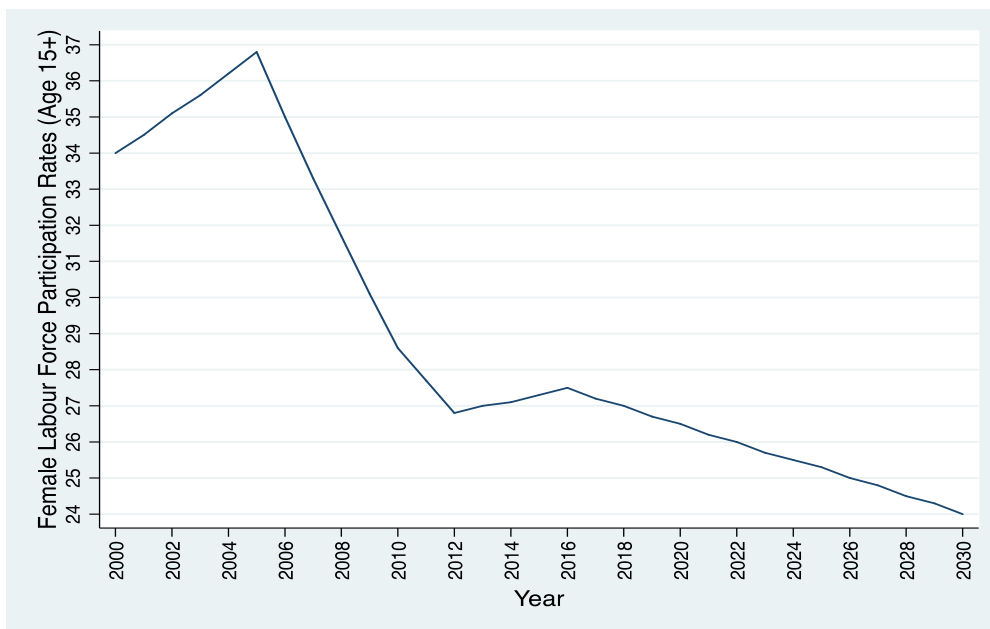
It is often contended that India has been adhering to the U-shaped hypothesis that relates national income with FLPR such that a rise in national income inadvertently leads to a drop in FLPR until it reaches the minimum and then rises again (Goldin 1995 and Mammen et al, 2000). This relationship has been attributed to the long run structural shifts in the economy, income and substitution effects and improvement in educational outcomes. The hypothesis pushes us to believe that the problem of declining FLPR in India is transient, and our country would soon turn around the corner of the trough. However, the existence of this U-shaped relationship has been a subject of much debate in the recent past, with a range of recent empirical studies failing to find a significant relationship between economic growth and FLPR in India (Gaddis and Klasen, 2012; Lahoti et al, 2013). These studies reinforce the idea that the relationship between economic growth and FLPR is complex and is mediated by large number of socioeconomic and cultural factors. Thus, the optimism that the Indian FLPR

has reached the bottom of the U-shaped curve and will soon turn around the corner and start rising might be misplaced or unwarranted.

1.1 ILO Projections for Female Labour Force Participation Rates

If the ILO projections are any indication (Figure 1)¹, the female labour force participation rates are unlikely to witness an increase in the near future. According to ILO estimates, the FLPR has fallen from 33.8 percent in 2000 to an all-time low of 26.8 percent in 2012. In 2015, the FLPR stood at 27.3 percent. Thereafter, the projections indicate that the FLPR will plunge further after a marginal increase in 2016 and expected to reach an abysmal level of 24 percent by 2030. This projected low participation of women in the economic sphere will certainly detract India from achieving the Sustainable Development Goal 5 i.e. eliminating gender inequalities by 2030.

Figure 1: ILO Projections for Female Labour Force Participation (Ages 15 and above)



Source: ILOSTAT - ILO modelled estimates as updated on July 2017

1.2 International Comparatives

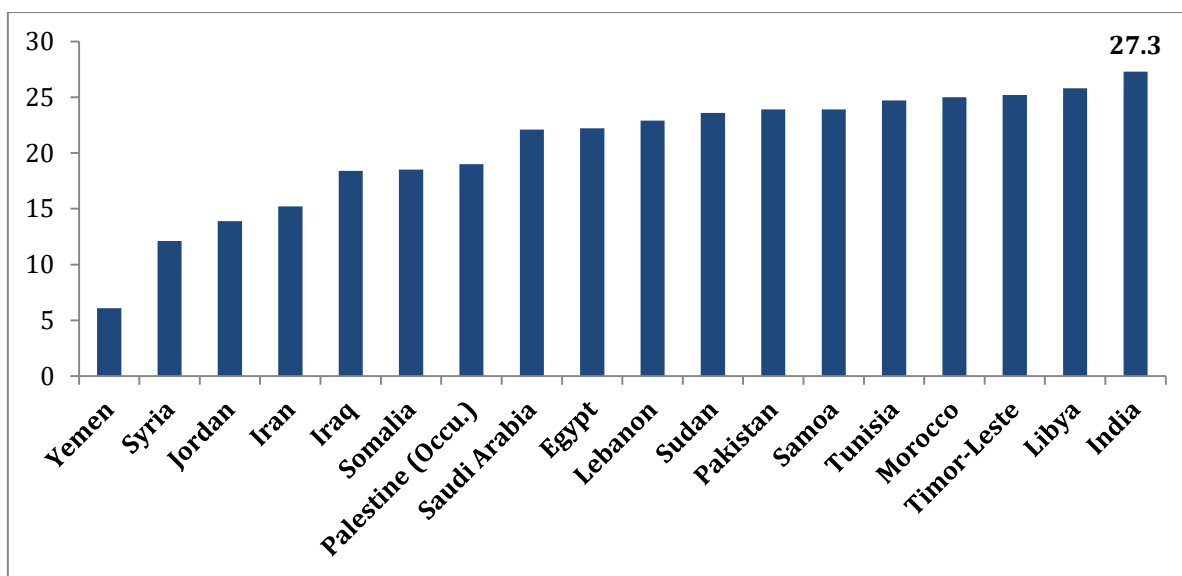
The proportion of India’s total female population that is economically active is among the lowest in the world. While the female labour force participation rates vary considerably across developing countries, few countries in the world perform worse than India (see Figure 2). These countries are largely spread across the Middle East, Africa and South East Asia where historically gender roles and cultural stereotypes have continued to affect economic outcomes. In the South Asian region, only Pakistan has a lower female labour force participation rate than India at 23.9 percent in 2015 (ILOSTAT). However, despite a higher

¹ Data for time period between 1990-2015 are estimates while data for the time period between 2016-2030 are projections. The series is part of the ILO modelled estimates (updated as of July 2017). <https://www.ilo.org/ilostat-files/Documents/LFEP.pdf>

fertility rate of 3.3 children per women and a lower female literacy rate of 46.3 percent (Pakistan Labour Force Survey 2010-11), the female labour force participation in Pakistan has continued to increase, albeit slowly over the past few years converging with the South Asian average.

The recently released Global Gender Gap Report 2017 by the World Economic Forum which benchmarks 144 countries on their progress towards gender parity placed India at the 108th position in 2017; a slip of 21 slots from 2016. The WEF measures gender gap across four pillars: economic participation and opportunity, educational attainment, health and survival and political empowerment. Across the economic participation and opportunities pillar, India is placed abysmally low at 139 out of 144 countries (only better placed than Iran, Yemen, Saudi Arabia, Pakistan and Syria). However, with respect to the educational attainment pillar it was reported that, “India succeeded in fully closing its primary and secondary education enrolment gender gaps for the second year running, and, for the first time has nearly closed its tertiary education gender gap.” Thus, in India, education and female labour force participation rate are not necessarily moving in the same direction. It is the Indian experience of a fall in female labour force participation rates despite robust economic growth, rising incomes, fall in fertility rates and improvement in female literacy that has raised brows in the international sphere. Hence, it is important that the anomaly of India’s unique development trajectory is highlighted and its deviation from the standard experience be explained.

Figure 2: Countries with the Lowest Female Labour Force Participation Rates in the World (2015)



Source: ILOSTAT - ILO modelled estimates as updated on July 2017

2. Estimating FLPR from National Data Sources

2.1 NSSO Quinquennial Employment and Unemployment Survey

The falling female labour force participation rates in India can be looked at through the lens of various national data sources. The quinquennial household surveys on employment and unemployment conducted by the National Sample Survey Organisation (NSSO) since 1972 is frequently cited while reporting the long-term trend in FLPR in India.

The most recent round (68th round) conducted in 2011-12 reports female labour force participation rates for all ages to be at 22.5 percent (Table1) using the usual status² approach. Thus, this round reports a fall in the FLPR for all ages, which stood at 23.3 percent in 2009-10 (66th round). With respect to the working age population i.e. ages 15 and above, the female labour force participation rates have dropped from 32.6 percent in 2009-10 to 31.2 percent in 2011-12 (Andres et al, 2017). However, the FLPR in the urban areas rose marginally (ages 15 and above) from 19.4 percent in 2009-10 to 20.5 percent in 2011-12, though it is still much lower than the FLPR of 23.7 percent in 1993-94 and 24.4 percent in 2004-05.

It has been observed that the only increase in the female labour force participation since 1977 was between 1999-00 and 2004-5. This has primarily been attributable to the rise in rural female unpaid family workers in the agricultural sector. It has been argued that increased females in the workforce served as a reserve army of workers at a time when the agricultural growth rate had hit a slump at 1.7 percent (Mehrotra et al, 2017). This is consistent with the theory of the “added worker effect” whereby increased participation of women is observed during economic crisis, in response to declining household income (Verick et al, 2014; Attanasio et al, 2005; Abraham, 2009). Female labour force participation rate and employment again dropped back between 2004-5 and 2009-10 when the agricultural growth rate picked up (Mehrotra et al, 2017). Thus, the FLPR in rural areas (ages 15 and above) dropped from 49.4 percent to 37.8 percent (a drop of 11.6 percentage points), and urban areas from 24.4 percent to 19.4 percent (a drop of 5 percentage points) between 2004-05 and 2009-10, leading to a concomitant decline in the overall female labour force participation rates in the said period. Additionally, it has also been observed that for the first time in recent years, between 2004-05 and 2009-10, along with a decline in the total female labour force participation rate, the size of the total female labour force has also shrunk (Andres et al, 2017). The shrinkage in the size of the female labour force is a cause for concern.

² The usual status (ps+ss) approach takes into consideration both the major time criterion (183 days or more in an economic activity) and shorter time period (30 days or more in an economic activity). It is a more inclusive indicator for measuring labour force participation rate. Thus a person who has worked even for 30 days or more in any economic activity during the reference period of last twelve months is considered as employed under this approach.

Table 1: NSSO: Female Labour Force Participation Rates by Urban and Rural Areas; Usual Status

All ages#			
	Urban	Rural	Rural+Urban
1993-94	16.4	33.1	
1999-00	14.7	30.2	
2004-05	17.8	33.3	
2009-10	14.6	26.5	23.3
2011-12	15.5	25.3	22.5
Ages 15 and above*			
	Urban	Rural	Rural+Urban
1993-94	23.7	49.0	42.6
1999-00	21.0	46.0	39.5
2004-05	24.4	49.4	42.7
2009-10	19.4	37.8	32.6
2011-12	20.5	35.8	31.2

Source: #NSS Report on Employment and Unemployment (2011-12); *Andres et al, 2017

Table 2: NSSO: Female Labour Force Participation Rates by Age-Group and Residence; Usual Status

Age Group	1993-94	1999-2000	2004-2005	2009-2010	2011-2012
Rural					
15-19	37.1	31.4	33.1	19.5	16.4
20-24	47.0	42.5	43.5	31.4	29.7
25-29	52.8	49.8	53.0	40.4	36.9
30-34	58.7	55.7	59.3	43.4	43.1
35-39	61.0	57.9	64.2	49.7	48.1
40-44	60.7	58.6	62.7	49.8	48.2
45-49	59.4	56.6	61.6	49.2	48.4
50-54	54.3	51.5	56.2	48.5	44.4
55-59	46.8	45.0	50.9	41.1	39.4
60 & above	24.1	21.8	25.4	22.6	21.3
All	33.1	30.2	33.3	26.5	25.3
Urban					
15-19	14.2	12.1	14.4	8.5	8.9
20-24	23.0	19.1	25.0	19.7	19.7
25-29	24.8	21.4	26.1	22.2	25.3
30-34	28.3	24.5	30.8	23.9	25.9
35-39	30.4	28.9	34.0	27.8	28.4
40-44	32.0	28.5	31.7	25.6	27.6
45-49	31.7	26.9	26.9	23.1	24.5
50-54	28.7	26.4	25.9	22.8	21.9
55-59	22.5	20.8	21.8	19.1	17.7
60 & above	11.4	9.4	10.0	7.0	7.8
All	16.4	14.7	17.8	14.6	15.5

Source: NSS Report on Employment and Unemployment (2011-12)

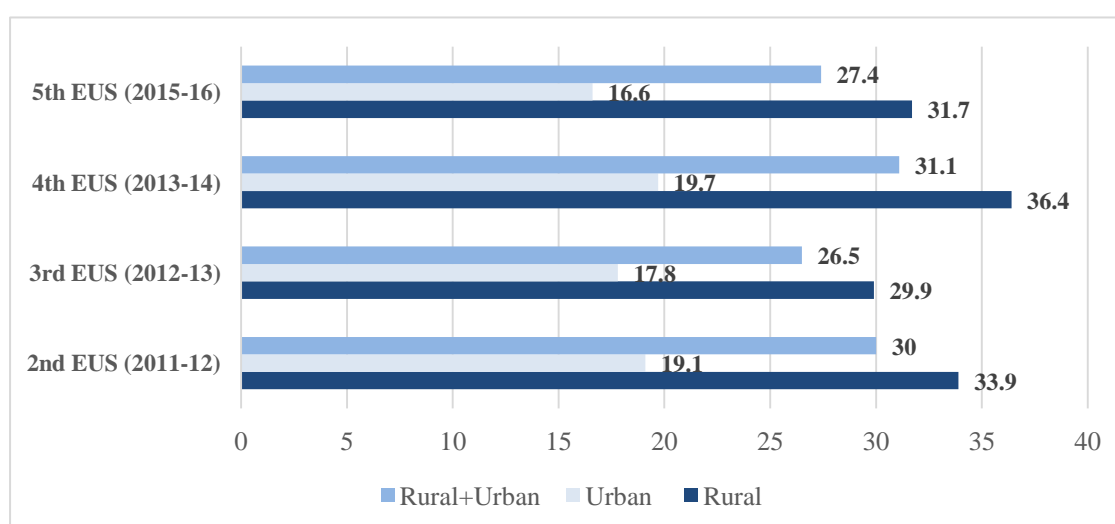
Table 2 presents the age-group specific FLPR since 1993-94 by rural and urban areas. Between 1993-4 and 2011-12, it can be seen that FLPR has declined for all age- groups of rural females and for all age-groups other than ages 25-29 for urban females (where it has

risen marginally from 24.8 percent to 25.3 percent). For rural females, the FLPR in the age group 25-29 years and 30-34 years has declined by as much as 15.9 and 15.6 percentage points respectively.

