Empowering women economically: What will it take?

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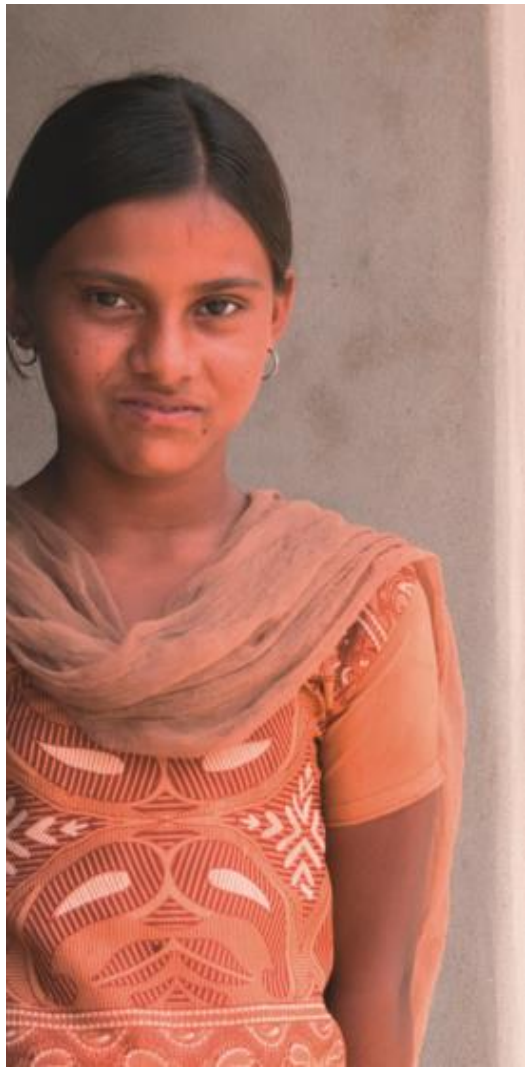
Female disadvantage begins early and persists over time…



Picture credit: ASER (2017)

- By the time Kalyani is 18, she will be married.
- Her access to and ownership of resources will be limited, if at all.
- She will lose her existing social network and kinships post marriage.
- Within 2 years of marriage she will give birth to her first child.

Wither economic opportunities?

- In 2011, only 20% of **rural** married women in age 15-60 were in the labor force, *30 percentage points* lower than for unmarried women.

- While workforce participation rates amongst **urban** unmarried women went up by 11 ppt between 1999-2011, it has been stagnant for married women at 20% for the past thirty years.

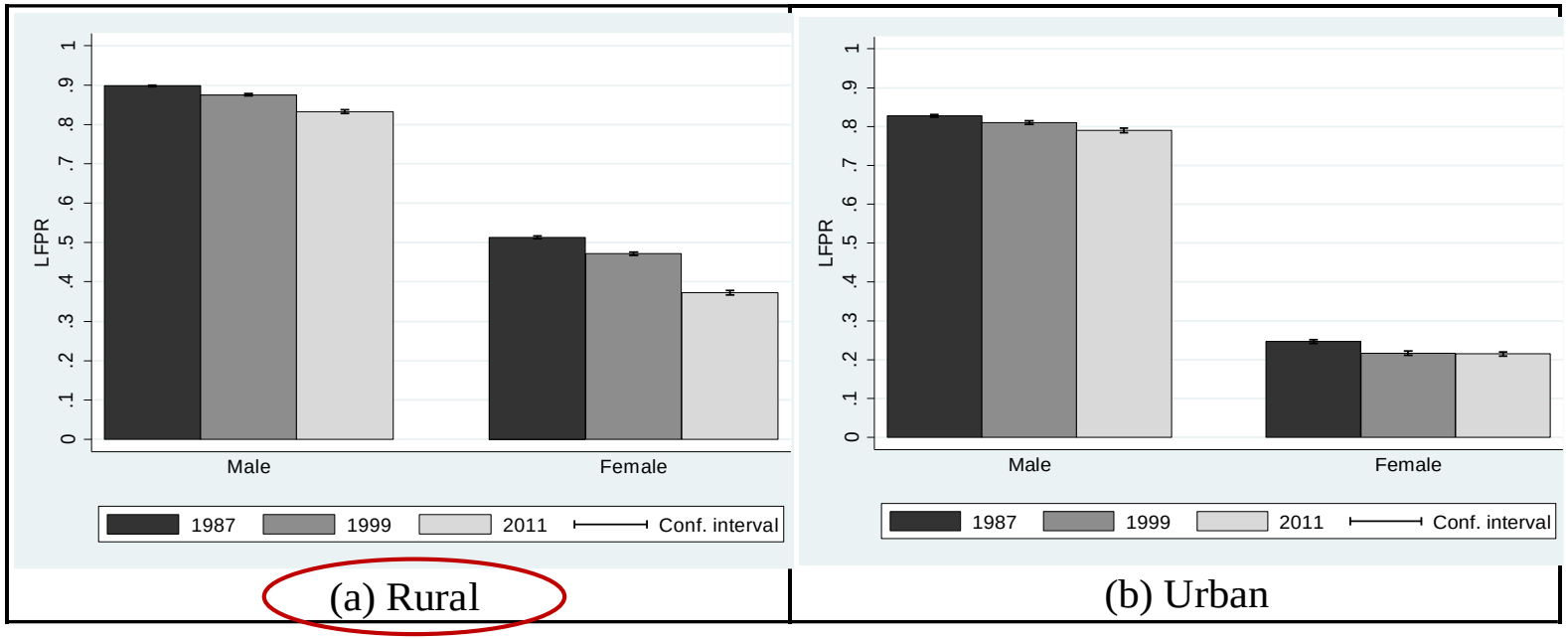
- For married and unmarried **men**, the participation rates are high (around 95%) and constant over time. If anything, married men have a slightly higher rate of labor force attachment than unmarried men.

