

## **Institutions and the Benefits to the Poor from Globalization**

**Mark R. Rosenzweig, Harvard University**

1. Globalization is a dynamic process whose consequences are shaped by institutions.
2. For an empirical micro-economist studying impacts of globalization, need data describing institutions and outcomes for the poor *over time*.
3. Today, look at urban and rural areas of India over the past twenty years. Why India?
  - a. Policy reforms in the 90's opened up the economy - participation of India at the country level in globalization.
  - b. Institutional reform: transformed local (village) governing bodies to democratically elected councils.
  - c. Experienced real growth over this period.
4. Look at two institutions - caste and local democracy - and the real poor in India:
  - a. Rural areas: the landless
  - b. Urban areas: low-caste

## 5. Institutions

a. Caste: an indigenous institution, for the most part neglected in empirical work by economists.

1. I have been working with India data for almost 30 years - never paid attention to caste, as is true for most empirical economists over this time period. Partly due to the fact that caste information is not collected, except for low castes (government administrative purposes). We have now collected detailed caste information in surveys.

2. Here look not at the caste hierarchy - brahmin, etc. - but the sub-caste (*jati*), which defines the social organization of individuals and households.

3. Basic question: Does caste matter in a dynamic setting? Does it shape the way in which development and globalization affect the poor? View I heard 30 years ago from Indian specialists: caste is a principal barrier to development. Empirical economists have assumed caste does not matter at all.

4. Show empirically: caste matters - although possibly helpful for poor in static setting; possibly a barrier to the development of the poor in a dynamic setting

b Local democracy

1. Basic question: Does local democratization benefit the landless? relative to the landed? Show empirically: yes and yes.

## Case 1: Globalization in Mumbai - Acquiring English

[based on joint work with Kaivan Munshi, University of Pennsylvania]

1. One important manifestation of globalization observed here:

We are communicating in English, using a common language, despite very diverse origins

2. The returns to learning English have evidently risen in Europe for at least the highly educated - what about India?

3. New 2001 survey in Dadar neighborhood in Mumbai: 20-year earnings histories for adults along with highest attained schooling level and medium (language) of instruction in primary/secondary school.

4. Descriptive earnings function for men and women aged 30-55 in 1980, 1985, 1990, 1995, 2000:

$$\ln \text{earnings}_{it} = \alpha_{1t} + \alpha_{2t}S_i + \alpha_{3t}E_i + \alpha_{4t}\text{age}_{it}$$

where  $t$  = time period,  $i$ =individual

$S_{it}$  = Schooling attainment of  $i$

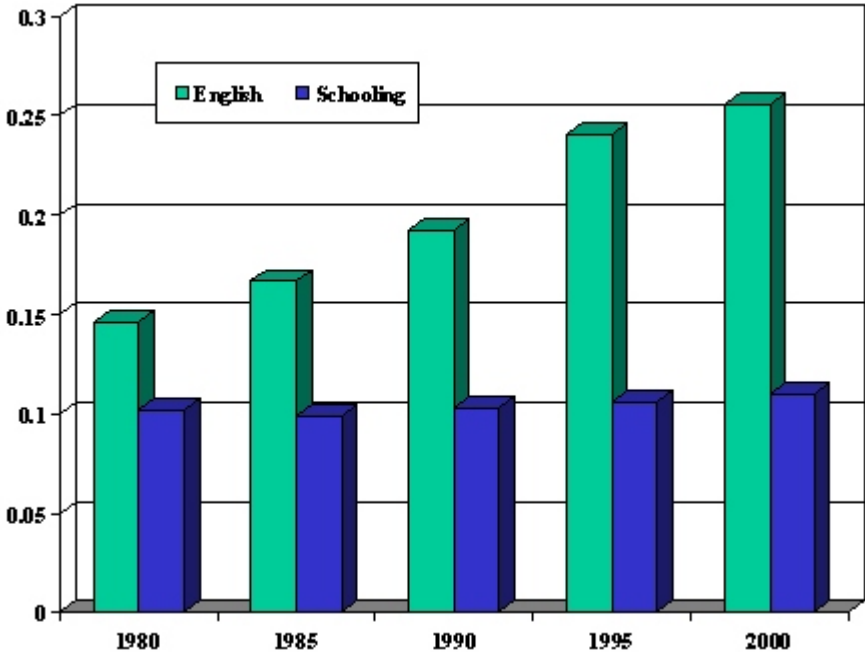
$E_{it}$  = Whether  $i$  attended English medium school