2.2 Labour Bureau Employment and Unemployment Survey

The NSSO Employment and Unemployment survey is a quinquennial survey and thus, is unable to capture the employment situation in India in the intervening years. The last NSSO survey was conducted in 2011-12 and therefore, a need was felt to conduct surveys on an annual basis to assess the employment situation in the economy at frequent intervals (Report of the Third Labour Bureau Employment and Unemployment Survey, 2012-13). Conducted since 2009-10 by the Labour Bureau to fill in the data gaps, the ‘Annual Employment and Unemployment Survey’ is an important starting point to gauge the most recent national estimates of the female labour force participation rates in India (Figure 3). Using the usual status approach, the female labour force participation rates (ages 15 and above) in India was reported to be at 30 percent in 2011-12 that declined to about 27.4 percent in 2015-16. In urban areas, the decline in FLPR was from 19.1 percent in 2011-12 to 16.6 percent in 2015-16 while the rural areas witnessed a concomitant decline from 33.9 percent to 31.7 percent. Thus, the decline in FLPR in the most recent years was driven marginally more by urban than rural areas.

Figure 3: Labour Bureau: Female Labour Force Participation Rates (Ages 15 and above); Usual Status



Source: *Labour Bureau Annual Employment and Unemployment Survey: Vol I³*

Table 3 reports the FLPR by age group ‘18-29 years’ and age group ‘30 years and above’. Across both age groups there has been a fall in the FLPR in urban and rural areas between 2013-14 and 2015-16.

³ In the report of the First Labour Bureau Employment and Unemployment Survey 2009-10, all estimates are given using the usual principal status approach and thereby, comparable estimates of female labour force participation using the usual status approach for the year 2009-10 is not available.

Table 3: Labour Bureau: Female Labour Force Participation Rate by Age Groups and Residence; Usual Status

Age groups	3rd EUS (2012-13)	4th EUS (2013-14)	5th EUS (2015-16)
Rural			
18-29	27.4	33.2	28.1
30 and above	33.8	40.8	36.5
Urban			
18-29	20.0	21.2	16.7
30 and above	18.4	20.6	18.0
Rural+Urban			
18-29	25.3	29.4	25.0
30 and above	29.4	34.4	31.1

Source: Labour Bureau Annual Employment and Unemployment Surveys: Vol II

While commenting on the falling FLPR, it is also important to observe the size of the female labour force. For the first time in recent years, Andres et al (2017) note a decline in the size of the female labour force by around 19.13 million between 2004-05 and 2009-10 using the NSSO quinquennial rounds. Similarly, Abraham (2013) notes that while the size of the female labour force increased by 26.5 million between 1999-00 and 2004-05, during the period between 2004-05 and 2009-10, the size of the female labour force dropped by 21.7 million (consistent with the theory of the ‘added worker effect’). Thus, not only has there been a fall in the female labour force participation rates, but the size of the total female labour force has also shrunk. Using the estimates of the FLPR and the population projections reported by the Labour Bureau, an attempt is made to estimate the size of the female labour force for the years 2013-14 and 2015-16.

Table 4: Labour Bureau: Size of the Female Labour Force (in millions); Usual Status

Ages 15 and above				
	FLPR (usual status)	Population projection ⁴	Size of the Female Labour Force	Change in the Size of the Female Labour Force
4th EUS (2013-14)	31.1	438.11	136.25	
5th EUS (2015-16)	27.4	453.96	124.38	-11.86

Source: Author’s estimates from Labour Force Participation Rates and Projected Population reported in the 4th and 5th Report of the Labour Bureau Annual Employment and Unemployment Survey

⁴ The 4th and 5th Labour Bureau Employment and Unemployment Survey report the population projections for ages 15 and above using the Census 2001 and 2011 data. The reference period for the 4th EUS is January 2014 to July 2014 and the population data is as on 1st March 2014. It is estimated using the formula $A=A1*\{[1+(R/100)]^{(52/120)}\}$, where A1 is the census population as on 1st March 2011, R is the percentage decadal change in population between 2001 and 2011 and A is the projected population as on 1st March 2014. Similarly, the reference period for the 5th EUS is April 2015 to December 2015 and the population data is as on 1st July 2015 using the same formula.

Thus, in 2013-14, the size of the female labour force was 136.25 million which declined to about 124.38 million in 2015-16, a drop of 11.86 million (the biggest decline observed since the decline between 2004-05 and 2009-10).

Table 5: NSSO and Labour Bureau: Size of the Female Labour Force (in millions); Usual Status

Ages 15 and above	
Andres et al (2017)⁵	
1999-00	122.08
2004-05	148.01
2009-10	128.88
2011-12	128.85
Author's Estimate⁶	
2013-14	136.25
2015-16	124.38

Source: Andres et al(2017); Author's estimates derived from FLPR and projected population reported in the 4th and 5th Report of the Labour Bureau Annual Employment and Unemployment Survey

Table 5 juxtaposes the estimates of **Andres et al (2017)** based on the NSSO rounds with the most recent estimates obtained using the Labour Bureau Annual Employment and Unemployment Survey data. The size of the female labour force was 122.08 million in 1999-00 which increased to about 148.01 million in 2004-05. Between 2004-05 and 2015-16, the size of the female labour force has fallen by as much as 23.63 million. Since, two different sources are used for making the comparison, it is important to comment on the comparability between the NSSO Quinquennial Employment and Unemployment Survey and Labour Bureau Annual Employment and Unemployment Survey. Broadly, there are no significant methodological differences between the NSSO and Labour Bureau as both of them have used the same concepts and definitions in estimating employment and unemployment characteristics (Report of the Third Labour Bureau Employment and Unemployment Survey, 2012-13). Additionally, the same sampling frame in both urban and rural sector has been used. The selection process of FSUs in both surveys is based on the “2011 census villages for the rural areas and the urban frame survey (UFS) for urban areas.” (State of Working India, 2018).

Besides, the estimates of FLPR as reported by the Labour Bureau are broadly similar to those given by the NSSO quinquennial survey in a given year. The Labour Bureau estimated the female labour force participation rate in India (for ages 15 and above) in 2011-12 at 30 percent while the derived estimates from NSSO (Andres et al, 2017) puts it at 31.2 percent in the same year using the comparable usual status approach. Thus, the estimates from the two different government sources are consistent and vary only marginally. This marginal variation may stem from differences between the two surveys in the criteria used for the

⁵ Based on the NSSO Quinquennial Survey.

⁶ Based on the Labour Bureau Employment and Unemployment Survey Report

selection of households and the time duration of the fieldwork. While the Labour Bureau stratifies households on the basis of total members of the households aged 15 and above, the NSSO selects households on the basis of affluence in rural areas and monthly per capita expenditure in urban areas (Report of the Third Labour Bureau Employment and Unemployment Survey, 2012-13). According to the Expert Committee that was set up for designing the methodology of the Labour Bureau Survey, the methodology that stratifies household based on the number of members aged 15 years and above is a better criterion for estimating employment (Report on Employment and Unemployment Survey, 2012-13). There is also a difference in the duration of the field-work of the two surveys (The fieldwork for the Labour Bureau surveys runs for a shorter period than the NSSO surveys) which has implications for collection of data for casual and seasonal workers (State of Working India, 2018).

2.3 National Family Health Survey: Participation of Women in Cash Economy

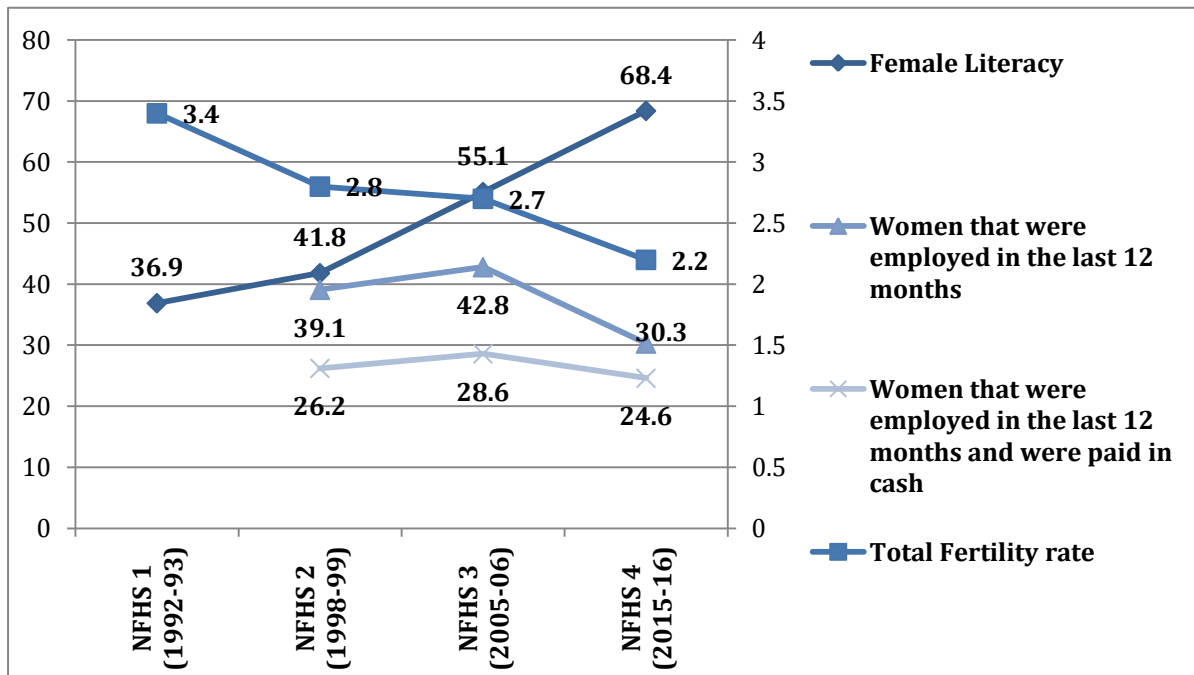
The results from the National Family Health Survey⁷ also reaffirm that the outcomes for women in the labour market in India have deteriorated over the past few years. It is commonly accepted that educational attainment, fertility rates, age of marriage and economic growth drive female labour force participation rates. However, the Indian experience has turned out to be quite an anomaly. The National Family Health Survey (NFHS) conducted since 1992-93, under the stewardship of the Ministry of Health and Family Welfare is an important lens through which we can simultaneously look at fertility rates, female literacy and participation of women in the economy (Figure 4). It can be seen that between 1992-93 and 2015-16 female literacy has increased from 36.9 percent to 68.4 percent while the fertility rate (parity) has declined from 3.4 children per woman to 2.2 children per woman. However, the percentage of women (ever married women; ages 15-49) that were employed in the 12 months preceding⁸ the survey fell from 39.1 percent in 1998-99 to 30.3 percent in 2015-16. Concomitantly, the percentage of women that were employed in the last 12 months and paid in cash⁹ declined from 26.22 percent in 1998-99 to 24.6 percent in 2015-16 (Figure 4). The observation that improved development outcomes of women have failed to have an impact on the female employment is a cause for concern.

⁷ In the NFHS-1 (1992-93), the sample was ever-married women aged 13-49. Subsequently, in the later rounds of the NFHS (2, 3, 4), the sample was ever-married women aged 15-49.

⁸ Respondents are considered to be employed if they have done any work other than their housework in the 12 months preceding the survey. The employment is the sum total of the 'currently employed' and 'not currently employed'. 'Currently employed' are defined as those who have done work in the past seven days. 'Not currently employed' are those who have not done work in the last seven days but were employed at any time in the twelve months preceding the survey.

⁹ The type of earning reported in the NFHS is: cash only, cash and kind, kind only, not paid and missing.

Figure 4: NFHS: Female Literacy, Participation in Economy and Total Fertility Rate (Various Rounds)



Source: Published reports of the National Family Health Survey (several rounds)

The fall in the percentage of women engaged in the cash economy over the past two decades is indicative of larger withdrawal of women from the market economy. It is also reflective of a fall in rural and urban distress alike. This is because between 1998-99 and 2005-06 i.e. the years that coincide with an agricultural slump, the percentage of women engaged in the cash economy picked up before falling back and to even lower rates between 2005-06 and 2015-06 (the time period corresponding to the revival in the agricultural growth rate and initiation of the MGNREGA that ameliorated rural distress). Thus, the data is indicative of distress driven rather than opportunity driven entry of women in the labour force and corroborates the theory of the ‘added worker effect’. However, it must be kept in mind that the results from the NFHS survey are prone to biases as women only in the reproductive age group i.e. ever-married women between 15-49 years of age are sampled.

2.4 Consumer Pyramid Household Survey

The CMIE Consumer Pyramid Household Survey is a longitudinal survey of more than 172,365 households and 522,000 people (which is more than that of the NSSO). It is conducted over a period of four months (called a wave) and can be used to gauge the most recent estimates of the female labour force participation rate in the country. The first wave of the survey was launched in January -April 2016 and the most recent round for which data on female labour force participation is available is May-August 2018. The recall period of the CMIE is either the date of the survey or the day preceding it. If there is any ambiguity

regarding the status of the individual on the day of the survey, the status of the individual on the day preceding the interview is considered. Therefore, the methodology used by the CMIE for estimating the labour force statistics is closest to the NSSO's current daily status approach.

CMIE also makes a distinction between labour force participation rates (LFPR) and greater labour force participation rates (GLPR) which stems from the difference in the definition of unemployed. The GLPR defines 'unemployed' as those that are '**unemployed, willing to work but not active job seekers**' and '**unemployed, willing to work and are actively seeking jobs.**' As opposed to this, the LFPR is a more conservative measure and defines unemployed as those that are '**unemployed, willing to work and actively seeking jobs.**' It can be seen from Table 6 that both female LFPR and GLPR have declined across the consecutive waves. The CMIE female LFPR stood at 15.75 percent in January-April 2016 and has declined to about 10.65 percent in May-August 2018 while the female GLPR has declined from 22.13 percent in January-April 2016 to 11.83 percent in May-August 2018.