Wither economic opportunities?

- *Lack of ownership of productive assets* by women limits their entrepreneurial ability.
- *Low human capital* investments in girls, both in terms of quality and quantity, restricts labor market access.
- *Absence of a strong social network*, limits information about job and market opportunities.
- *Gendered division of time* use within the household confines women to within homes.

Women's LFP in India is low and falling!

Figure 1. Labor Force Participation Rates (LFPR) over time by gender
Sample of 15-65 year olds



Source: NSS (1987, 1999, 2011) Employment and Unemployment Schedule (Authors' calculations).

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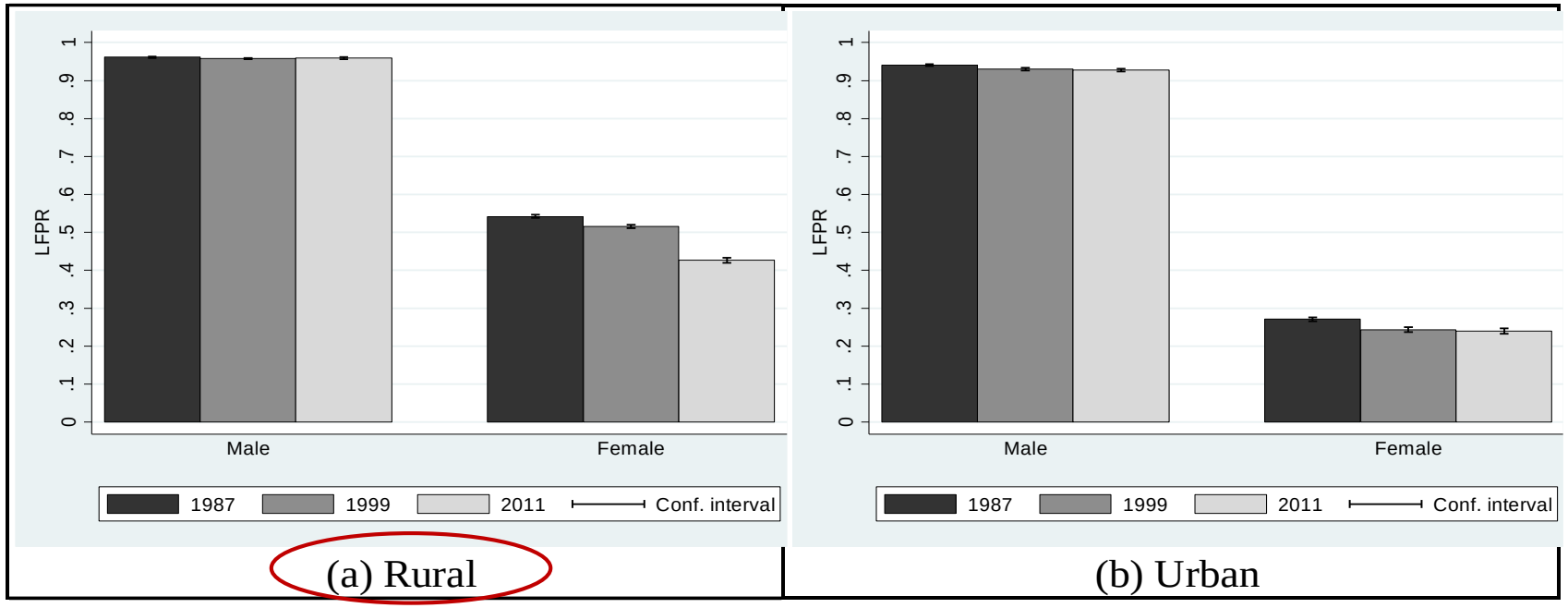
Women's LFP in India is falling in rural areas

Figure 2. Labor Force Participation Rates (LFPR) over time by gender
Sample of 25-65 year olds



Source: NSS (1987, 1999, 2011) Employment and Unemployment Schedule (Authors' calculations).