Men:  $N = 13,638$ ;  $R^2 = .29$

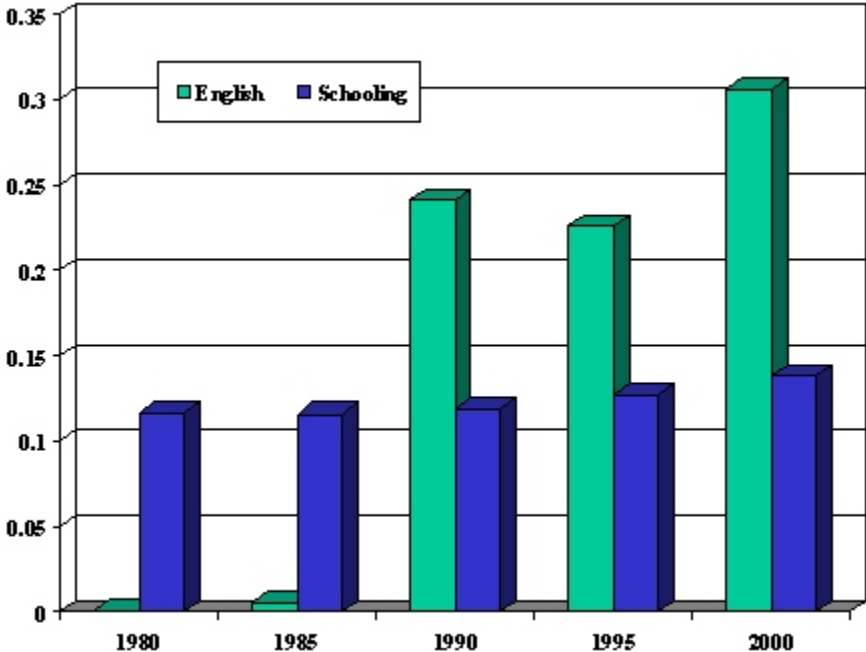
Women:  $N = 3,068$   $R^2 = .42$

# Returns to English and Schooling, by Year and Gender: 1980-2000

## Men

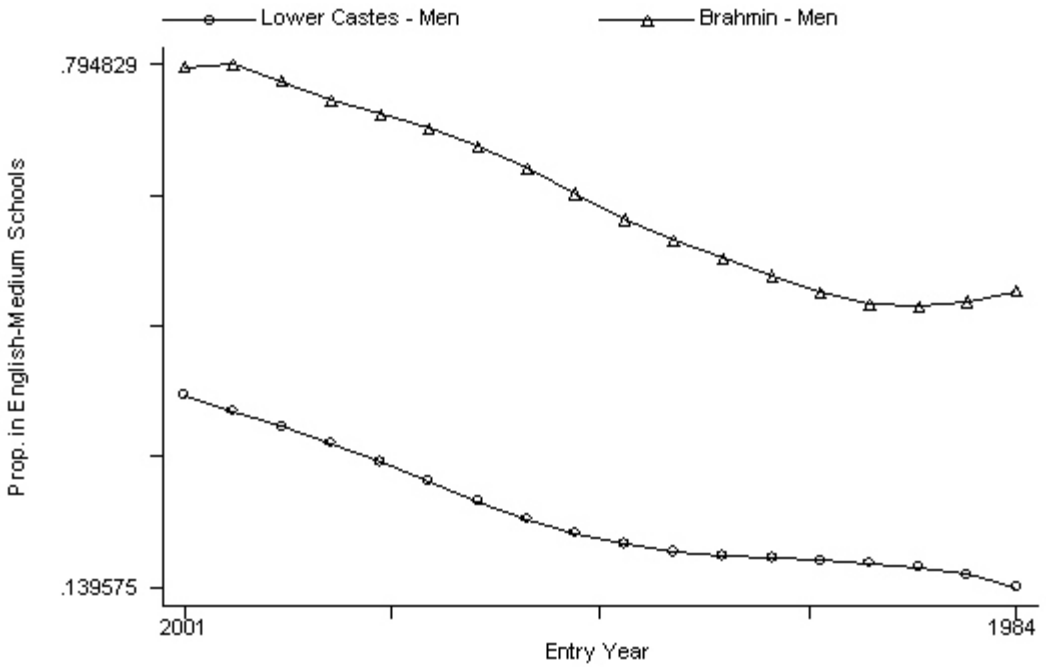


## Women

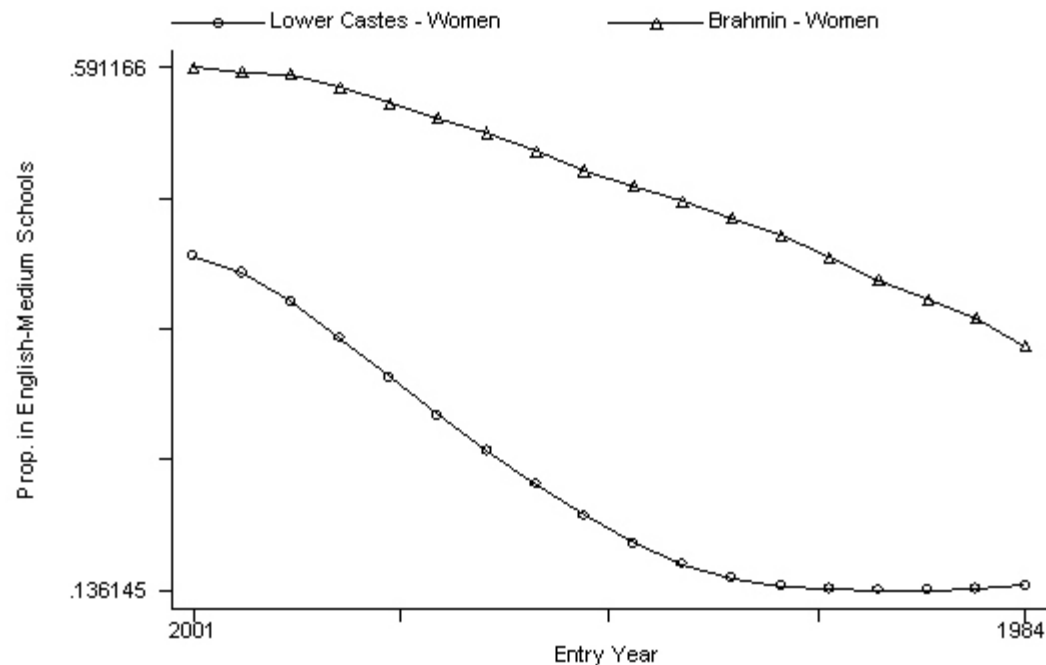


# Enrollment Rates in English-medium Schools, 1984-2001, by Caste

## Men



## Women



## Specific Research Questions:

1. Why are enrollment rates in English-medium schools rising?
  - A. Increase in demand for English? Why?
  - B. Increase in demand for better schools, which happen to be English-medium? Are English-medium schools higher quality?
2. Why are enrollment rates of boys in lower-castes not catching up?
  - A. Lower incomes? tuition in English-medium schools higher (949 vs. 2,176 rupees in 2001)
  - B. Lower pre-school human capital (endowments)?
  - C. Discrimination?
  - D. Caste-based - institutional - explanation
    1. Caste is an inherited trait
    2. Castes are closed groups: little or no inter-marriage across *jatis*
    3. Castes tend to specialize in occupations
    4. Castes provide services of network: credit, insurance, **job referrals**

## Outline

1. Describe caste model: role of employment networks and network externalities
2. Test implications of the model
  - A. School choice: Does caste play a role in choice of English-medium schools?
  - B. School selectivity: What are the effects of caste and rise in return to English on the quality of students in English- and Marathi-medium schools
3. Examine alternative explanations for caste effects on school choice
  - A. Income, parental schooling
  - B. Occupation of parents determines children's occupation and thus school choice
  - C. Unmeasured caste quality and preferences
4. Test whether quality differences between schools: school characteristics and test scores