With respect to the methodology and estimates used by the CMIE for gauging female labour force participation, it is worth mentioning that using the reference period of a day used is advantageous to the extent that this approach is less vulnerable to recall errors. According to the ILO (1990), "retrospective measurement over a long reference period such as a year has limitations: various types of recall errors due to memory lapses may occur, including omission of events and misreporting of their timing or duration. These errors are aggravated when proxy-responses are used." Secondly, the usual status approach which uses a longer reference period of a year is unable to capture the changes in the activity pattern caused by seasonal fluctuations (Planning Commission, 2008). Thus, in developing countries where a large informal sector exists (with a large share of self-employed) and where employment tends to be volatile and short-lived, having a short reference period of a day or a week allows the capture of seasonality in participation rates and may give a better snapshot of the economy.

However, even though the estimates by CMIE are less vulnerable to memory dependent errors and capture seasonality better, having a reference period of a day might give a higher estimate of female unemployment than the usual status approach. This is because by using a shorter reference period such as that used by the CMIE, those that end up being captured as employed in the longer reference period will be declared unemployed. This is especially in the context of large intermittent and underemployment of the female workforce in the country.

Table 6: CMIE: Female Labour Force Participation Rates (LFPR) and Greater Labour Force Participation Rates; CMIE Methodology

Ages 15 and above		
	LFPR	GLPR
Jan-Apr 2016	15.75	22.13
May-Aug 2016	16.37	21.91
Sep-Dec 2016	14.43	18.12
Jan-Apr 2017	12.64	14.51
May-Aug 2017	11.44	12.53
Sep-Dec 2017	11.97	13.58
Jan-Apr 2018	11.37	12.78
May-Aug 2018	10.65	11.83

Source: Unemployment in India: A Statistical Profile; Centre for Monitoring Indian Economy

2.5 Time-Use Survey

India conducted its only Time-Use Survey in 1998 and thus, even though it cannot be used to gauge the dynamic development in the labour market for women; it gives a snapshot of the time spent by women on work and reaffirms that the conventional method of data collection for measuring employment disfavors women. In the surveys conducted by both the NSSO and the Census for collecting labour statistics, women's work in four general areas of activity i.e. (1) subsistence production, (2) informal paid work, (3) domestic work and (4) voluntary work is underestimated, thereby, misrepresenting the overall size of female 'workers' (Hirway,1999). However, Time-Use Surveys by comprehensively revealing the details of an individual's daily life over a 24-hour period are able to circumvent this problem. The survey records the various activities undertaken by a respondent on a given day and hence, captures the division of the day by men and women in paid and unpaid work. Thus, Time-Use Surveys account for multiple activities undertaken whether simultaneously or not and can potentially complement and supplement the conventional labour force surveys.

India conducted the first pilot Time-Use Survey in 1998 in six selected states, namely, Haryana, Madhya Pradesh, Gujarat, Orissa, Tamil Nadu and Meghalaya but did not follow through for 20 years. This was perhaps because the survey was highly resource intensive in terms of number of skilled investigators, time and money required (Report of the Committee on Unorganised Sector Statistics, 2012). However, despite the cost, the exercise unveiled some interesting aspects with respect to participation of women in activities classified as SNA¹⁰ (System of National Accounts), extended SNA activities and Non-SNA activities. The SNA activities encompass production of all goods within the SNA production boundary and the production of all services except personal and domestic services produced for final

¹⁰ The System of National Accounts (SNA) is an accounting framework based on a set of internationally agreed concepts, definitions, classification and accounting rules and is followed both by the NSSO and the Census. The latest SNA framework was released in 2008 and is similar to the SNA framework of 1993 (Sircar, 2010).

consumption in the household¹¹. Concomitantly, extended SNA activities refer to activities which fall outside the SNA production boundary but within the general production boundary¹² (Sircar, 2010). Extended SNA activities mainly include (a) household maintenance and management (cooking, cleaning and washing), (b) care for children, the sick, elderly and disabled of own household (c) community services and help to other households and (d) production of goods for self-consumption, for instance, stitching clothes, makings jams and pickles for family (ibid). Non-SNA activities refer to those which fall outside the general production boundary i.e. activities which cannot be delegated to others like sleeping, eating etc (ibid).

The Time-Use survey revealed that the census and NSSO underestimated female participation in SNA activities (Hirway, 1999). The data revealed that 76.4 percent males and 62.8 percent females participated in SNA activities while only 46.6 percent males and as much as 88.7 percent females participated in extended SNA activities (ibid). Even though, women work in large numbers in SNA activities, the number of hours put in by them in SNA activities (19 hours) is much less than those put in by men (42 hours) (MoSPI, 2018). This is because of relatively larger burden of extended SNA activities which leaves them with little time to engage in the formal labour market. Also, on comparing the total number of hours (which includes SNA and extended SNA activities) put in by men and women, it is found that women work more than men. This is not just an Indian phenomenon since, globally women work more than men when both paid and unpaid work is accounted for. While women spend about 58 hours a week, men spend about 50 hours a week on work in India (Hirway, 1999). Within extended SNA activities, men spend a total of 3.65 hours, of which 2.55 hours are spent on household management and maintenance, 0.98 hours on care (of children, the elderly and sick) and 0.12 hours on community work (ibid). Concomitantly, of the 34.63 hours spent by women on extended SNA activities, 29.89 hours are spent on household management and maintenance, 4.65 hours on care and 0.09 hours on community work (ibid). Thus, women spend almost ten times the time that men spend on unpaid family responsibilities. This has important consequences in terms of opportunities for public participation, labour force participation and consequently downward mobility and increased risk of poverty and vulnerability (Second National Commission on Labour, 2002).

In 2017, the Task Force on Improving Employment Data recommended that a new Time -Use Survey be instituted that would be conducted over an interval of three years. This survey would not only help in tracking how time spent by households has been changing but would also help in assessing the shifts in the labour force participation rates. Thus, it would enable us to understand the sharp decline in FLPR between 2004-05 and 2011-12 which has been a subject of much speculation (Task Force on Improving Employment Data, 2017). It will also

¹¹ For instance, the SNA activities encompass primary production activities, like crop farming, animal husbandry, fishing, forestry, processing and storage, mining and quarrying; secondary activities like construction, manufacturing and activities like trade, business and services (MoSPI, 2018).

¹² General Production Boundary demarcates the production of services from other activities that maybe important and beneficial but where it is impossible for one person to employ another person to perform it. For instance, care activities can be performed by other units and hence, fall within the general production boundary but activities such as eating, sleeping and drinking fall outside the general production boundary.

help us identify how India's 200 million women involved in domestic activities spend their day and to what extent they may already be involved in market activities. Presently, the NSSO is in the process of launching a Time-Use Survey from 1st January 2019¹³. The NSSO must ensure that the Time-Use Survey be conducted by adopting a harmonized classification of activities with other labour force surveys to ensure comparability. This is because an important issue with the classification of activities in the Time-Use Survey is that these activities do not converge with the classifications of activities used in the conventional labour force surveys such as the NSSO (Report of the Committee on Unorganised Sector Statistics, 2012).

3. Explaining Falling Female Labour Force Participation Rates in India

Broadly, the declining FLPR rates in India reflect both demand and supply side factors that makes the determination of causation difficult (Fletcher et al, 2017). Some of these factors can be quantified such as increasing enrolment of women in higher education, income effects of households, lack of job opportunities deemed suitable by women, crowding out effect due to higher educational outcomes, discriminatory wages and labour laws (protective legislation). Additionally, there is also the problem arising from the mismeasurement of women's work. However, there are additional factors at play besides these i.e. processes that are difficult to quantify. For instance, gendered morality that defines women and men's roles and prevent women from working. In developing economies like India, social norms and economic factors interact in a complex fashion to determine the decision and ability of women to participate in the labour force¹⁴. In the following section, these economic and social factors have been clubbed into a series of supply and demand side factors that have seemingly led to the paradoxical phenomenon of low FLPR in India (Klasen et al, 2015).

3.1 Demand Side Factors

On the demand side, constraints to FLPR in India are economic and legal. On the economic front, sustained growth over the last few years has not necessarily translated into more jobs. This jobless growth has been more prominent in sectors that employ women or are female friendly (Fletcher et al, 2017). In 2011-12, the largest proportion of female workers were distributed in agriculture (63 percent), followed by manufacturing (13 percent) both of which sectors that witnessed either decline or slow growth in female employment (Rustagi, 2013). While the share of women workers in the agriculture sector dropped from 42 percent in 2004-05 to 35.5 percent in 2011-12; in manufacturing the drop was from 31.9 percent to 29.1 percent (ibid).

The reduction in female employment in agriculture was mostly among unpaid female family workers. According to Rustagi (2013), this reduction in unpaid female family workers could be indicative of increasing adoption of technology in agriculture. Mehrotra et al (2017) point that women perform more manual work in agriculture than men with about 54 percent of female workers in agriculture engaged in manual activities in 2011-12. Thus, the process of

¹³ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=183753>

¹⁴ These norms play out across both the demand and supply side factors and constrain FLPR.

mechanization such as the use of seed drillers, harvesters and threshers has impacted female workers disproportionately and displaced them in large numbers. This displaced female workforce face greater difficulties in moving out of the agricultural sector and obtaining other non- agricultural jobs (Kapsos et al, 2014). This is because the lack of momentum in job creation in the manufacturing sector has depressed demand for female labour for women transitioning out of agriculture. In fact, the Indian economy has leapfrogged directly from agriculture to services and the role of manufacturing in generating jobs has been very limited in the past few decades. The recent growth story of India has been driven not by manufacturing but by the service sector (formal and informal) boom. However, women tend to be less represented in the services and manufacturing continues to remain an important employer of women. Prillaman et al (2016) find that manufacturing abets female labour force participation and the gender gap in labour force participation in the services sector is 19 percent in favour of men, but 1 percent in favor of women in manufacturing. This challenges the narrative of the role of service sector jobs in increasing female employment (Fletcher et al , 2017).

The crowding out effect also plays an important role in declining participation rates of women. With increase in educational qualifications, there has been a cumulative explosion of potential high skilled female workers. However, the increase in white-collar jobs which are the only jobs likely to pull in highly qualified women in the labour market have not been able to keep in pace with the increased supply of these women (Klasen et al, 2013). The share of white-collar services in urban employment has fallen from 19 percent in 1987 to 17 percent in 2009, while the proportion of graduates in the working age population have increased precipitously from 11 percent to 21 percent (ibid). Consequently, there has been a crowding out of female labour participation because of oversupply of educated workers relative to the growth in jobs considered appropriate by them. Moreover, the net job creation in the past few years has been majorly in the informal sector, which is characterized by poor and unsafe working conditions, low wages and the lack of jobs and social security. Between 2004-05 and 2011-12, 14 million jobs were added in the economy, the bulk of which were in the informal sector (Himanshu, 2017). Employment for women in the informal sector is a double-edged sword for not only are they paid less than the statutory minimum wages, but they are also paid less than their male counterparts. The persistence of stigmas against informal work has led to a lower level of participation rates among women with medium educational attainment.

On the legal front, historically, ‘protective legislation’ at both the central and state level in India has limited the employment of women workers. Some of these laws and regulations have been identified below (Table 7). These discriminatory laws place restrictions on the working of women during night shifts, and also the type of operations that women can work in. Prohibiting women workers from working at night has resulted in a decrease in the hiring of women by employers for “it means adding more people to the muster rolls as one entire shift of workers becomes unavailable for work.” (Abraham et al, 2013). With respect to the mining industry, there is a blanket ban on women working underground. These legal prohibitions along with the mechanization of mines over time have resulted in low female employment in the mining sector (ibid).

Table 7: Protective Legislation in India

Law	Restrictive Provisions for Women
The Factories Act 1948, Section. 22, 27, 66 and 87	<p>Section 22 prohibits women from cleaning, lubricating or adjusting any part of a prime mover or of any transmission machinery while it is in motion.</p> <p>Section 27 prohibits women from being employed in any part of a factory for pressing cotton in which a cotton opener is at work.</p> <p>Section 66 states that no woman shall be required or allowed to work except between 6 A.M and 7 P.M in any factory.</p> <p>Section 87 allows the state government to make rules restricting the employment of women if it is of the opinion that the manufacturing process or operation exposes a person to bodily injury, poisoning or disease.</p>
Mines Act 1952, Section 46	<p>Prohibition on employment of women in</p> <p>(a) mines below ground and</p> <p>(b) mines above ground except between 7 pm and 6 am</p>
Maharashtra Factories Rules 1963, Schedules II, IV, VI, VII, VIII, X, XI, XIII, XIV, XV, XVIII, XX, XXI and XXII	<p>Restrictions on working in industrial operations such as metalworking; glassware manufacturing; operation involving lead process; operations involving generation of gas from petroleum; operations in the blasting chamber; operations involving chrome process; processes involving use of nitro or amino compounds; processes involving carbon disulphide and hydrogen sulphide; processes involving manganese ; processes involving benzene or substances containing benzene; operations in solvent extraction plants</p>

Source: Abraham et al (2014); *Women, Business and the Law (WBL)*, World Bank

3.2 Supply Side Factors

According to Mehrotra et al (2017) “Economic growth increases employment opportunities but it cannot on its own reduce gendered inequalities.” Cultural norms and stigmas attached to women working outside and participating in economic activities are still rampant. Lack of an enabling environment that allows women to balance out domestic duties and work, such as the provision of crèches and flexi hours further fails to retain women in the workforce. This also plays a crucial role in arresting women’s labour force participation in India. According to Rustagi (2014), “To a certain extent, men control women’s lives. And women have internalized this as the norm. In such situations, the little work they do is the result of compulsion, such as when the household income is not enough, rather than choice¹⁵.”

Traditionally, women have been primary caregivers and they have disproportionately borne the burden of domestic responsibilities. Thus, there is a wide disparity between men and women in terms of time spent in domestic duties. The various NSS reports suggest that this disparity has only reinforced over the years with an increase in the share of females engaged in domestic duties from 51.8 percent in 2004-05 to 59.7 percent in 2011-12 in rural areas and from 63.1 percent in 2004-05 to 63.7 percent in 2011-12 in urban areas. Further, more

¹⁵ <https://theconversation.com/indias-urban-work-boom-is-leaving-women-behind-22668>

women in urban areas report their primary activities as domestic duties at 76 percent compared to 67 percent in rural areas (Fletcher et al, 2017).