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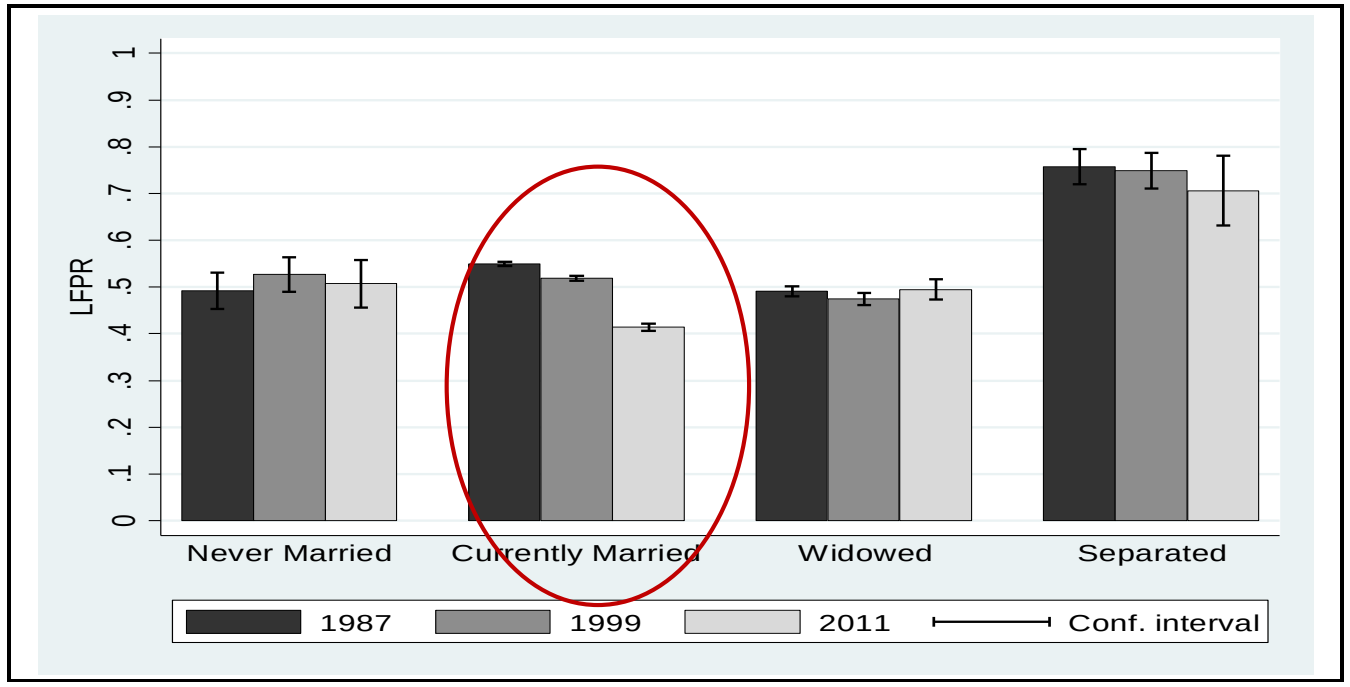
Women's LFP in India is falling for married women

Figure 3. Female Labor Force Participation Rates (LFPR) over time by marital status

Rural sample



Source: NSS (1987, 1999, 2011) Employment and Unemployment Schedule (Authors' calculations).
Note: The sample includes women aged 25-65 in rural India.

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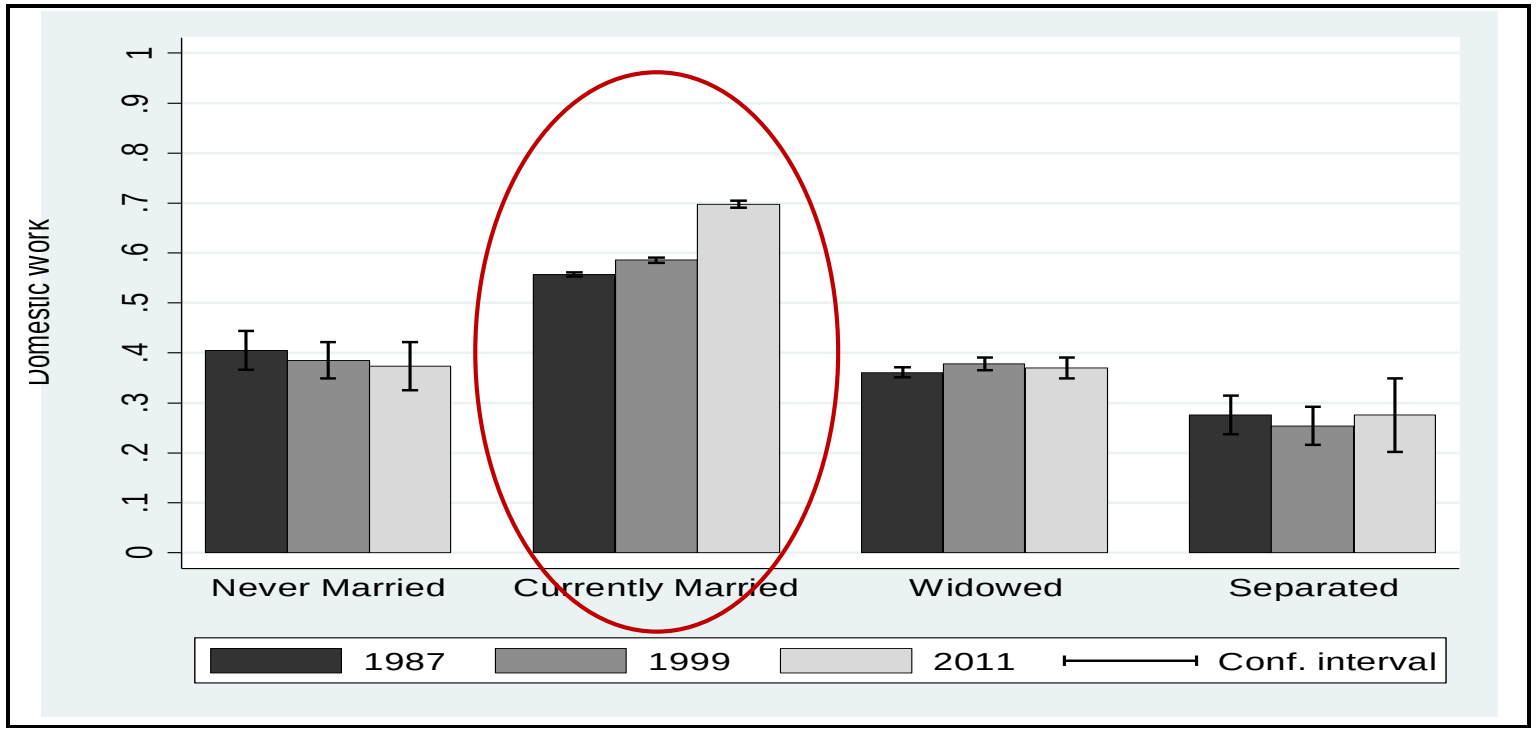
While domestic work is going up…

