

# *Public Employment Reservations for Women in India*

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June 2, 2016

## *Introduction*

- ▶ Affirmative action is a form of positive discrimination that targets historically disadvantaged groups.
- ▶ India has one of the lowest female participation rates in labour despite recent advances in economic growth and prosperity.
- ▶ Targeted groups include minorities, low caste groups and females.
- ▶ **In this study, the impact of public employment reservations for women on the likelihood of gaining different types of employment is analysed.**

## *Background*

- ▶ Women reservations were introduced in 1993 for positions in Gram Panchayat, where one third of seats were held.
- ▶ These reservations did not extend to employment or education, as many states deemed it unconstitutional.
- ▶ However, some states chose to implement reservations in government employment as a way to increase female participation rates and empowerment.
- ▶ Note: Many more states have implemented the policy since the estimation period used in this study.

## Background

- ▶ Why have female participation rates in labour remained low?
- ▶ Possible causes (Das et al (2003)):
  - ▶ Structural/Demand-side Issues: Lack of white collar jobs or appropriate available for women
  - ▶ Cultural/Supply-side Issues: Women generally give up employment after marriage, especially if the husband can provide through his own salary; expectation by husband that his wife will look after household duties etc
- ▶ **Reservations relaxes the demand-side issue by providing a mandated quota for women that public institutions have to abide by.**

## List of States with Women Employment Reservations

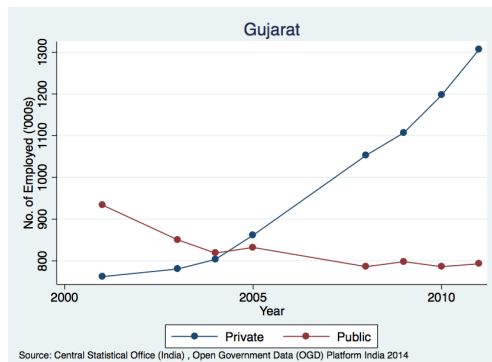
State	Policy Implemented	Year	Percentage
Assam	Yes	2005	30%
<b>Gujarat</b>	<b>Yes</b>	<b>1997</b>	<b>30%</b>
<b>Karnataka</b>	<b>Yes</b>	<b>1996</b>	<b>30%</b>
<b>Maharashtra</b>	<b>Yes</b>	<b>2001</b>	<b>30%</b>
Tamil Nadu	Yes	1989	30%
Rajasthan	Unknown		Possibly 10%
Andhra Pradesh	Yes	1985	33%

## Literature

- ▶ Klasen and Pieters (2015)
  - ▶ Uses Husband's education to control for supply-side effects.
- ▶ Goldin (1994), Mammen and Paxson (2000), Klaisen and Pieters (2012)
  - ▶ U-shaped participation rate.
  - ▶ Push and Pull Mechanism
- ▶ Das et al (2003)
  - ▶ Structural and cultural issues, where the former is the biggest cause of female employment according to Das et al (2003)

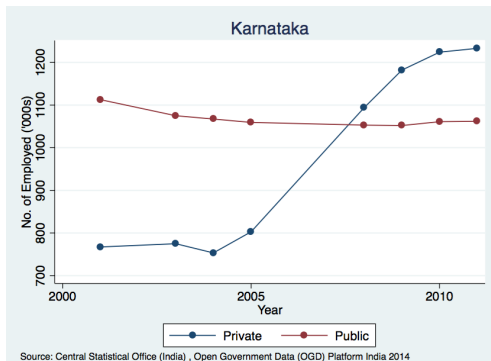
# Background

*Figure:* Public and Private Employment in Gujarat: 2001-2011



# Background

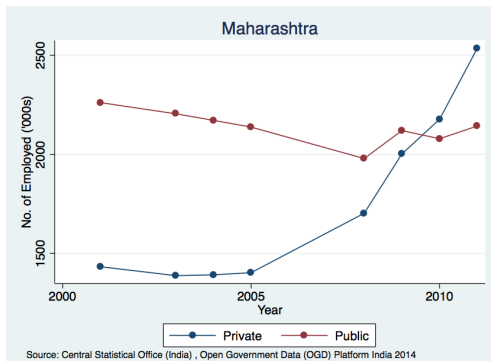
*Figure:* Public and Private Employment in Karnataka: 2001-2011





# Background

*Figure:* Public and Private Employment in Maharashtra: 2001-2011



# Data

- ▶ The National Family and Healthy Survey: 1992-93, 1998-99, 2005-06
  - ▶ Data was restricted to those aged 18-50.
  - ▶ Those who were in education were also omitted.
  - ▶ Only women were interviewed.
- ▶ Post treatment years are 1998-99 and 2005-06.