Box 1: Mondelez's Indian Manufacturing Plant - A Model Factory for Women

Economic Times (2018) reported that at Mondelez's (a U.S. based FMCG giant) Indian manufacturing unit in Sri City, Andhra Pradesh, nearly half of the permanent employees on the production floor are women. Mondelez adopted a unique strategy to build a factory floor (which generally tends to be a male bastion) that was equally represented by women. The representatives from the company went to the villages in and around Andhra Pradesh and approached the families of the women they could potentially hire. They asked the parents of their potential female employees to visit the facility so that they could assure them that Mondelez had a safe and secure working environment. Once hired and prior to joining work, these women were trained for 6-12 months in Bengaluru to expose them to an industrial environment. Some of the proactive measures Mondelez took to support women in the workplace were: a) provision of a medical centre and crèche inside the facility for young mothers; b) provision of a company hostel 20 minutes away from the plant with pick up and drop facilities and c) equipping machines in the plant with vacuum lifters that could aid in lifting heavy bags. The industry giant also took measures to create greater awareness and sensitization regarding gender issues at work. It let men get acclimatised to the idea of women working at equal par with them in the factory floor and that inclusion is good for them. In this regard, it organised and continues to organise campaigns which it calls 'Lakshman Rekha' to teach male and female workers about respecting gender boundaries and that no gender is allowed to dominate the other. All of these efforts have turned Mondelez's facility in India a model factory for women.

Source: Economic Times (2018)

Further, the existence of the income effect such that the rising income of a household serves to drastically lower the female labour force participation rate, is also a dominant supply side factor influencing the participation rate of women. Secular increases in the rural and urban real wages post 2004-05 has largely boosted household incomes to the effect that the absolute number of poor fell by 138 million between 2004-05 and 2011-12 (Mehrotra et al, 2017). Rising household income increase the opportunity cost of domestic activities for women. Additionally, as the financial necessity of women to engage in outside work drops, most families are keen for women to stay at home as it is reflective of a rise in social status.

Also, significant wage differential in the labour market which exists at even high levels of education also impede the participation of women (Table 8). The wage gap is higher in rural than urban areas. For graduates and above, it is as high as 31.3 percent in rural areas and 24.3 percent in urban areas. Thus, while competing for a small pool of formal sector jobs, instead of accepting poorly paid jobs, a significant proportion of educated women choose to remain out of the labour force.

Table 8: NSSO: Wage Differential by Residence and Education level (2011-12)

	Rural		
	Men	Women	Wage Differential
Not literate	174.37	89.31	48.8
Literate & upto Middle	202.48	104.27	48.5
Secondary & Higher Secondary	319.46	179.98	43.7
Diploma/ Certificate	450.31	428.66	4.8
Graduate and above	550.23	377.85	31.3
All	322.28	201.56	37.5
	Urban		
	Men	Women	Wage Differential
Not literate	207.65	123.43	40.6
Literate & upto Middle	237.24	132.81	44.0
Secondary & Higher Secondary	358.51	306.96	14.4
Diploma/ Certificate	524.33	391.43	25.3
Graduate and above	805.52	609.69	24.3
All	469.87	366.15	22.1

Source: NSSO Employment and Unemployment Situation in India, 68th round

Another, understudied, yet notable supply side constraint to female labour force participation is migration. Concerns over safety and improper provisioning of working women’s hostels when migrating to a major city for a job undermine the willingness of women to migrate for work as readily as men. Thus, appropriate support to female migrants in the form of safe and affordable accommodation should be a priority policy area for the government. Notably, Ministry of Women and Child Development is implementing the Hostels for Working Women Scheme since 1972-73 to provide safe accommodation. However, since its inception only 961 hostels have been sanctioned under the scheme all over the country.¹⁶

3.3 Measurement Errors

The Second National Commission on Labour (2002) noted that the data on work participation of women remains questionable. “The problems arising from inadequate definitions and inaccuracies and biases in enumeration, are compounded by the difficulties that are experienced in assigning economic value to the work of women especially when it is unrelated to the market.” The Indian System of National Accounts (SNA) lumps women performing certain non-marketed economic activities as out of the labour force. (Kapsos et al 2014; Hirway, 2012 and Mehrotra et al, 2017). Hirway (2012) notes that activity status category ‘93’ which includes women who attend to domestic duties and at the same time were engaged in free collection of goods such as vegetables, roots, firewood, cattle, cow dung and sewing, tailoring, weaving etc., have been categorized as non-workers. This is in direct contravention to the United Nations Systems of National Accounts, which includes these as economic activities. Sircar (2010) notes that mismeasurement may also arise due to social conditioning that often makes women believe that their work is not important enough to be recorded as ‘work’. For instance, even though a weaver may report himself as worker, the

¹⁶ <http://164.100.47.190/loksabhaquestions/annex/15/AU2967.pdf>

female members of the household assisting the weaver by starching the yarn, preparing the loom, etc. may not report themselves as workers (ibid). There is also the case of investigators tending to be biased while reporting women's work for often they tend to view women's work as household work.

Notwithstanding the above argument, there is little doubt that the number of women working in India outside the home is relatively low compared to other countries and this measurement is less likely in the context of an external workplace such as a factory or office (Dasgupta et al, 2016). Moreover, women work in household-based work for a pittance, is minimally productive work.

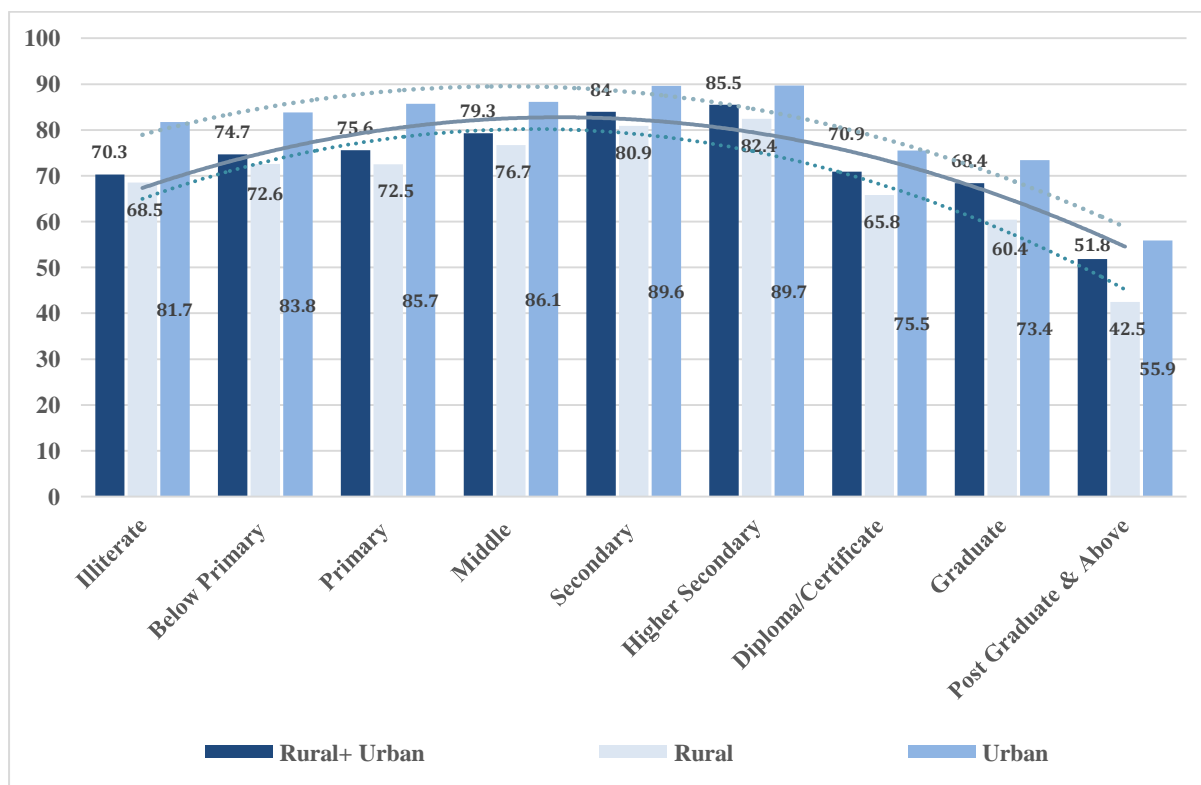
4. Education and Female Labour Force Participation Rates

While there are a plethora of supply and demand side factors that impede the economic participation of women, this section particularly examines the low FLPR in conjunction with education. Firstly, the 'U- Shaped' hypothesis that traces the relation between education and FLPR is probed using the most recent data (2015-16) from the Labour Bureau's Annual Employment and Unemployment Survey. Secondly, the argument that higher female enrolment in secondary education over the last few years has led to a fall in the FLPR is revisited. Thirdly, an exploratory analysis is undertaken to understand the factors that have impeded the translation of higher educational attainment into improved labour market outcomes for women.

4.1 Examining the U-Shaped Hypothesis

Klasen et al (2013) empirically present the case for the existence of a U-shaped curve with respect to FLPR and educational attainment. Most recently, Andres et al (2017) also confirm the existence of this U- shaped curve using the NSSO data. It has been observed that at very low education level, the FLPR is high which plummets into a downward trajectory with improvements in educational attainment and rise again at higher levels of education. At very low levels of education, women are forced by necessity to work if household income is low, thereby, raising their economic participation. This changes for women with medium levels of education where their economic participation is constrained by social and cultural norms, which put a premium on women seclusion. Moreover, there is also the case of reluctance of these women to work in low skilled jobs. For women with higher education qualifications (for instance, graduates and above), the FLPR is higher as they are less constrained by social norms and family circumstances. Thus, a woman with medium or intermediate educational qualification is less likely to work than a woman with advance or low levels of educational qualifications. This U-shaped relationship can be further reaffirmed by empirically analyzing the data from the 5th Labour Bureau Employment and Unemployment Survey (2015-16). Counter intuitively, by looking at the percentage of women out of the labour force at each level of educational qualification, an inverse U- shaped curve is obtained (Figure 5). As it can be observed, with reference to the all India (Rural and Urban) trends, there is an increase in

Figure 5: Percentage of Women (Ages 15 and above) out of the Labour Force at each Education Level (2015-16); UPS approach¹⁷



Source: Labour Bureau Employment and Unemployment Survey, 2015-16

the percentage of women out of the labour force as one moves from illiterate (70.3 percent), to middle (79.3 percent) to higher secondary education (85.5 percent) levels and subsequently, a decline as one moves from diploma/certificate (70.9 percent) to graduate (68.4 percent) and finally to post-graduate levels (51.8 percent) and above. This U-shaped relationship holds true for both rural and urban areas. Notably, it holds true for all age-cohorts too (Table 9).

These basic descriptive statistics (Figure 5, Figure 6, Figure 7 and Table 9) on the interaction of the labour market and educational outcomes of women reveal a number of important facets. Firstly, at all levels of education, the percentage of women out of the labour force in urban areas is far more than in the rural areas. For instance, at postgraduate levels and above, the percentage of women out of the labour force in urban areas is as high as 55.9 percent as opposed to 42.5 percent in rural areas. Concomitantly, the percentage of women with graduate degrees and out of the labour force is 73.4 percent in urban areas while the corresponding figure for rural areas is much lower at 60.4 percent. This is an important research question that merits further inquiry¹⁸. Secondly, between 2013-14 and 2015-16,

¹⁷ Since, education mostly impacts the principal status workers, the usual principal status approach is used for giving these estimates.

¹⁸ It may be argued that this could partially be explained by the ‘base effect’ such that there are lower proportion of women with graduate and post-graduate degrees in the rural areas.

there has been an increase in the percentage of women out of the labour force at all levels of education and across all age-cohorts. For instance, with respect to the age- cohort 30 and above, the percentage of women with graduate degrees and above and out of the labour force has increased from 62.7 percent to 65.2 percent while the percentage of illiterate women out of the labour force has increased from 67.6 percent to 70.1 percent. This indicates that the incentive for females to participate in the labour force has declined irrespective of one's educational attainment. Thirdly, significant state-wise variation exists in the labour market outcomes of women. Figure 6 and Figure 7 indicate the heterogeneity across states in terms of percentage of graduate and post graduate women out of the labour force respectively. It is the North-Eastern states such as Sikkim, Manipur, which have the lowest percentage of women out of the labour force at the graduate level and postgraduate level and above. For instance, as high as 82.1 percent of women with graduate degrees are out of the labour force in Madhya Pradesh while the corresponding figure for Sikkim is as low as 10.7 percent. Similarly, with respect to women with post- graduate degrees and above, almost 75 percent of women in Madhya Pradesh are out of the labour force while the corresponding figure for Manipur is just 0.7 percent (Table 10). Thus, the North-Eastern states have consistently performed well in terms of labour market outcomes of women. The extent to which these trends are indicative of relatively better social status accorded to women in the these states is touched upon in the later sections.

Table 9: Labour Bureau: Percentage of Women out of the Labour Force at each Education Level by Age Groups and Year (All India); UPS approach

Ages 15 and above				
Education	2011-12	2012-13	2013-14	2015-16
Illiterate	68.1	71.7	67.3	70.3
Below Primary	71.9	77.1	73.0	74.7
Primary	74.5	77.4	72.7	75.6
Middle	79.3	80.7	78.7	79.3
Secondary	83.5	85.3	82.9	84.0
Higher Secondary	83.4	85.2	83.8	85.5
Graduate	73.7	71.2	67.9	68.4
Post Graduate & Above	54.4	53.5	48.8	51.8
Ages 18 to 29				
Education	2012-13	2013-14	2015-16	
Not literate	72.1	65.0	72.3	
Below Primary	79.5	72.6	77.4	
Primary	78.0	72.6	78.6	
Middle/Secondary/ Higher Secondary	82.1	81.0	87.2	
Graduate & above	67.5	65.2	65.2	
Ages 30 and above				
Education	2013-14		2015-16	
Not literate	67.6		70.1	
Below Primary	72.9		74.0	
Primary	72.4		74.2	
Middle/Secondary/ Higher Secondary	77.0		77.0	
Graduate & above	62.7		65.2	

Source: Labour Bureau Employment and Unemployment Survey, Various Rounds

Figure 6: State-wise Variation in Percentage of Women Graduates (Ages 15 and above) out of the Labour force (2015-16), UPS approach