Figure 4. Female Participation in Domestic Work over time by marital status
Rural sample



Source: NSS (1987, 1999, 2011) Employment and Unemployment Schedule (Authors' calculations).
Note: The sample includes women aged 25-65 in rural India. The above graph reports proportion of women whose primary activity is domestic work.

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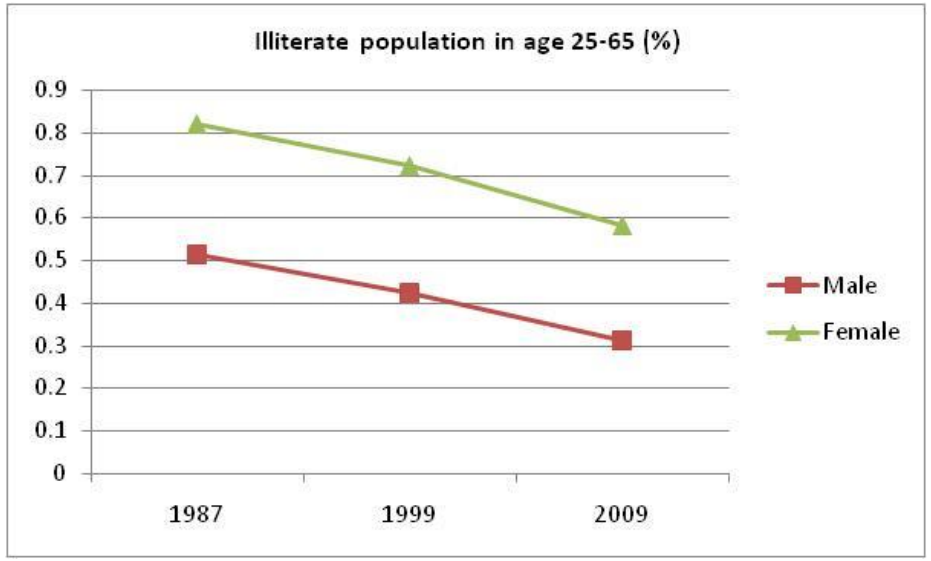
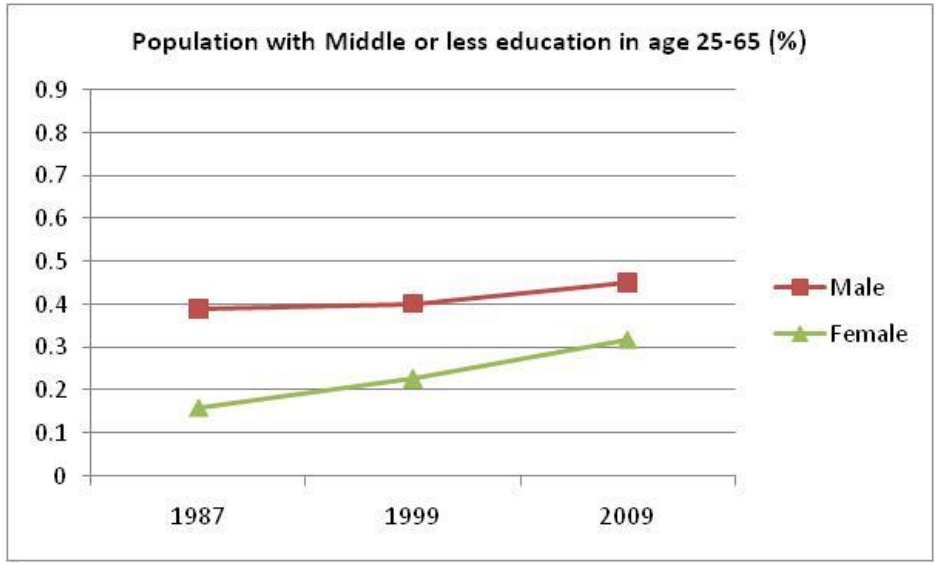
A puzzle?

- Fall in female LFPR along with increase in female domestic work by married women during a period of
  - high economic growth
  - rising female educational levels





Source: NSS (authors' calculations)

This research

- How much of the fall in female LFPR in rural India can be explained by the changing demographic and socio-economic characteristics of working age females?
  - 1987-1999
  - 1999-2011
- What is the contribution of each characteristic to the fall?

Data

- National Sample Survey rounds: 1987, 1999, 2011

  - The surveys include repeated cross-sections of households.