## Caste-Based Competitive Employment Model (Free Mobility)

Set-up

1. Two types of jobs:

A. Blue-collar (“high-referral” sector with network externality):

a. inability to discern productivity so that employers pay expected productivity

b.  $W_{ij}^B = P_j^B$ , where  $P_j^B$  = proportion of persons in *jati*  $j$  in blue-collar jobs

B. Professional:

a.  $W_{ij}^P = \omega_{ij}\theta$ , where  $\omega_{ij}$  = ability of individual  $i$  in *jati*  $j$ ;  $\theta$  = returns to ability

b. English necessary, so  $\theta$  = return to English

2. Three ability-types of workers, equally distributed across *jatis*:

$P_L, P_M, P_H$  = proportions low, medium, high ability in each *jati*

3. Each individual lives two periods; chooses schooling type - Marathi or English - in the first period based on expected occupation he/she will be in second period to maximize net expected return (Marathi education less expensive)

Proposition 1 (static economy): 3 equilibria possible for each *jati*; *jatis* can differ persistently in schooling choices, with no change in  $\theta$

Example: pre-reform  $\theta < 1$ ;  $\omega_L = 0$ ;  $\omega_M = 1/2$ ;  $\omega_H = 1$

Three equilibria: (i) Everyone in *jati* chooses Marathi schooling;  $W_j^B = 1 > W_{Hj}^P = \theta$

(ii) Only high-ability types choose English schooling

sustainable when  $\theta/2 < P_L + P_M < \theta$

(iii) Only low-ability types choose Marathi schooling

sustainable when  $P_L < \theta/2$

Proposition 2 (dynamic economy): all *jatis* converge to equilibrium 3 *sequentially*

Post-reform  $\theta \geq 1$

At  $\theta = 1$ : all equilibrium -1 *jatis* move to equilibrium 2, as high-ability types switch to English schools and professional jobs

For  $\theta \geq 2(P_L + P_M)$ : all *jatis* move to equilibrium 3

Dynamic implications for school selectivity:

1. Students in English-medium schools always higher ability than those in Marathi schools.
2. Average ability declines in Marathi schools as  $\theta$  increases.
3. Average ability declines in Marathi schools as  $\theta$  increases more among the *jatis* concentrated in the blue-collar jobs.
4. Changes in the average ability in English-medium schools is ambiguous:

Example: Initially, ( $\theta=1$ ), average ability in English schools rise (because only high-ability types switch)

At higher levels of  $\theta$  ( $\theta \geq 2(P_L + P_M)$ ), average ability in English schools decline.

## ***Optimal and Sub-optimal Caste Restrictions on Mobility***

Assume *jati* maximizes average wage  $W$  of its members

Thus, in equilibrium 1,  $W^1 = 1$  for all values of  $\theta$

Examples:

A. for  $\theta = 1$  and free mobility, *jatis* in equilibrium 1 move to second equilibrium, then

$$W^2 = (P_L + P_M)^2 + P_H$$

but,  $W^2 < W^1$ : *jati* welfare declines, creating incentive for caste-based restrictions on mobility (preserve integrity of network)

Social restrictions on mobility *welfare-enhancing and efficient*

B. for  $\theta \geq 1 + P_L + P_M$  and free mobility,  $W^2 > W^1$ , *jati* welfare increases

At some point, social restrictions on mobility *reduce jati* welfare and efficiency

Empirical question: do we see caste-based restrictions on mobility in blue-collar *jatis*, and thus non convergence, due to network externalities in the labor market?

## **Data: 2002 Dadar, Mumbai Student Survey**

1. Random sample of 4700 student records for students residing in the 29 schools in Dadar

A. Enrolled in grades 1 through 10 in fall 2001 or

B. Enrolled in grade 10 over the period, from 1982-1991.

Thus, covers enrollment decisions over the period 1982-2001

2. In-home interviews of parents of students completed February 2002

A. Information on parents, grandparents, siblings

B. Information on schools attended, scores on secondary-school-leaving exams for students; earnings histories, schools attended and **how found job** for parents; parental and sibling occupation, remittances and transfers; and **sub-caste** (*jati*). There are 59 sub-castes represented.