Percentage of Women Graduates out of the Labour Force

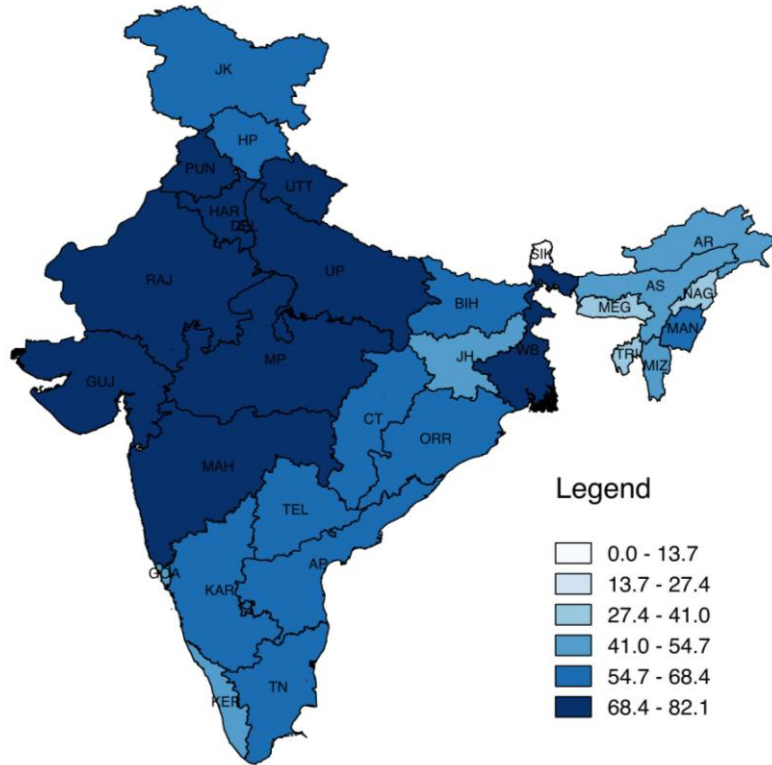
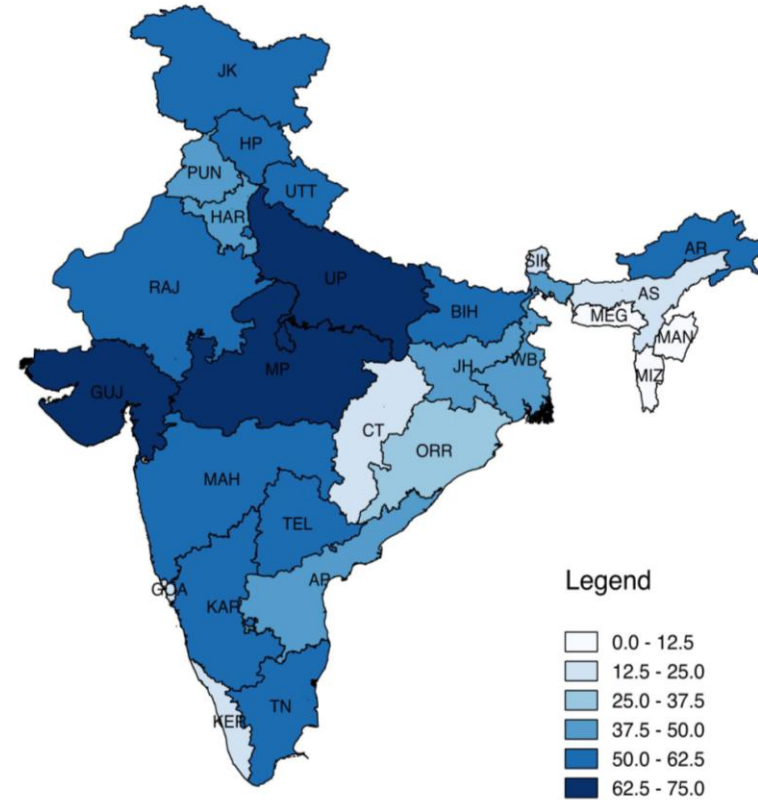


Figure 7: Labour Bureau: State-wise Variation in Percentage of Women (Ages 15 and above) with Postgraduate Degrees and above out of the Labour Force (2015-16); UPS approach

Percentage of Women with Postgraduate Degree and above out of the Labour Force



Source: Data sourced from Labour Bureau Annual Employment and Unemployment Survey, 2015-16

Table 10: Labour Bureau: State-wise Highest and Lowest Percentage of Women (Ages 15 and above) out of the Labour Force at each Education Level (2015-16); UPS approach

Educational Classification	Highest	Lowest
Illiterate	Jammu & Kashmir (94.8%)	Nagaland (26.3%)
Below Primary	Uttar Pradesh (92.7%)	Mizoram (27.5%)
Primary	Punjab (93.2%)	Mizoram (32.3%)
Middle	Jammu & Kashmir (95.8%)	Nagaland (30.3%)
Secondary	Bihar (95.2%)	Mizoram (56.6%)
Higher Secondary	Delhi (94.3%)	Tripura (41.9%)
Graduate	Madhya Pradesh (82.1%)	Sikkim (10.7%)
Post-Graduate	Madhya Pradesh (75%)	Manipur (0.7%)

Source: Labour Bureau Annual Employment and Unemployment Survey, 2015-16

4.2 Revisiting the Role of Increasing Education Enrolment in Explaining the Decline in Female Labour Force Participation Rates

It has been argued that in recent years more working age women in the age cohort 15-24 years are opting out of the labour force to continue their education. Thus, higher female enrolment in secondary education has led to a fall in the FLPR over the years (Thomas, 2012; Rangaranjan et al, 2011 and Abraham, 2013). However, recent literature suggests that this may not be the case. Andres et al (2017) add up the FLPR and education participation rates¹⁹ to test the validity of this argument for the time period between 1993-4 and 2011-12²⁰. They argue that if higher participation in education has led to drop in FLPR, then the Combined Participation Rate (sum of the FLPR and education participation rates) should be rising or stay constant over the time period. They find that for all ages 15 and above, the combined participation rates declined, thereby, suggesting that the decline in FLPR may not necessarily have stemmed from rise in educational attendance. Andres et al (2017) note that across all levels of education (illiterate, below secondary, secondary and higher secondary and college and higher), between 1993-94 and 2011-12, there has been a decline in the FLPR in both rural and urban areas. Thus, not just educational attendance but educational attainment is also associated with declining FLPR.

Preet Rustagi (2013) notes a secular decline in the FLPR across all age cohorts between the time period 1999-2000 and 2011-12 and not just the age-cohort 15-29 years (the cohort most likely engaged in acquiring education). While the highest drop observed for FLPR in rural areas is for ages 15-29; the highest drop in the urban areas is for the cohort of women aged 45-59 years. In fact, for urban females there has been an increase in the female labour force participation rate for the cohort 15-29 years. Thus, if educational enrolment was an explanation to decline in FLPR, a decline in urban female labour force participation should have also been observed in the age-cohort 15-29 years. Concomitantly, Ghose (2013) too

¹⁹ Percentage of young females aged 15-24 years in school.

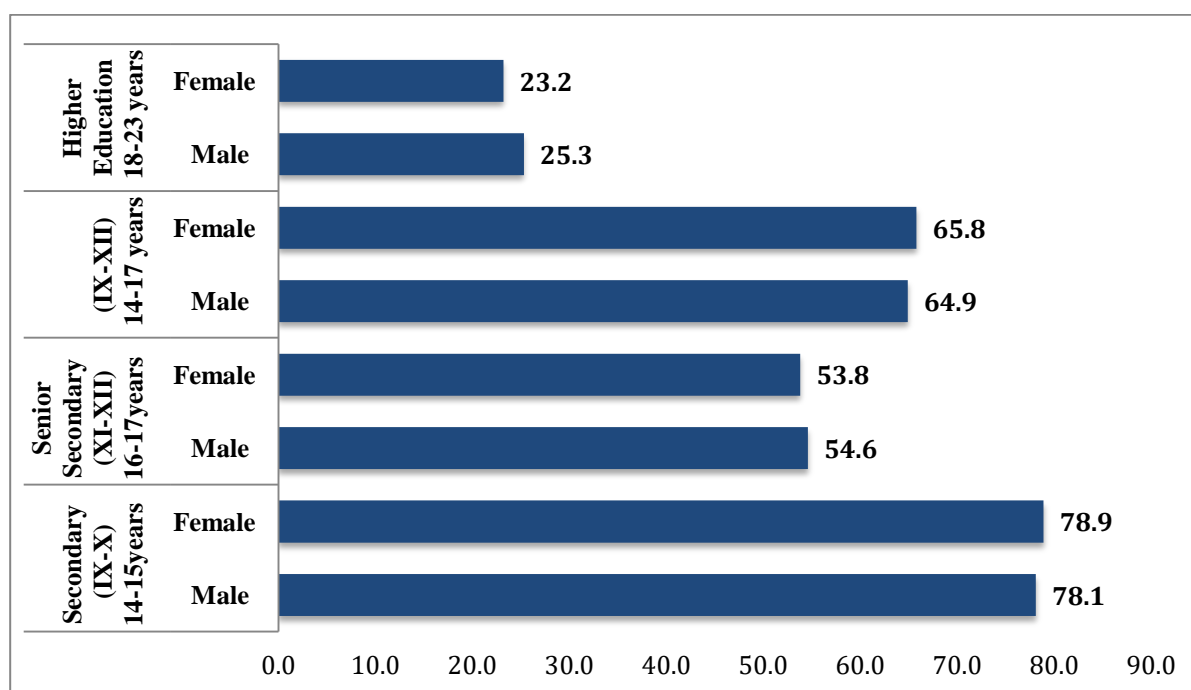
²⁰ The argument would be valid if “the sum of the ‘percentage loss’ of working age females from the labour force and ‘percentage gain’ in schools” rise or stay constant over time such that the reduction in FLPR is compensated by increase in educational enrolment for young women (Andres et al, 2017).

dismisses the hypothesis that the rise in the share of female enrolment in education can explain the long-term declining trend of FLPR in India. He argues that the non-student FLPR (the female labour force as a percentage of non-student population) displays the same pattern (decline) as that of the FLPR between the 1999-00 and 2011-12.

The latest data from the Labour Bureau Employment and Unemployment Survey also reiterates these trends (Table 9). Between 2013-14 and 2015-16, there has been an increase in the percentage of women out of the labour force at all education levels across all age-cohorts.

All of this reiterates that the drop in FLPR cannot be attributed to higher educational participation among the young cohort but must depend on other heterogeneous factors. Thus, therein lies the argument: over the years more women are getting educated. There is almost perfect gender parity in the secondary level enrolment and women remain in education for longer (Figure 8). This merits a bigger question as to ‘where are they going’ and ‘what are they doing?’

Figure 8: Gross Enrolment Ratio (2014-15)



Source: *Educational Statistics at a Glance 2016 (The Department of Higher Education)*

4.3 Examining the Factors that Impede the Translation of Higher Educational Attainment into Improved Labour Market Outcomes for Women

The decline in the FLPR for all categories of education attainment (Table 9) especially with respect to women with high educational qualification (graduates and above) merits an explanatory analysis. In understanding this phenomenon, four points of consideration have been identified such as the link between education and marriage markets, education and social norms, the poor demand conditions for educated women and quality of education.

Firstly, there has been evidence suggesting that part of the expansion of education in India has been to improve the marriage prospects of women, rather than their employment prospects. In 2009, the marriage prospects of women with higher education were better as opposed to in 1987 when primary education alone accounted for high returns in the marriage market (Klasen et al, 2013). Jeffrey et al (1994) conclude from a survey in several villages of Bijnor that women and parents see the value of education as a necessity for increasing girls' marriageability, as opposed to increasing their independence or employability. Thus, if the primary motivation for educating women in India is to enhance their marriage prospects, then labour market policies targeting improved employment opportunities for women might not be very beneficial. Similarly, Preet Rustagi (2013) also suggests that for women in India, marriage is an alternative to labour markets. In 2011-12, even though divorced/separated women comprised of about 0.4 percent of the population, about 60.3 percent of them were in the workforce (usual status) as opposed to 32.5 percent of the currently married women in the workforce comprising 50.5 percent of the population.

Secondly, the spectre of patriarchy and adverse social norms for women looms large and prevents education in having the desired impact on FLPR. In South Asia and the Middle East, higher premium and social prestige is accorded to households that keep the women secluded and out of the labour force which majorly, offsets the impact of education. For instance, Klasen et al (2012) found that in urban India higher social status is negatively associated with female labour force participation rates. Thus, while men are compelled by the fundamental forces of patriarchy to be the breadwinner, women have the option (or mostly forced) to opt out of the labour market and supply care responsibilities to the household. For a vast majority of women and girls in India, domestic chores and responsibilities are a barrier to realizing workforce participation aspirations. They can work as long as it provides additional income to the household without coming in the way of their domestic responsibilities. The gendered division of labour and social norms is so deeply entrenched in our society that education fails to improve women's situation in any meaningful way (Pande et al, 2005). Thus, a range of underlying social conditions needs to be made favourable in India through appropriate policies, for education to have any meaningful impact on FLPR.

Thirdly, oversupply of educated women relative to growth in jobs that are considered appropriate by them (formal sector jobs), might have led to crowding out of females from the labour force. The reservation wages of educated women remains high, since they are usually married to educated men and thus, have access to financial resources. Also, significant wage differential in the labour market does not really help which exists at even high levels of education (Table 8). The wage gap is higher in rural than urban areas and for graduates & above, it is as high as 31.3 percent in rural areas and 24.3 percent in urban areas. Moreover, while competing for a small pool of formal sector jobs, instead of accepting poorly paid jobs, they choose to remain out of the labour force.

Fourthly, education in most developing countries seeks to 'domesticate' rather than 'empower' women. The educational practices unconsciously perpetuate gender stereotypes through gender segregation in classroom and gender insensitive curriculum and pedagogy.

The Hindu (2017) reported that there was a glaring absence of gender parity in textbooks for children in India. About ten NCERT textbooks for classes 2-5 on subjects including Hindi, Mathematics, English, and Environmental studies were examined. In all of these books men are shown to be participating in outdoor activities while women are confined indoors shown to be adept only at domestic chores. While men are shown to be the head of the family, women are portrayed to be primary caregivers of their children. Moreover there was a significant ‘masculinisation’ of jobs with all jobs including those of milk-seller, farmer and shopkeeper performed by men. Thus, education does not challenge the traditional elements that shape the marriage dynamics in terms of decisions regarding labour force participation, marriage customs and domestic work. It fails to subvert the long-standing gender beliefs amidst strong cultural and traditional institutions, which drill these stereotypes from the beginning of an individual’s life. Not only is the formal curriculum replete with sexual stereotypes in textbooks, the teachers are often not gender sensitive and there is dearth in provision of gender sensitive counselling and guidance. Additionally, Pande et al (2005) suggest that social conditioning whereby, education may limit girls by equipping them towards becoming better wives often offsets the positive impact of education. ‘Stereotype threat’ whereby girls internalize the bias in schools that they are not equally capable as boys threaten gender equality even if technological conditions for even playing fields are met (Duflo, 2012).

5. Testing Hypothesis: Patriarchy is Indicative of Poor Labour Outcomes for Women

In this section, an attempt is made to test the hypothesis that patriarchy may be indicative of the poor labour outcomes among highly educated women (graduates and postgraduates and above). Cross-sectional state-level data including Delhi for the year 2015-16 is used for conducting bivariate and multivariate analysis. It must be reiterated that indication by bivariate correlation analysis does not imply causation.