  - Household composition, religion, social group, landholding, monthly consumption expenditure and individual demographic variables such as age, education, marital status and participation and earnings in the labor market.

Methodology

Decomposition Analysis:

- What proportion of change in female employment over time can be explained by changing characteristics of the female population in the working age group?

Decomposition analyses

- The reduced form specification of whether a woman 'i' in year 'j' was employed or not can be written as

$$\hat{Y}_i^j = F(\mathbf{X}_i^j \hat{\beta}^j) \qquad (1)$$

woman *i*'s participation status in the labor force (=1 if the woman is currently in the labor force and 0 otherwise) in year *j*

X comprises the individual and household characteristics

$\hat{\beta}$ are the parameter estimates.

Decomposition analyses

We can decompose the predicted differentials in participation rates (e.g. between 1987 and 1999) using the coefficient estimates from (1) as follows:

- The first term is the change in women's LFP that can be attributed to their changing demographic and socio-economic characteristics ($\mathbf{X_i}$) over time holding the coefficients ($\hat{\beta}^{1987}$) (explained proportion)
- The second component is driven by changes in the probability of being employed ($\hat{\beta}$) for women with a given set of demographic and socio-economic attributes ($\mathbf{X_i}$) (unexplained proportion)

$$\bar{Y}^{1987} - \bar{Y}^{1999} = \left[\sum_{i=1}^{N^{1987}} \frac{F\left(\mathbf{X}_i^{1987}\hat{\beta}^{1987}\right)}{N^{1987}} - \sum_{i=1}^{N^{1999}} \frac{F\left(\mathbf{X}_i^{1999}\hat{\beta}^{1987}\right)}{N^{1999}}\right] + \left[\sum_{i=1}^{N^{1999}} \frac{F\left(\mathbf{X}_i^{1999}\hat{\beta}^{1987}\right)}{N^{1999}} - \sum_{i=1}^{N^{1999}} \frac{F\left(\mathbf{X}_i^{1999}\hat{\beta}^{1999}\right)}{N^{1999}}\right] \quad (2)$$

Results

- Proportion of fall explained by women's characteristics:
  - 1987-1999: 100%
  - 1999-2011: up to 50%

- Which characteristics explain the fall most?
  - Education of men in household
  - Own education of woman

- No consistent effect of household wealth/income

Contribution of each characteristic (1987-99)

Contribution to explained variation in LFPR	**(1)**		**(2)**		**(3)**		**(4)**		**(5)**	
Panel A: 1987-1999										
1987 coefficients										
Explained proportion	*0.68*		*0.86*		*1.04*		*1.33*		*1.36*	
Own age group	**-0.02**		**0.00**		**0.00**		**-0.01**		**-0.01**	
	-0.0003	**	0.0000		0.0000		-0.0005	***	-0.0005	***
	(0.0001)		(0.0001)		(0.0001)		(0.0001)		(0.0001)	
Own education	**1.02**		**0.81**		**0.58**		**0.22**		**0.16**	
	0.0213	***	0.0216	***	0.0186	***	0.0088	***	0.0072	***
	(0.0008)		(0.0008)		(0.0008)		(0.0009)		(0.0009)	
Land ownership of HH			**0.19**		**0.22**		**0.17**		**0.19**	
			0.0052	***	0.0071	***	0.0071	***	0.0085	***
			(0.0004)		(0.0004)		(0.0004)		(0.0004)	
Consumption of HH					**0.21**				**0.12**	
					0.0066	***			0.0052	***
					(0.0004)				(0.0004)	
Male education of HH							**0.62**		**0.54**	
							0.0255	***	0.0244	***
							(0.0008)		(0.0008)	
1999 coefficients										
Explained proportion	*0.70*		*1.04*		*1.20*		*1.40*		*1.41*	
Own age group	**-0.02**		**0.00**		**0.01**		**0.00**		**0.00**	
	-0.0005	***	0.0001		0.0003	***	0.0000		-0.0001	
	(0.0002)		(0.0001)		(0.0001)		(0.0001)		(0.0001)	
Own education	**1.02**		**0.70**		**0.50**		**0.31**		**0.24**	
	0.0220	***	0.0224	***	0.0187	***	0.0132	***	0.0111	***
	(0.0007)		(0.0007)		(0.0007)		(0.0008)		(0.0008)	
Land ownership of HH			**0.30**		**0.34**		**0.25**		**0.28**	
			0.0096	***	0.0124	***	0.0109	***	0.0134	***
			(0.0005)		(0.0004)		(0.0005)		(0.0005)	
Household's Consumption					**0.15**				**0.10**	
					0.0055	***			0.0046	***
					(0.0004)				(0.0005)	
Male education of HH							**0.44**		**0.38**	
							0.0191	***	0.0180	***
							(0.0008)		(0.0008)	

Contribution of each characteristic (1999-2011)