## Specification

The following equation is estimated for each regression,

$$P(\text{Occupation}_{it} = j | X_{ijt}) = \Phi(\alpha + \beta X_{ijt} + \gamma \text{Treated}_{ijt} + \delta \text{Year}_{ijt}) \quad (1)$$

where  $X_{ijt}$  = (Age, AgeSq, Married, Urban, Religion, Position in household, Education, Caste, TotalNumDep, Wealth Index, Year, EPLIn, Husband's Education) for  $i$  individual on the  $j$ th choice of occupation in year  $t$ .

- ▶ Occupation represents a categorical variable, where
  1. Not Working
  2. Agricultural Work
  3. Self-Employed
  4. **Professional/Manual Work**
- ▶ A multinomial probit regression is used to estimate the model and average marginal effects are presented

## Specification

- ▶ Treated are those who are in the treatment state in question and are part of the Others/Forward Caste category.
- ▶ The effect of reservation will be measured by looking at the difference in difference effect of being in the treatment group across years.
- ▶ In order to control for supply side effects, the regression includes husbands education.
- ▶ EPL index is used as a control for state-level changes in labour laws. It increases as transaction costs for employers decrease with a change in labour law.

# Preliminary Results

VARIABLES	(1) Not Working	(2) Agricultural	(3) Self-Employed	(4) Professional/Manual
Age	-0.0421*** (0.00132)	0.0129*** (0.000961)	0.00936*** (0.000801)	0.0199*** (0.000945)
AgeSq	0.000566*** (1.96e-05)	-0.000174*** (1.43e-05)	-0.000118*** (1.18e-05)	-0.000274*** (1.39e-05)
Married	0.156*** (0.00599)	-0.0279*** (0.00430)	-0.0323*** (0.00336)	-0.0962*** (0.00375)
Urban	0.0899*** (0.00335)	-0.159*** (0.00299)	-0.0121*** (0.00186)	0.0814*** (0.00202)
<b>Religion</b>	<b>Base==Hindu</b>			
Muslim	0.139*** (0.00372)	-0.0900*** (0.00241)	-0.0239*** (0.00225)	-0.0247*** (0.00261)
Christian	-0.0676*** (0.00766)	-0.0112* (0.00621)	0.0333*** (0.00531)	0.0454*** (0.00543)
Sikh	0.144*** (0.00585)	-0.0747*** (0.00415)	-0.0448*** (0.00304)	-0.0246*** (0.00412)
Others	0.0274 (0.0173)	-0.0140 (0.0146)	0.00231 (0.0104)	-0.0158 (0.0102)
<b>Education</b>	<b>Base==No Education</b>			
Primary	0.0360*** (0.00339)	-0.0357*** (0.00253)	-0.00943*** (0.00202)	0.00905*** (0.00232)
Secondary	0.0474*** (0.00384)	-0.0761*** (0.00266)	-0.00143 (0.00240)	0.0301*** (0.00282)
Higher	-0.0979*** (0.00743)	-0.133*** (0.00480)	0.0132*** (0.00471)	0.217*** (0.00732)
<b>Hus Education</b>	<b>Base==No Education</b>			
Primary	0.0120*** (0.00367)	-0.00667*** (0.00246)	0.00638*** (0.00212)	-0.0117*** (0.00274)
Secondary	0.0864*** (0.00357)	-0.0311*** (0.00238)	-0.00666*** (0.00205)	-0.0486*** (0.00261)
Higher	0.122*** (0.00489)	-0.0491*** (0.00360)	-0.00821*** (0.00289)	-0.0644*** (0.00323)
<b>Position in the HH</b>	<b>Base==Head of HH</b>			
Wife	0.0698*** (0.00612)	-0.0336*** (0.00450)	-0.0282*** (0.00392)	-0.00803* (0.00416)
Daughter	0.122*** (0.00726)	-0.0449*** (0.00536)	-0.0424*** (0.00446)	-0.0343*** (0.00476)
Daughter in Law	0.114*** (0.00657)	-0.0274*** (0.00490)	-0.0363*** (0.00416)	-0.0505*** (0.00435)
Others	0.137*** (0.00703)	-0.0521*** (0.00508)	-0.0312*** (0.00437)	-0.0533*** (0.00441)