For the purpose of quantifying social and cultural norms that determine patriarchy, an index is constructed at the state level using National Family Health Survey-4, 2015-16 data²¹. This index attempts to serve as a proxy for patriarchy and is constructed in a manner such that higher values are indicative of higher levels of patriarchy in the state. According to OECD guidelines, care must be taken not to include variables that are “indicator rich but information poor”. Participation of women in household decisions, child sex ratio and prevalence of spousal violence have been identified as output variables that best satisfy this condition. The rationale for identification of each of these variables has been explained below.

The dominant sex-role socialization forces of patriarchy identify men as the decision makers. Thus, the extent to which a woman participates in household decisions is an output variable that is reflective of women rejecting these forces, thereby signifying agency and empowerment. The NFHS-4 reports on ‘currently married women who usually participate in household decisions.’ Women are considered to participate in household decisions if they

²¹ The ‘Patriarchy Index’ has been constructed using the National Family Health Survey (NFHS)-4, 2015-16 which samples ever-married women between the ages of 15-49. The sample size for NFHS-4 is 601,509 households which includes 699,686 women, and 112,122 men.

make decisions alone or jointly with their husbands on a) women's own health care b) major household purchases c) visits to the woman's family or relatives (NFHS-4 India Report, 2015-16).

Child sex ratio (Sex ratio at birth for children born in the last five years) is essentially a proxy for the value put on women by society and is one of the most important measures to quantify patriarchy in a state. In India, there is widespread use of sex selective abortions as patriarchal norms put a premium on sons. This premium increases in the context of growing desire for small family sizes in the country and has exacerbated the declining sex ratio in many states. Child sex ratio is used as an indicator as opposed to the overall sex ratio because it is insulated from the impact of migration (Rustagi 2003). The Economic Survey 2017-18 has identified 63 million 'missing women' and 21 million 'unwanted girls' in India. Thus, we would have 63 million more women if India's population reflected the normal survival rates and female to male births. This 'missing women' is a spillover from patriarchal norms, that expect sons (not daughters) to provide financial and emotional care to parents in old age, continue the family lineage, add to family wealth, perform important religious roles, and exercise and defend the family power. This is in contrast to the roles of daughters who are expected to get married to another household (patrilocality) and drain the family wealth through dowries. These gendered roles encourage sex selective abortions and post-natal neglect in health care and nutrition of the girl child. The 21 million 'unwanted girls' also stem from the preferences for a male child that encourages families to continue having children until they have had the desired number of sons. Also, recent studies have noted that sex-selective abortions are not just practiced by poorer and less educated households and communities but better educated women from urban, wealthy backgrounds are more likely to practice sex selective abortions. They have greater access to means and may change the way they implement son preference but not the preference itself (Pande et al, 2016).

Patriarchy is that overarching gender construct which engenders abuse in all of its form. In patriarchal societies, men must resort to violence when their position of dominance is under threat. Thus, spousal violence follows as a logical conclusion to the patriarchal assumption that women are subordinate to men. It is through spousal violence that men exert dominance, control and fear. Therefore, the variable 'ever-married women who have ever experienced spousal violence' as reported by NFHS-4 could be used as an indicator of patriarchy.

There are other variables in the NFHS-4 that profess to gauge women empowerment such as financial autonomy, ownership of assets and ownership of mobile phones. Economic theory purports that ownership of assets/financial autonomy increases the bargaining power of women in the household which, allows them to take more control over decisions that impact their lives (Anderson et al, 2009). However, drawing upon from Ribot and Peluso's theory of access (2003), it can be argued that more than ownership of assets, 'access-to assets, knowledge, social relations and political processes' leads to empowerment (Goldman et al, 2016). In India, often ownership of formal land titles by women does not guarantee access to and control of these assets, due to lack of legal knowledge and deep-rooted patriarchal and social biases. Working women not having control over their earnings is not an unheard

phenomenon in both urban and rural areas alike. Moreover, the extent of ownership of assets by women might be related more to affluence than to independent access. Thus, these variables, even though are pathways and necessary conditions to achieving female empowerment, are not necessarily reflective of empowerment or conversely the extent of patriarchy per se.

On account of high degree of correlation among the output variables quantifying patriarchy (Figure 9), principal component analysis technique is used for creation of the index. PCA best captures the variance in the data and prescribes weights to the variables, which are then not left to the discretion of the researcher. While specifying the PCA, correlation matrix is used as opposed to covariance matrix since the variables are non-standardized. The Principal Component transforms the set of the three correlated variables used for the construction of the index into linear combination of the set of three uncorrelated principal components. The components are constructed in such a manner that the first component explains the maximum variation in the data and the consequent components are constructed so as to explain the largest amount of the remaining variance. As can be seen Table 11, the first two components explain 88.66 percent of the total variance and have an eigenvalue of more than 1. The factor scores from the first component, which captures maximum amount of variance in the data (51.98 percent), are used as weights to compute the ‘Patriarchy Index’.

Figure 9: Correlation between Output Variables that Define the Patriarchy Index

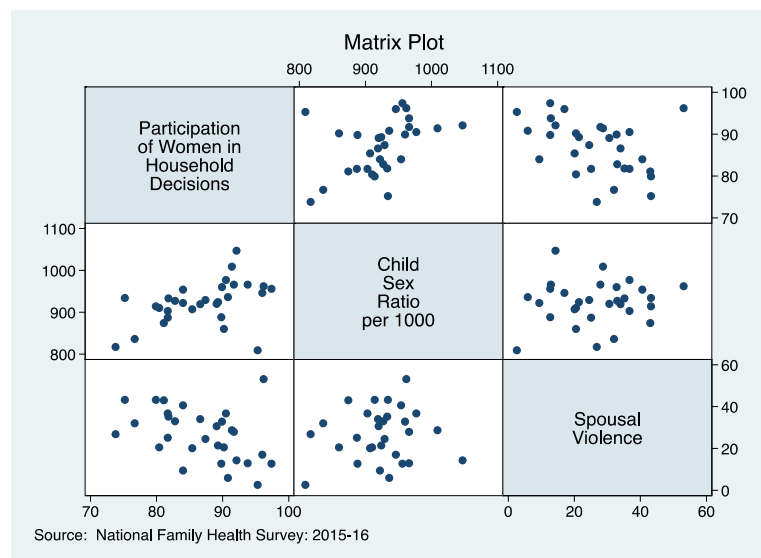
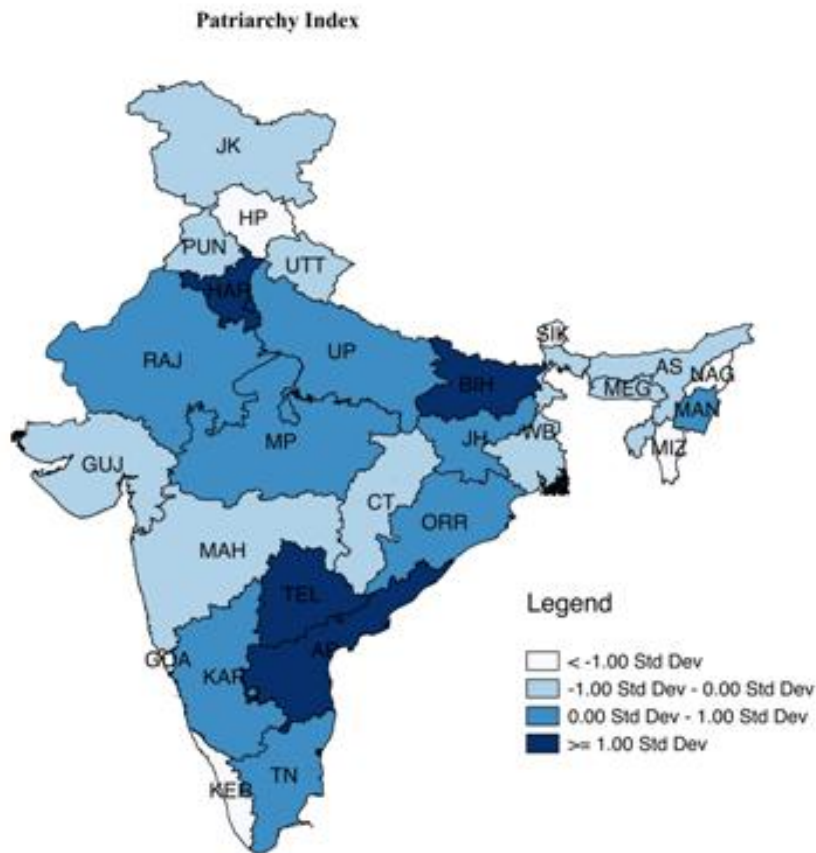


Table 11: Principal Component Analysis between the Output Variables that Quantify Patriarchy

Variable	Component 1	Component 2	Component 3
Participation in Household Decisions	0.7356	0.0153	-0.6773
Child Sex Ratio	0.5081	-0.6736	0.5366
Spousal Violence	0.4480	0.7389	0.5033
Cumulative Variance	0.5198	0.8866	1.0000
Eigenvalues	1.5593	1.1004	.34024

Figure 10: Patriarchy Index by State (2015-16)

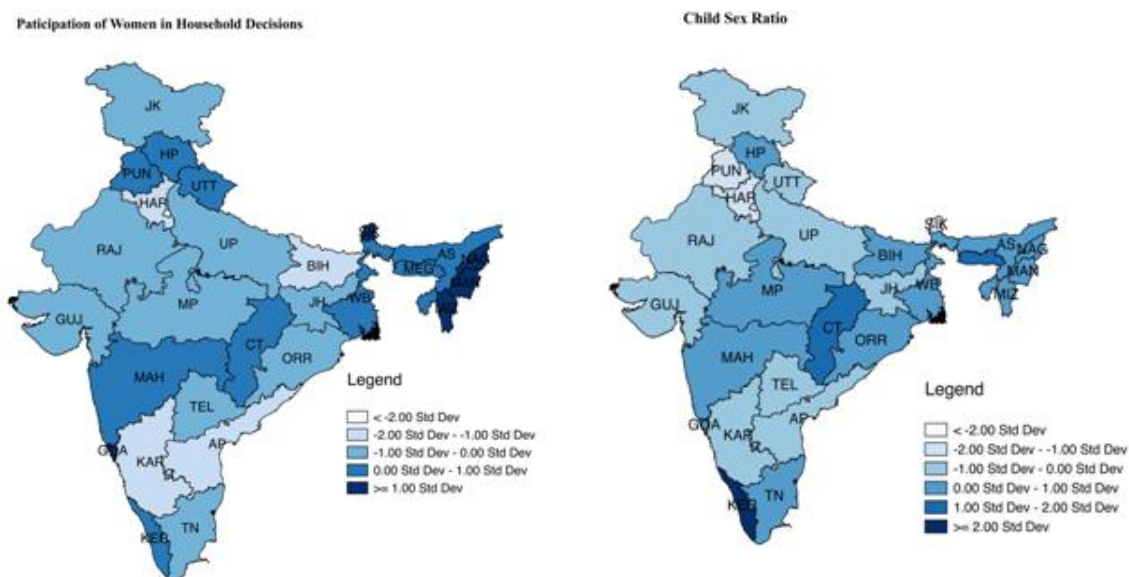


Source: Data sourced from the National Family Health Survey-4, 2015-16

The 'Patriarchy Index' (Figure 10) reveals that the commonly cited 'North-South divide' that demarcates areas of strong discrimination (northern states) from those with greater gender equality (southern states) may not really hold true. For instance, the southern states of Andhra Pradesh and Telangana are the states where the 'Patriarchy Index' is comparable to states like Haryana, Delhi and Bihar. This stems from the surprisingly low performance of Andhra Pradesh and Telangana in terms of women reporting spousal violence and the prevalence of low child sex ratio. For instance, in Andhra Pradesh and Telangana almost 43.2 percent and 43 percent women reported spousal violence in 2015-16. With respect to child sex ratio, Telangana was one of the worst performing states at 874 females per 1000 males. The corresponding figures for Punjab, Haryana and Delhi was 860, 836 and 817 females per 1000 males respectively; a matter of grave concern.

Figure 11: Participation of Women in Household Decisions (2015-16); Percentage

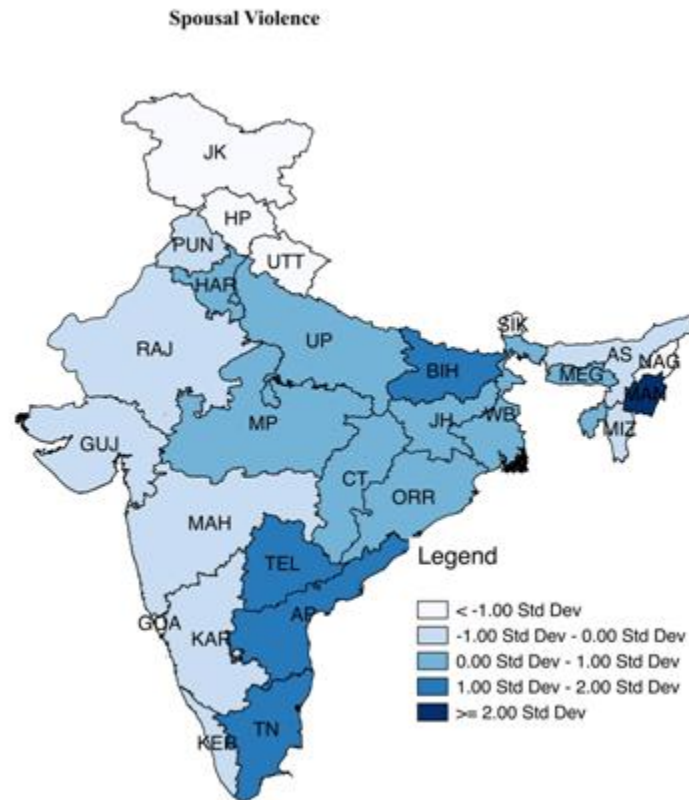
Figure 12: Child Sex Ratio (2015-16); Females per 1000 males



Source: Data sourced from the National Family Health Survey-4, 2015-16

The state that has the lowest value for the ‘Patriarchy Index’ is Kerala followed by Nagaland, Goa, Himachal Pradesh, Mizoram, Sikkim and Meghalaya. Unsurprisingly, the North-Eastern states fare very well in terms of gender equality and are better off than most states in India. In Nagaland almost, 97.4 percent of currently married women report that they can participate in decision making while the corresponding percentage for Manipur is 96.2 percent, Mizoram is 96 percent and Sikkim is 95.3 percent. Concomitantly, In Meghalaya, the child sex is as high as 1003 females per 1000 males while the corresponding ratio for Tripura is 966 females per 1000 males and Manipur is 962 females per 1000 males.