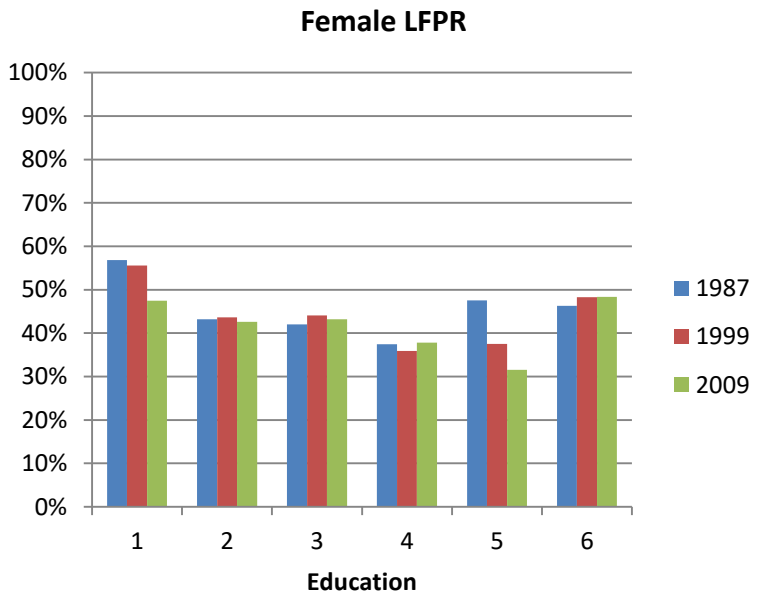
Contribution to explained variation in LFPR	**(1)**		**(2)**		**(3)**		**(4)**		**(5)**	
Panel B: 1999-2011										
1999 coefficients										
Explained proportion	*0.33*		*0.36*		*0.54*		*0.41*		*0.56*	
Own age group	**-0.01**		**0.01**		**0.00**		**-0.01**		**-0.01**	
	-0.0003		0.0004	*	-0.0003		-0.0004	*	-0.0007	**
	(0.0003)		(0.0002)		(0.0002)		(0.0002)		(0.0002)	
Own education	**1.01**		**0.95**		**0.53**		**0.47**		**0.28**	
	0.0351	***	0.0360	***	0.0298	***	0.0203	***	0.0162	**
	(0.0012)		(0.0011)		(0.0012)		(0.0014)		(0.0014)	
Land ownership of HH			**0.03**		**0.03**		**0.02**		**0.03**	
			0.0013	***	0.0016	***	0.0010	***	0.0015	**
			(0.0002)		(0.0002)		(0.0002)		(0.0002)	
Consumption of HH					**0.45**				**0.36**	
					0.0255	***			0.0210	**
					(0.0019)				(0.0019)	
Male education of HH							**0.52**		**0.35**	
							0.0222	***	0.0207	**
							(0.0009)		(0.0009)	
2011 coefficients										
Explained proportion	*0.15*		*0.18*		*0.16*		*0.21*		*0.16*	
Own age group	**-0.12**		**-0.10**		**-0.10**		**-0.10**		**-0.11**	
	-0.0019	***	-0.0019	***	-0.0017	***	-0.0022	***	-0.0020	**
	(0.0004)		(0.0004)		(0.0004)		(0.0004)		(0.0004)	
Own education	**1.12**		**0.94**		**1.15**		**0.30**		**0.47**	
	0.0174	***	0.0180	***	0.0188	***	0.0067	***	0.0081	**
	(0.0015)		(0.0014)		(0.0014)		(0.0018)		(0.0018)	
Land ownership of HH			**0.16**		**0.18**		**0.08**		**0.10**	
			0.0031	***	0.0030	***	0.0017	***	0.0018	**
			(0.0004)		(0.0004)		(0.0003)		(0.0003)	
Consumption of HH					**-0.23**				**-0.41**	
					-0.0038				-0.0071	**
					(0.0025)				(0.0027)	
Male education of HH							**0.72**		**0.95**	
							0.0159	***	0.0165	**
							(0.0015)		(0.0015)	

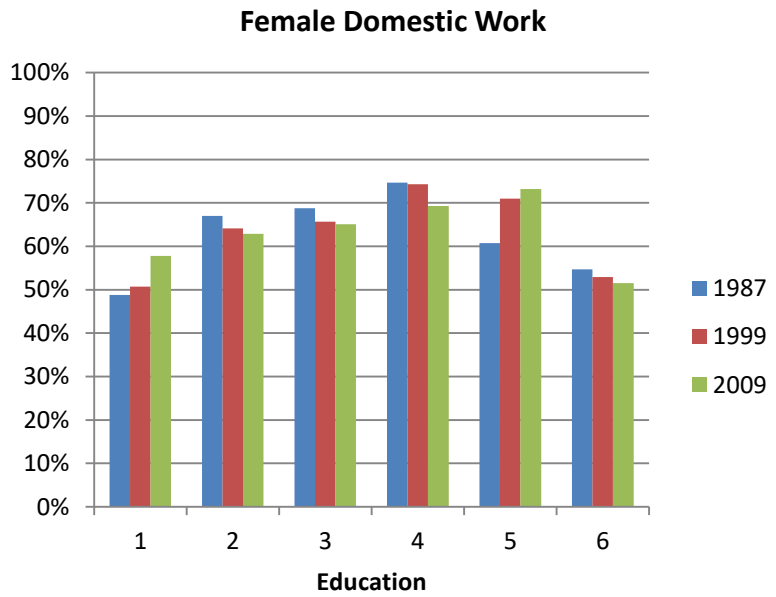
Discussion of results

- Primary education improves female productivity in home tasks?