# Preliminary Results

VARIABLES	(1) Not Working	(2) Agricultural	(3) Self-Employed	(4) Prof/Manual
<b>Caste</b>	<b>Base==Others</b>			
SC	-0.0992*** (0.00363)	0.0530*** (0.00255)	-0.00284 (0.00200)	0.0491*** (0.00261)
ST	-0.234*** (0.00543)	0.0663*** (0.00347)	0.0582*** (0.00344)	0.110*** (0.00441)
OBC	-0.0929*** (0.00351)	0.0507*** (0.00267)	0.0171*** (0.00197)	0.0251*** (0.00235)
TotalNumDep	0.00914*** (0.000897)	-0.00303*** (0.000633)	-0.00132** (0.000532)	-0.00479*** (0.000624)
EPLIn	0.0650*** (0.00852)	-0.0232*** (0.00601)	0.0382*** (0.00523)	-0.0800*** (0.00589)
<b>Wealth Index</b>	<b>Base=Lowest Quintile</b>			
Second	0.0104** (0.00426)	-0.00577** (0.00286)	-0.00574** (0.00253)	0.00111 (0.00310)
Middle	0.0221*** (0.00430)	-0.00403 (0.00295)	-0.0155*** (0.00254)	-0.00266 (0.00310)
Fourth	0.0780*** (0.00452)	-0.0453*** (0.00310)	-0.0269*** (0.00266)	-0.00582* (0.00326)
Highest	0.158*** (0.00526)	-0.110*** (0.00335)	-0.0224*** (0.00326)	-0.0254*** (0.00376)
Treated	-0.209*** (0.00700)	0.134*** (0.00704)	0.0448*** (0.00512)	0.0295*** (0.00535)
<b>Year</b>	<b>Base=1992</b>			
1998	0.0286*** (0.00305)	-0.101*** (0.00218)	0.0998*** (0.00185)	-0.0274*** (0.00207)
2005	-0.0521*** (0.00348)	0.0158*** (0.00291)	0.0248*** (0.00164)	0.0116*** (0.00242)
Observations	138,356	138,356	138,356	138,356

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Main Results from the State Regressions

VARIABLES	(1) Not Working	(2) Agricultural	(3) Self-Employed	(4) Professional/Manual
<b>Gujarat</b>				
1998 vs 1992	-0.0295* (0.0151)	-0.100*** (0.0139)	0.149*** (0.0128)	-0.0196* (0.0106)
2005 vs 1992	-0.0255 (0.0164)	0.0137 (0.0173)	0.00238 (0.00781)	0.00943 (0.0132)
<b>Karnataka</b>				
1998 vs 1992	-0.0516*** (0.0142)	-0.0281** (0.0134)	0.0950*** (0.0120)	-0.0153* (0.00930)
2005 vs 1992	0.0436*** (0.0164)	-0.0857*** (0.0147)	0.0153* (0.00868)	0.0269** (0.0128)
<b>Maharashtra</b>				
2005 vs 1998	0.0626*** (0.0115)	0.0448*** (0.0117)	-0.0932*** (0.0101)	-0.0142* (0.00732)

Standard errors in parentheses

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## Results

- ▶ Married women are more likely to be unemployed and increasing husband's education makes it less likely for women to be in professional/manual employment.
- ▶ Karnataka shows sign of improvement post treatment, however Gujarat and Maharashtra are yet to experience any positive feedback from policy implementation.
- ▶ Can be attributed, possibly, due to the decline in government employment and rise in private employment, especially in the case of Karnataka.
- ▶ Caveats have to be taken as distinguishing between the two is not possible in the dataset.



## Conclusion

- ▶ Public employment has been on the decline and adding quotas to a shrinking employment base is proving to be ineffective in 2 out of 3 states studied.
- ▶ Supply-side issues such as cultural norms are also not addressed by the policy and is an underlying issue that needs to be addressed alongside the demand-side.
- ▶ Possibly could extend policy into the private sector where there are more white collar jobs for educated women.