Figure 13: Prevalence of Spousal Violence (2015-16); Percentage



Source: Data sourced from the National Family Health Survey-4, 2015-16

However, with respect to the output variable spousal violence, a very interesting trend emerges. As can be seen in Figure 13, the North-Eastern state of Manipur performs the worst in the country with the percentage of women that report spousal violence as high as 53.1 percent. This is quite an enigma against the background of relatively egalitarian gender norms in the North-East and merits further research. The Southern states of Andhra Pradesh, Telangana and Tamil Nadu are also some of the worst performers with spousal violence reported by as high a proportion as 43.2 percent, 43 percent and 40.6 percent women respectively.

A bivariate correlation analysis is conducted at the state level between the ‘Patriarchy Index’ and labour market outcomes for women with high education²². The labour market outcome variables used are ‘percentage of women postgraduates (and above) not in the labour force’ and ‘percentage of women graduates not in the labour force’. As can be seen in Table 12, the Karl Pearson Correlation coefficient between the ‘Patriarchy Index’ and labour outcome variables is high, in the required direction and statistically significant. Thus, though solely correlational, it is notable that states with high levels of patriarchy, as estimated by the index, are also states with high proportion of women out of the labour force with graduate degree

²² The labour market outcomes for women (percentage of women out of the labour force at high levels of education) are from the 5th Labour Bureau Employment and Unemployment Survey (2015-16), UPS approach.

($r=0.5580$; statistically significant at 1%) and postgraduate degree and above ($r=0.4229$; statistically significant at 5%). Further, the correlation coefficients between each of the indicators of patriarchy i.e. participation of women in household decisions, child sex ratio, and prevalence of spousal violence and labour market outcome for women at high education level is also reported in Table 12. States that report higher participation of women in household decisions are the states where the proportion of women out of the labour force with graduate degree ($r=-0.6028$; statistically significant at 1%) and postgraduate degree and above ($r=-0.6248$; statistically significant at 1%) are low. States that report a higher child sex ratio are also the states where the proportion of women out of the labour force with post graduate degree and above is lower ($r=-0.37$; statistically significant at 5%). With respect to spousal violence, the percentage of women graduates out of the labour force is higher in states that report high spousal violence ($r= 0.32$; statistically significant at 10%).

Table 12: Correlation between Indicators of Patriarchy and Labour Market Outcomes of Women (2015-16)

Karl Pearson's Correlation Coefficient	Percentage of Women Graduates out of the Labour Force	Percentage Of Women out of the Labour Force with Degrees Postgraduate & above
Patriarchy Index	0.5580***	0.4229**
Participation of Women in Household Decisions (percentage)	-0.6028***	-0.6248***
Spousal Violence (percentage)	0.3233*	0.0093
Child Sex Ratio (females per 1000 males)	-0.2454	-0.3746**

6. Policy Recommendations

The observation that education has not translated into improved labour market outcomes for women is discouraging. Andres et al (2017) summarize that “conventional approaches to increasing female labour force participation rate (such as education, skills, and legal provisions) will be insufficient. Policies should focus on promoting the acceptability of female employment.” Malhotra et al (2003) have argued that even though education is necessary for ensuring the well-being of women, it is not a sufficient condition for the same and that female education must be accompanied by a range of social and market reforms to have any beneficial impact on gender equality. As Pande (2017) rightly surmised: “When the stumbling block is social norms rather than, say, lack of resources or human capital, then it changes how we can make progress and calls for a smarter policy response.”

The key take from this is that along with focus on female education, the government schemes must also target the cultural and social forces that shape patriarchy and thus, facilitate behavioural changes that are conducive to the acceptability of female employment. These coupled together with policies that simultaneously address some of the other demand and

supply side constraints that impede FLPR is likely to bolster the effort and result in discernible positive outcomes for women. Some of these policies have been identified below:

6.1 Multi-Stakeholder Interventions that Shape Gender Attitudes

To reiterate, education in the current form alone might not be sufficient to spur growth in FLPR in India. A multistakeholder intervention that involves teachers, parents, community members and government and promotes gender equitable norms leading to acceptability of female employment is imperative. These interventions must not only target the wider environment of girls and improve their cognitive ability to question gender roles but also enable them to aspire for the future.

Studies suggest communication programmes on gender equality in secondary education can help in internalization of more equitable gender norms at early ages (Nanda et al, 2017). Schools and teachers could play an important role in developing and implementing reflective programmes on gender equality and enforcing a curriculum that is free from gender stereotypes. These reflective programmes would urge adolescent girls to think about their position in society, and recognise the prevalence of patriarchy as a social construct. It is this recognition that will enable them to break the barriers that have been set for them by society and families. It is also essential that the reflective programmes include the engagement of male peers to promote alternative masculine norms around gender equality that is more caring, sharing, non-aggressive and respectful (ibid). These reflective programmes should be able to challenge the traditional dynamics that dictate the duties of woman to be a ‘care giver’ and man to be ‘bread-winner’. The programme must be participatory and create a space in classroom that enables girls to open up and personally engage through well thought content and facilitation. They must be able to break the denial of existence of discrimination within and around their lives. They must also be able to articulate their aspirations for life and future goals.

There are some successful education interventions that have sought to boost both the empowerment and employability of young girls in the past and could potentially be scaled up. For instance, in 2013 ICRW in collaboration with the MacArthur Foundation launched an in-school intervention Planning Ahead for Girls’ Empowerment and Employability (PAGE) that targeted girls aged 15-17 in select Delhi government schools. The curriculum was built on the premise that in order to advance in lives, girls need to be able to negotiate gender and power inequalities. It had two components i.e. Empowerment and Employability. The Empowerment component focussed on building girls understanding of gender and power relations; their ability to have a say in critical decisions in their lives; their recognition of discrimination and their ability to think of their future somewhat independent of societal influences. Concomitantly, the employability component aimed to positively influence their aspiration for higher studies and for a career. It urged them to seek information for their future goals and identify the skills that are needed for the success of these goals and work towards acquiring those skills. Notably, it was observed that “girls in the intervention schools had greater awareness about gender discrimination and were able to articulate this and a

desire to change this reality by negotiating small things in their daily lives. Girls from control schools were less able to perceive and discuss these differences. (Nanda et al, 2017)”

At the level of the government (both national and local) public educational programmes that focus on issues surrounding the value of the girl child and gendered roles can be launched. For instance, campaigns that press upon the need for parents to not impose gendered roles and encourage equal distribution of care responsibilities between sons and daughters. This is because perpetual exposure of girls and boys to gendered roles early in life may crowd out girls aspirations and ambitions later in life due to existence of double burden of work. The high octane campaign “Hum Do, Hamare Do” (One family, two children) launched as part of India’s population control policy reached every city, town, village and household. The campaign used mass media and advertising at an unprecedented scale and the slogan “Hum Do, Hamare Do” still reverberates in popular discourse and social consciousness. Not only all forms of modern mass communication were used but also traditional cultural media was used to develop a social support for the idea of family planning and the need for having small families. There is a need to design a high octane advocacy campaign along these lines that not only creates a more supportive environment for girls but also redefines norms of masculinity and thus, men’s and women’s role in the family.

At the community level, a low cost peer educator programme can be piloted where women can be trained and paid to deliver messages through street plays and door to door campaigns (Nanda et al, 2017). These groups could actively promote messages on gender equitable norms such as sharing of care responsibilities and acceptability of female employment and thus, bring forth behavioural interventions. Additionally, they could also undertake safety mapping of communities and engage in developing a safe and supportive environment for the girls at the household and community level.

6.2 Support for Reducing the Time Burden

A range of underlying social conditions need to be made favourable in India for education to have any meaningful impact on FLPR. For instance, government policies favourable towards reducing the time burden of women on domestic duties and care responsibilities must be implemented. This is because these are often a barrier for women in realizing their workforce participation aspirations. The quinquennial NSSO surveys give a picture of the proportion of women primarily engaged in domestic duties in India²³. In 2011-12, of women who did not work, over 90 percent were primarily occupied with domestic duties in the previous year (Fletcher et al, 2017). The NSS Report on ‘Participation of Women in Specified Activities along with Domestic Duties (2011-12)’ reveal that the proportion of women engaged in domestic duties has increased over the years. In rural areas the proportion has risen from 35.3 per cent in 2004-05 to 42.2 per cent in 2011-12. In urban areas, the corresponding increase is from 45.6 per cent in 2004-05 to 48 per cent in 2011-12. Moreover, among women aged 15

²³ As defined by the NSSO, women engaged primarily in domestic duties encompasses proportion of women with usual principal activity status codes 92 (attended domestic duties only) and 93 (attended domestic duties and were also engaged in free collection of goods, sewing, tailoring, weaving, etc. for household use).

years and above who were engaged in domestic duties, about 60 per cent in rural areas and 64 per cent in urban areas did so due to the reason ‘no other member to carry out the domestic duties’ while about 16 percent in rural areas and about 14 percent in urban areas have reported the reason ‘social and/or religious constraints’.

Hirway (1999) notes that “focus on designing and implementing employment programmes for women’s empowerment, without any arrangement for work sharing in extended SNA activities, will only increase their burden.” Better sharing of extended SNA work between men and women will encourage women to participate for longer hours in SNA work. Besides policies that reduce the stronghold of patriarchy in the country, two thrust areas in which government support can have direct implications for reducing the time burden on women associated with unpaid household work are child care support and maternity benefit. Moreover, provision of basic infrastructure such as energy and water at the doorstep would greatly contribute to making more time available for women’s paid work.

Free child care subsidies free up mothers time to enter the labour force and have had significant implications in impacting female employment. They relieve a mother of multiple burdens and can result in upto 50 percent enhancement in the productivity of the mother as well as lower morbidity and growth of child (Report of the Second National Commission on Labour, 2002- henceforth known as SNCL, 2002). For instance, Barros et al (2011), found that implementation of free child care services in Rio de Janeiro, Brazil almost doubled the employment rate of mothers (who were not working prior to receiving this benefit) from 9 percent to 17 percent. Additionally, free child care subsidies can also have positive spillover effects on the education of young girls. This is because a large part of sibling caregivers are girls who in the absence of child care facilities for the mother, are left to take care of their younger siblings leaving them with little opportunity to attend school.

Most recently, the Government of India has taken a proactive stance for provision of child care for the organised sector women workers through the Maternity Benefit (Amendment) Act, 2017.²⁴ The amendment has inserted an addition section for crèche facility that reads “every establishment having fifty or more employees shall have the facility of crèche within such distance as may be prescribed, either separately or with common facilities; provided that the employer shall allow four visits to the crèche by women, which shall also include the interval of rest allowed to her.” However, there are three important considerations within the amendment (with respect to crèche facility) that warrant the attention of policymakers. Firstly, the threshold for applicability of this provision is too high²⁵ and must be reduced to twenty or more workers (in accordance with the recommendation of the SNCL, 2002). Secondly, the law is bias to the extent that it recognises that the child care is just the mother’s responsibility by not giving male employees an equal benefit to visit their child during the day. This provision must be amended such that any worker (either mother or father) can leave

²⁴ <https://labour.gov.in/sites/default/files/Maternity%20Benefit%20Amendment%20Act%2C2017%20.pdf>

²⁵ It must be noted that though The Maternity Benefit (Amendment) Act, 2017 applies to establishments employing 10 or more than persons in Factories, Mines, Plantation, Shops & Establishments and other entities, the provision of crèche facility is applicable only for establishments employing 50 or more workers.

their child in crèche and are allowed to visit during the day. Thirdly, the government must notify the rules and guidelines for the facilities to be provided in the crèche and distance of facility from the place of establishment which it has failed to do uptill now.

The SNCL, 2002 has also made other important recommendations with respect to child care that need to be revisited. Due to gradual breakdown of traditional family arrangements of child care, it is vital that community based approaches be encouraged and multiplied. The SNCL, 2002 cited the ‘praveshdwar home-based childcare programme’ of the Government of Nepal as an excellent example of community-based child care which catered to the children aged 0-3 years and was run by mothers themselves. Mothers often formed groups of 6 and took turns to look after children at their homes (ibid). Secondly, instituting a flexible, autonomous Childcare Fund which can be used to provide childcare facilities to all women irrespective of income is also worth looking at. The fund should be raised from multiple sources and should be at the state or local level for administrative convenience and adaptability (SNCL, 2002). There are many interesting case studies across the world from which India can draw upon to set up the fund. The ‘Hogares Familiales’ or ‘day-care homes’ programme that was run by the Columbian Institute of Family Welfare is one of the best-known examples of designated child-care programme from developing countries (ibid). This fund was sourced through a 3 percent payroll tax collected by the government from public and private companies with more than 50 employees or with sufficient capital to qualify as an enterprise.

Maternity Benefits are essential to support women’s economic participation. The Government of India’s Maternity Benefit (Amendment) Act, 2017, has increased the paid maternity leave to women employees from 12 weeks to 26 weeks. This is much more than the ILO recommendation of 18 weeks of maternity leave²⁶. It was notified by the Ministry in March 2018 and has been a subject of much public debate ever since. It has been contended that extended maternity leave has become a deterrent for female employment. This unwanted and unintended consequences of the Act stem from various reasons. Firstly, it has increased the cost of hiring a female employee. The financial liability on the employer in the form of 26 weeks of paid maternity leave would disincentivise female hiring and likely reduce the demand for women in the formal economy. Moreover, Micro, Small and Medium enterprises that dominate the firm landscape in India may not be able to afford the cost of hiring women due to resource constraints. This increased cost to firms over hiring women may have negative spillovers in the form of reduction in wages to women to compensate for future costs and increase in contractualisation and informality to bypass statutory obligations. India is perhaps the only country in the world where the entire financial burden for maternity leave rests on the employer. While in Singapore the employer bears the cost of 8 weeks and the public funds bear the cost for another 8 weeks, in Australia and Canada the public funds bear the full cost (Chakraborty et al, 2018). In France, the cost is borne by a social insurance scheme and in Brazil it is shared by the employer, employee and the government (ibid). Secondly, though well intentioned, the Act has reinforced traditional gender roles with respect to childcare by placing the onus of parenthood entirely on women. The provision of

²⁶ https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R191

maternity benefits and crèche have been extended solely to women with no provision of allowing the father to check on his child during the workday. Further, India is the only BRICSs country where there is no provision of paternity or shared parental leave. The law in India neither mandates paid nor unpaid paternity leave. It would be useful for India to draw lessons from Norway and Sweden where the distinction between maternity and paternity leave has been dropped (Nikore, 2017). The parents are entitled to a shared leave which is split the way they would like to. The respective employer of the parent shares the total cost of the parental leave even if all the leave is availed by one spouse. For instance, even if the entire parental leave is availed by the wife, the husband's company bears 50 percent of the cost (ibid).