  - rise in the returns to women's home productivity with increase in education?
  - if the returns to women's time spent in home production rise faster than the returns to female labor in the market for rising levels of education

LFP, Domestic Work and Education



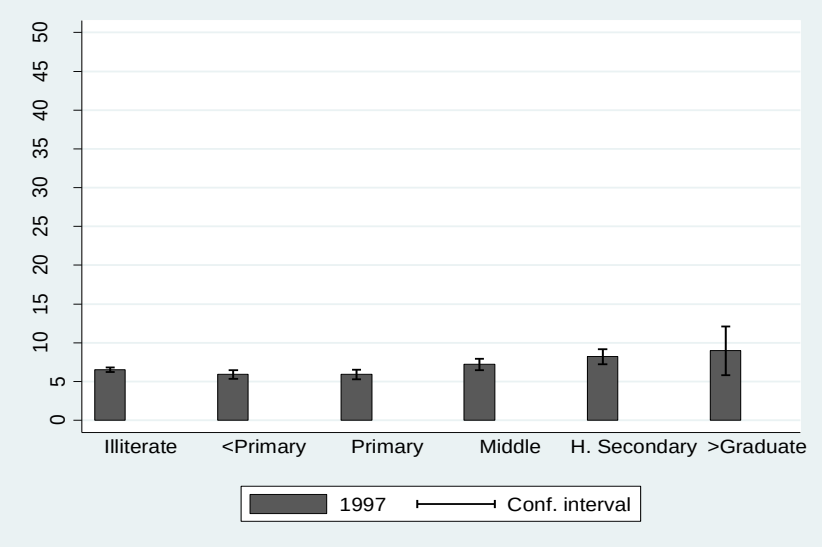


1=(Illiterate) 2=(Literate less than primary) 3=(Primary) 4=(Middle) 5=(Higher Secondary) 6=(Graduate and above)

- Female LFPR and Education: U-shape
- Female Domestic Work and Education: Inverted U-shape

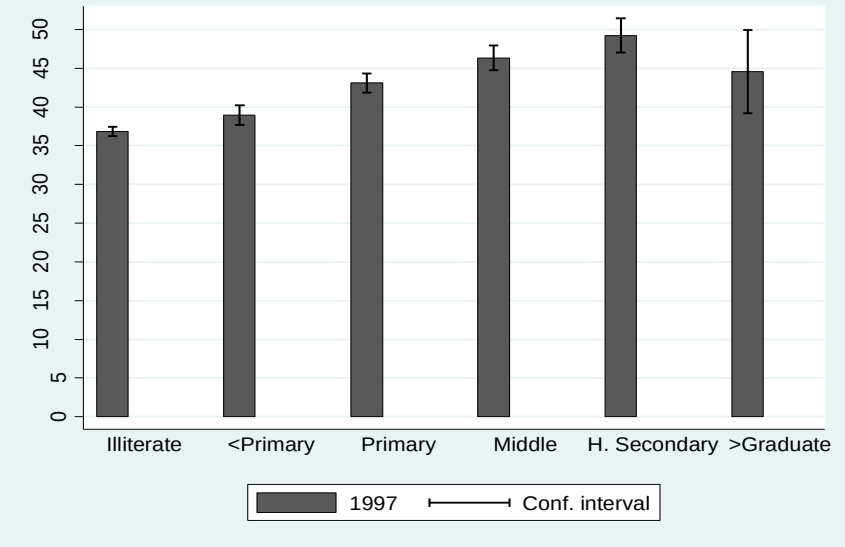
Time spent by women with a child of age 0-15 years

(a) Child Care and mother's education



- ❑ Physical care of children (washing dressing feeding)
- ❑ Teaching training and instruction of own children,
- ❑ Accompanying children to doctor/school/sports/other, supervising children, travel related to care of children

(b) Child Care and mother's education



- ❑ (a) + cooking and cleaning house, clothes and utensils

Supply side constraints

Cultural norms underlying the traditional role of men and women in the Indian households lead to

- higher elasticity of women's relative to men's labor supply, due to lack of job market skills and low education.