3. Survey of the school principals in the 29 schools

A. Medium of instruction, class sizes, teacher qualifications, average test scores of students, facilities.

B. English is the medium of instruction in 10 schools; Marati (local language) in 9.

**Percent of Men Receiving Job Referrals and Speaking English, by Occupation**

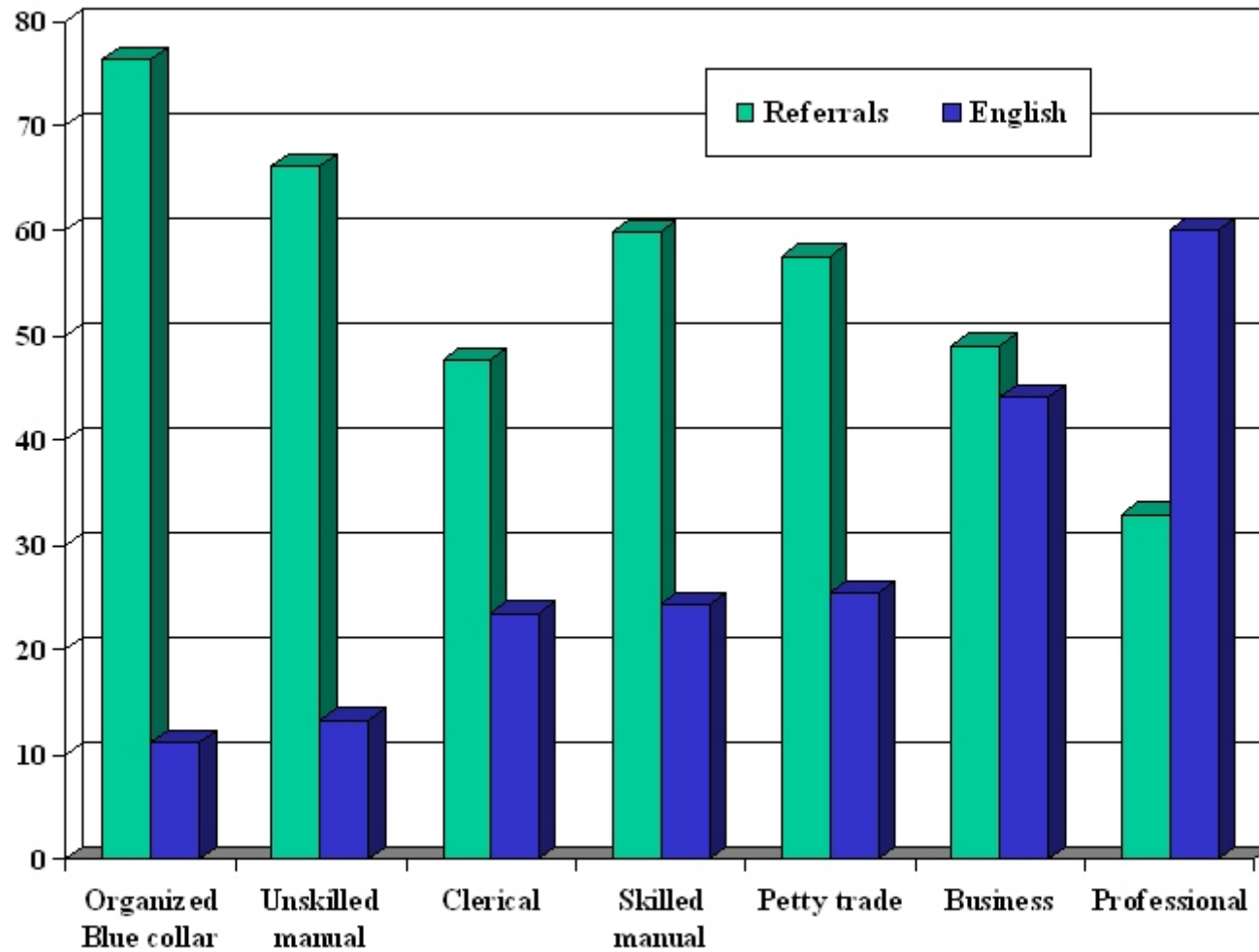


Table 1  
Occupational Distribution (%), by Caste: Mumbai Men

Occupation	Low Castes	Middle Castes	High Castes
No work	2.71	2.76	0.97
Unskilled manual	10.9	7.69	4.38
Skilled manual	16.8	13.4	10.4
<b>Organized blue collar</b>	<b>22.1</b>	<b>18.5</b>	<b>2.80</b>
Clerical	27.3	35.5	20.7
<b>Professional</b>	<b>8.25</b>	<b>8.5</b>	<b>42.9</b>
Business	7.70	8.86	15.2
Petty trade	3.93	4.24	2.56
Farming	0.33	0.48	0.12
Number	1806	1885	821

Table 2  
Occupational Distribution (%), by Caste: Mumbai Women

Occupation	Low Castes	Middle Castes	High Castes
No work	79.7	80.5	49.1
Unskilled manual	6.06	3.24	1.18
Skilled manual	1.81	1.60	3.17
<b>Organized blue collar</b>	<b>0.90</b>	<b>1.03</b>	<b>0.35</b>
Clerical	6.38	7.88	23.4
Professional	3.46	4.53	20.3
Business	0.90	0.51	1.88
Petty trade	0.80	0.72	0.59
Farming	0	0	0
Number	1881	1942	851

Table 3  
Determinants of the Choice of English-Medium Schooling, by Gender

Sample	Boys		Girls		All
	OLS	FE- occup.	OLS	FE- occup.	FE-caste
<i>Jati</i> -level job assistance	-.378 (2.55)	-.334 (2.21)	.116 (0.69)	.169 (1.00)	-