Even the Ministry of Labour and Employment has noted that there have been several representations to the Ministry on how “extended maternity leave has become a deterrent for female employees who are asked to quit or are retrenched on flimsy grounds before they go on maternity leave.”²⁷ Taking cognizance of this, the Ministry is working on a reimbursement scheme wherein the employer would be reimbursed the cost of maternity benefits equivalent to 7 weeks' wages with wage ceiling upto Rs. 15000. Thus, while the reimbursement scheme of the government is certainly a good step, the government can perhaps mull over increasing the threshold of the wage ceiling of the scheme for it excludes a significant proportion of women workers in urban areas. For instance, in 2015-16, about 22.5 percent of wage and salaried women in urban areas earned more than INR 20,000 in average monthly wages while the corresponding percentage for women earning INR 10,000 and above was 45.1 percent (Labour Bureau). The government should also work towards constructing a fund, such that the maternity benefits are raised from multiple sources including the employer, employee, state and community contributions.

6.3 Imparting Quality Education and Skills

For gains to be maximized from education, there is a need to overhaul the quality of education in the country. With respect to higher education, the institutes offering gender-stereotyped courses must be brought under government scanner and sensitised to provide higher education that focuses on realizing the aspirations of young girls. For instance, recently (September 2018), Madhya Pradesh's Barkatullah University announced a three month course to instil “sanskars” (traditional values) among the young generation. Vice-chancellor Prof D C Gupta explained to the Times of India²⁸ that the objective of the course was to “make girls aware so they can adjust to new environment after marriage...and prepare brides who will keep families intact.” This largely speaks to the institutionalised biases in our education system.

There is also a case for promoting engineering, technology, management and medical sciences courses among women to increase their FLPR. In 2015-16, of women graduates and above, with a degree in Arts and Humanities, 32 percent were in the labour force ; while the

²⁷ <http://pib.nic.in/newsite/pmreleases.aspx?mincode=21>

²⁸ <https://timesofindia.indiatimes.com/city/bhopal/nw-bhopal-varsity-to-make-ideal-brides/articleshow/65803214.cms?>

corresponding percentage for those in the labour force with a degree in accounting and law was 35.9 percent ; in natural science, mathematics and statistics was 37.2 percent ; in agriculture, forestry, fishery and animal husbandry was 45.7 percent; in engineering, technology and management was 46.1 percent and in medical sciences was 59.9 percent (Labour Bureau).

Imparting skills can especially have a beneficial impact on increasing FLPR in India. Women who have undergone vocational training, whether formal or informal are more likely to work. In 2015-16, of women in the labour force aged 15 and above with formal training, about 69.7 percent of them were employed and of those with informal training about 91.4 percent of them were employed. Using the NSSO 2011-12, Fletcher et al (2017) report that women with vocational training have higher levels of FLPR, regardless of educational levels. The NSS 2011-12 also sheds light on preference for work by women who were not in the labour force and primarily occupied with domestic duties. Conditional on reporting that they were willing to accept a job, more than half of these women reported that they did not have the requisite skills to take on the job they preferred. Prillaman et al (2017) by utilizing original survey data from 2,610 former skills trainees in India find that not only women are more likely to train in trades where gender gaps in job offer rates are higher but also they are less likely to receive offers overall. The Pradhan Mantri Kaushal Vikas Yojna (PMKVY) 2016-20, the flagship skill development programme of the government has much potential to address these gaps. The PMKVY has already significantly enhanced the focus on employment of trainees. This has been made possible through various means. First, it is mandatory, as per the common norms under PMKVY (2016-20), for the training providers to place at least 70 percent of the trained candidates. Compliance is insured through withholding reimbursement of 20 percent of the training cost if the requisite threshold of 70 percent placement is not met by the training provider. The training providers have a window of 3 months from certification of the candidate to ensure placement. The government can implement quotas to ensure that atleast a minimum of the trainees are women and a minimum proportion of those placed are women. Secondly, of the 221 job roles covered under the scheme, it is left to the training provider to choose from the available job roles for training based on local demands. Training providers could be encouraged to provide training in job roles considered suitable by women and where the demand for female employment is the highest. Thirdly, under the PMKVY training providers are mandated to organize 'Rozgar melas' every six months with the support of the Sector Skill Councils. These 'Rozgar Melas' can specially be used as an avenue for increased information access to women about potential job opportunities. There is literature that suggests that job search costs are higher for women than men and access to information about jobs is a constraint to female employment (Fletcher et al, 2017). Social norms restrict network size of women and more efficient search could be achieved through increased information about job opportunities (ibid). Jensen (2012) studied an experiment where business process outsourcing (BPO) recruiters were sent to rural villages in India and found that knowledge of these job opportunities changed the aspirations of rural women. The women in the treatment villages reported greater desire to continue working after marriage and children.

6.4 Creating Employment Opportunities through Quotas and Government Programmes

The government ought to create employment opportunities sensitive to the needs of women. Gender sensitive policies targeted on certain sectors may also work such as quotas. Operation Blackboard launched in 1987 to provide minimum essential facilities to all primary schools in the country provided for atleast 50 percent quota for female teachers (Fletcher et al, 2017). Since then, education sector has continued to employ a high proportion of women outside agriculture in both urban and rural India (ibid.)

Implementing employment generation programmes that reduce wage gaps, enforce quotas, and provide jobs at close proximity to home can raise female participation. For instance, MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act, 2005) which guarantees a minimum of 100 days of employment to every household in rural areas whose adult members volunteer to do unskilled manual work incorporates all of these elements. It comes with a stipulation of 33 percent quota for women in employment, promises equal wages and requires that work be located within five kilometres of the residence. Thus, remarkably the participation of women in the MGNREGA programme is higher than men with the share of women persondays as high as 53.5 percent in 2017-18. However, there is one aspect of the MGNREGA programme that merits attention. MGNREGA provides entitlement of 100 days of paid work to the household and not the individual. Thus, the decision to participate in the MGNREGA programme by women is influenced by intra-household relations and decision making. This is where social and cultural norms may stymie female participation. For instance, in 2015-16, the percentage of women persondays generated was as low as 29.52% in Uttar Pradesh (Lok Sabha Starred Question No. 2660, 2018). Khera et al (2014) note that in Uttar Pradesh and Bihar, there were significant social norms against women working outside the house and in many areas they were told that MGNREGA is not applicable to them. This calls for linking MGNREGA entitlements to individuals rather than households.

Another policy of the government that has achieved notable success among women is Pradhan Mantri Mudra Yojana (PMMY). Launched in April 2015, with the objective of fulfilling the credit needs of the micro and small enterprises (loan limit upto Rs 10 lakh), it has received much scrutiny amidst claim of large employment creation. Mudra loans are extended in three categories based on the size of the loans i.e. Shishu (up to Rs. 50,000), Kishore (above Rs. 50,000 and up to Rs. 5 lakh) and Tarun (Above Rs. 5 lakh and upto Rs. 10 lakh). A special rebate of 0.25 percent is extended to women borrowers to incentivise female entrepreneurship. Notably, in 2017-18 almost 70 percent of the total loan accounts were that of women. Of the total loan accounts of women about 95.78 percent of these loan accounts (of women) were in the Shishu category (loans up to Rs. 50,000); 3.97 percent in Kishore (loans above Rs. 50,000 and up to Rs. 5 lakh) category and 0.23 percent were in Tarun (loans above Rs. 5 lakh and upto Rs. 10 lakh) category. Thus, 95.78 percent of women that were beneficiaries under MUDRA received a loan amount upto Rs. 50,000. However, such small amount is unlikely to encourage women to start long term scalable entrepreneurial

ventures. Moreover, there is literature that suggests that in developing countries like India, microfinance loan extended to women often gets diverted to household enterprises that are not their own. Bernhardt et al (2018) re-examine data from previous experimental studies in India, Ghana, and Sri Lanka, and note that female entrepreneurs often reside with husband and fathers-in-law who may run their own businesses. So a female microentrepreneur may choose to hand over her capital on getting access to the loan. They also note that even if a women’s enterprise is high return, their capital is often directed to other household business if they lack control over it. This observation has important consequences when it comes to gauging the effectiveness of the MUDRA scheme in boosting female entrepreneurship or creating employment in the economy and warrants further research.

6.5 Encouraging Greater Participation of Women in Public Administration

The representation of women in top coveted positions in government bureaucracies also remain skewed (Table 13). Given the preference for government jobs among the educated women, an intervention by the government that seeks to increase female representation may have positive impact. According to Banerjee et al (2018), greater representation women in public administration, police and judiciary has been shown to “reduce bias against women and encourage families to invest in women as earning members.”

Table 13: Representation of Women in All-India and Central Group A Services

Service	Year	Female	Male	Total	%Female
Indian Administrative Service	2016	838	4088	4926	17.0 %
Indian Economic Service	2014	139	320	459	30.2%
Indian Foreign Service	2014	207	2346	2553	8.1%
Indian Forest Service	2016	111	2480	2591	4.2%
Indian Police Service	2016	349	3429	3778	9.2%
Indian Statistical Service	2016	173	556	729	23.7%

Source: *Women and Men in India- 2017, MoSPI*

6.6 Adopting Legal Reforms to Dismantle ‘Protective Legislation’

‘Protective Legislation’ in India jeopardizes women workers right to equal opportunity and employment by unreasonably classifying them into highly ‘vulnerable category’ not at par with men. Even though guidelines for safety for male and female workers is essential and must be evolved, a blanket ban on women’s engagement in certain processes is discriminatory and often has unintended consequences (Abraham et al, 2013). For instance, prohibition of women from working in underground mines keeps them away from the technical aspect of the mining industry. It pushes them to be employed as unorganized and often illegal workers with dismal conditions of work. Additionally, prohibiting women from working at night shifts has resulted in decrease in employment of women workers. With respect to this, the central legislation that warrants reform is the Factories Act, 1948 (Section. 22, 27, 66 and 87) and the Mines Act, 1952. Notably, in 2016 the government took measures to address the issue of the right of women to night work.

In 2016, the central government passed the Model Shops and Establishment (Regulation of Employment and Conditions of Service) Act, with the objective of improving the working conditions of workers, boosting female employment and creating favourable environment for doing business. In shops and establishments employing ten or more workers (except manufacturing units), women will be permitted to work during night shifts provided there is adequate provision of shelter, rest room, creches, ladies toilet, transportation and protection of dignity²⁹. The law also provides against discrimination of women in matter of recruitment, training, transfer or promotions. The states have the flexibility to change it as per their needs. The Union Cabinet approved the Model Shops and Establishment (Regulation of Employment and Conditions of Service) Bill, 2016 in June 2016 and the state governments were left free to adopt the act in its existing form or after modifying it as per their requirements³⁰. However, the response to the bill has been rather lukewarm with only Maharashtra³¹ and Kerala³² having taken steps to adopt the model legislation. The Centre must press upon the states to adopt the model legislation to ease the constraints on women workers.

7. Conclusion

The paper utilizes a large cross-section of data sets to comment on the falling female labour force participation rates in India. It is found that not only has there been a fall in the female labour force participation rates, but the size of the total female labour force has also shrunk in recent years. A large number of demand and supply side factors such as such as increasing enrolment of women in higher education, income effects of households, lack of job opportunities deemed suitable by women, crowding out effect due to higher educational outcomes, discriminatory wages, labour laws and mismeasurement of women's work have been examined as possible factors that might possibly explain the enigma of falling FLPR in India. Further, an exploratory analysis is undertaken to look at FLPR particularly in conjunction with education. It is found that a drop in FLPR cannot be attributed to higher educational participation among the young cohort but must depend on other heterogeneous factors. Further, four points of consideration have been identified such as the link between education and marriage markets, education and social norms, the poor demand conditions for educated women and quality of education as pathways that might impede the translation of higher education into improved labour outcomes for women. It is proposed that prevailing social norms and patriarchy hinders the participation of women in the economy despite high levels of education. For the purpose of quantifying social and cultural norms that determine patriarchy, an index is constructed at the state level using principal component analysis. A bivariate correlation analysis shows that states with high levels of patriarchy, as estimated by the index, are also states with high proportion of women out of the labour force with graduate degrees and above. The output variables that have been used to quantify patriarchy such as

²⁹ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=181542>

³⁰ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=146627>

³¹ <https://indianexpress.com/article/cities/mumbai/shops-and-establishments-can-now-run-24-hours-in-state-maharashtra-govt-4990621/>

³² <https://timesofindia.indiatimes.com/city/thiruvananthapuram/cabinet-approves-amendment-to-shops-and-establishment-act/articleshow/64864120.cms>

low child sex ratio, low participation of women in household decisions and high spousal violence are also indicative of high percentage of women out of the labour force at higher levels of education. It is concluded that education in the current form alone might not be sufficient to spur growth in female labour force participation rates in India. Along with focus on female education, the government schemes must also target the cultural and social forces that shape patriarchy and thus, facilitate behavioural changes that are conducive to the acceptability of female employment. These coupled together with policies that simultaneously address some of the other demand and supply side constraints that impede FLPR is likely to bolster the effort and result in discernible positive outcomes for women. Some of the potential policy responses that were identified were formulation of multistakeholder interventions that promotes gender equitable norms leading to acceptability of female employment; implementing policies that reduce the time burden of women on domestic duties and care responsibilities; imparting quality education and skills; creating employment opportunities through quotas and government programmes; encouraging greater participation of women in public administration and adopting legal reforms to dismantle 'protective legislation'.

There is an urgent need to overcome the inertia of low female labour force participation rate in the country. Unless this is done, India is unlikely to climb the ladder of gender equality. Drèze and Sen (1989) point out that participation of women in the workforce not only improves the quality of life for women but also has positive spillover effects in terms of improved development outcomes for the entire household. Further, greater female labour force participation rates has particular beneficial impact on child care for greater proportion of women's income is spent on child goods (Thomas, 1990 and Kingdon, 1998) According to Duflo (2012), women not working outside their homes might encourage a general perception that women do not need to be strong and healthy thus, result in deterioration in future investment for women health. Moreover, rising female labour force participation could do wonders for the economy and make a difference of some percentage points in the GDP. A study by IMF (2015), found that India could expand its GDP by 27 percent if the number of women workers increases to the same level as men.

Today, the Indian women are all poised to take part in the rapidly expanding economy. What is required is that the social and cultural barriers to female participation in the economy be removed and the government re-orient its growth strategy in favour of women. As the economic survey 2017-18 opined, "In this somewhat unequal contest between the irresistible forces of development and the immovable objects that are cultural norms, the former will need all the support it gets and then some."

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