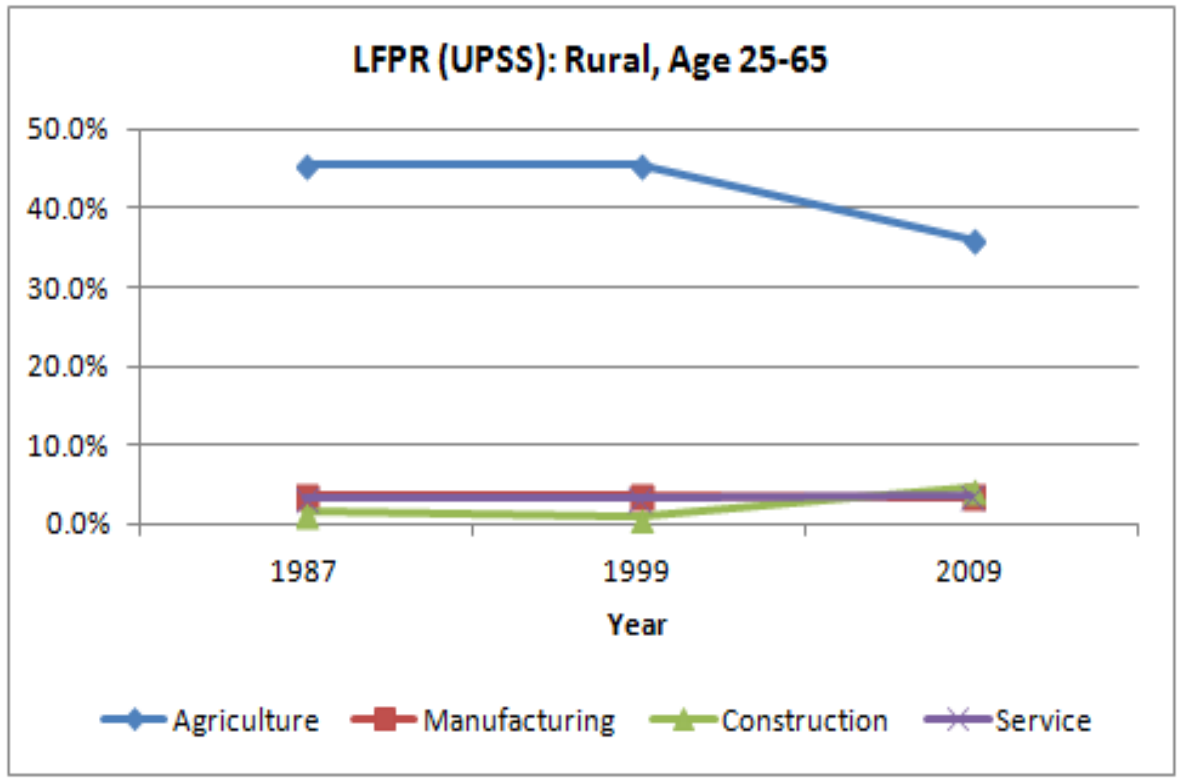
- non-substitutability between male and female labor in home production

- absence of child care services coupled with the shift towards more nuclear families may have exacerbated the burden of domestic work on women.

What constitutes the unexplained proportion?

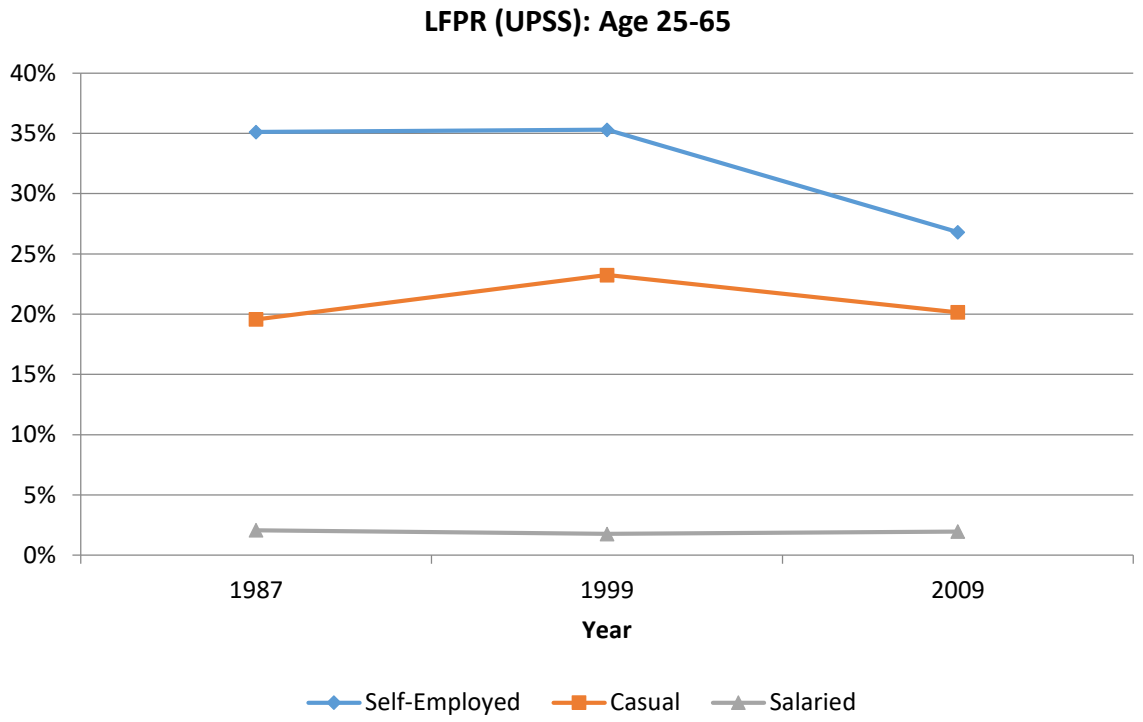
- Decrease in demand for women's labor?
  - Decline in agricultural employment
  - Missing manufacturing sector

Women's Labor Force Participation (Rural)



Source: NSS various years (own calculations)

Women's Labor Force Participation (Rural)



Source: NSS various years (own calculations)

Future research:
Identifying and alleviating constraints

- **Macro economic framework with a life cycle approach**

  - What constraints women's access to economic opportunities at various stages of her life?

  - Which sectors of the economy have shrinking opportunities for women?

  - Which sectors are more likely to engage women productively with 'good' jobs?

Identifying and alleviating constraints

- **Microeconomic and sectoral analysis**
  - Agriculture:
    - reducing unpaid work, adopting new technology on the farm, access to markets
  - Manufacturing:
    - skill training, child care services
  - Services:
    - safety

What works?

- The constraints women face in achieving economic empowerment are multifaceted.

- We need evidence on the relative effectiveness of interventions and policies that address the multidimensionality of this issue.