<i>Jati</i> -level job assistance x boy	-	-	-	-	-.404 (5.59)
Age (cohort)	-.0090 (4.51)	-.0112 (6.83)	-.0099 (5.17)	-.012 (5.34)	-.00992 (6.64)
English medium schooling - father	.234 (7.13)	.208 (5.33)	.309 (12.0)	.285 (10.1)	.246 (11.9)
English medium schooling - mother	.211 (7.38)	.175 (6.01)	.263 (5.98)	.240 (6.60)	.232 (7.52)
Years of schooling - father	.0222 (5.63)	.0193 (5.33)	.0199 (6.64)	.0158 (4.85)	.0209 (8.85)
Years of schooling - mother	.0242 (7.21)	.0193 (6.38)	.0262 (8.75)	.0222 (6.84)	.0244 (9.96)
Father's income (x10 <sup>-5</sup> )	.566 (1.21)	.271 (0.84)	.818 (2.78)	.601 (3.16)	.557 (1.76)
Boy	-	-	-	-	.253 (6.13)
N	2240	2240	2046	2046	4286

Table 4  
Determinants of the Choice of English-Medium Schooling for Boys, by  
Time Period

	1992-2001	1982-1991	1982-2001
<i>Jati</i> -level job assistance	-.394 (2.19)	-348 (1.63)	-
<i>Jati</i> -level job assistance - 1995-2000	-	-	-.438 (2.22)
<i>Jati</i> -level job assistance - 1990-1994	-	-	-.439 (2.32)
<i>Jati</i> -level job assistance - 1980-1989	-	-	-.315 (1.50)
Age (cohort) - 1995- 2000	-	-	-.00065 (0.05)
Age (cohort) - 1990- 1994	-	-	-.0177 (2.56)
Age (cohort) - 1980- 1989	-	-	-.00317 (1.14)
1995-2000	-	-	.121 (0.62)
1990-1994	-	-	.27` (1.67)
Age (cohort)	-.0160 (4.48)	-.00294 (1.04)	-
N	1209	1031	2240

Table 5  
Change in School Selectivity by Caste-type, Post-1990 Period:  
Student's Father's Schooling

Sample	Boys in Marathi-Medium School		Boys in English-Medium School	
	OLS	FE-Caste	OLS	FE-Caste
Age (cohort)	.708 (3.29)	.548 (3.51)	-.331 (2.10)	-.392 (2.49)
Age x caste-level job assistance	-1.43 (3.88)	-1.14 (4.53)	.706 (2.27)	.806 (2.54)
Caste-level job assistance	6.54 (1.58)	-	-15.2 (4.17)	-
Constant	7.63 (3.06)	-	20.4 (10.9)	-

## **Local Democratization and the Poor**

[based on joint work with Andrew Foster, Brown University]

### Issues

1. Does it deliver the goods?
2. Which goods?
3. To whom?

### Theory

- a. Ambiguous on who benefits:
  1. Improved flow of information, accountability
  2. “Capture” more or less likely at local level
- b. Key element: Public goods distribution reflects population shares of different interest groups
  1. Competition for share of surplus
  2. Share of “ignorant” poor increases likelihood of local capture (Bardhan and Mookherjee).

## Obtaining Evidence on Democratization

### Key challenges:

1. Identify interest groups by their different preferences for specific public goods.
2. Distinguish between effects of changing proportions of interest groups on the economy and on political outcomes (embed political model in general-equilibrium economic model).
3. Need variation in form of government.

### Existing studies:

1. Cross-country effects of democracy on growth (e.g. Barro (1999)).
2. Micro studies of recent Indian experience:
  - A. World Bank case studies.
  - B. Village constituency meetings (Ghatak and Ghatak (2000)).
  - C. Randomization of set-asides for village councils: role of gender (Chattopadhyay and Duflo (2001))

## Local Democratization in India

1. National tradition of democracy with implementation at local level left to states, villages.
2. Recent initiatives at national and state levels to implement democracy, provide tax authority at local level.
3. Thus, have variation across areas and over time in local democratization
4. Two interests groups in rural well-defined: by ownership of land
  - A. Bulk of rural poor are landless.
  - B. Landownership tends to be a permanent characteristic.
  - C. Landowners and the landless derive distinctly different benefits from programs that raise wages.
  - D. Variation in proportion landless (poor) have direct effects on economy.
5. Good data documenting changes in economy, characteristics of population, governance.

## Paper

1. Present simple model of democracy; probabilistic voting model.
2. Contrast with aristocratic model - public goods decided by elite.
3. Embed political model in general-equilibrium model of rural economy with two classes of people defined by land ownership and three types of public goods differentially favored by each class.
3. Derive implications:
  - A. Democratization effect on the distribution and level of public goods.
  - B. Effects of changing population share of poor on the public goods distribution under democracy and aristocracy.
  - C. Identification of whether tax system actually used is progressive or regressive.
4. Apply model to 20-year panel data set with 250 villages representing rural India.
5. Conclusions:
  - A. Democracy does give more voice to poor. B. Improves roads, less investment in agriculture; no effect on schools. C. Local taxation where permitted is regressive. D. Little evidence that local democratization affects economic growth.

## Theoretical Framework

Number of households=H

Village total land = aH

Number of landowning households = (1-ρ)H

$C_A$ =consumption in landed household,  $C_N$ =consumption in landless household

$\tau$ =tax rate,  $\theta$ =progressivity parameter ( $\theta > 1$ =regressive,  $\theta < 1$ =progressive)

$t$ =public pumps,  $r$ =paved road,  $s$ =school

Public budget constraint:

$$(1) \quad \pi(t,r,s) = B + \tau C_A + \theta \tau C_N - (w + p_r)r - p_t t - p_s s$$

a. Democratic Public Goods Allocations with Two Parties, X and Y

$$(2) \quad v_K^*(t_X r_X s_X) - v_K^*(t_Y r_Y s_Y) + \delta \epsilon_{Ki} - \delta \epsilon_{Ki} \geq 0$$

$$(3) \quad (1-\rho) / \left( 1 + \exp \left( - \frac{(v_A^*(t_X r_X s_X) - v_A^*(t_Y r_Y s_Y))}{\delta} \right) \right) + \rho / \left( 1 + \exp \left( - \frac{(v_N^*(t_X r_X s_X) - v_N^*(t_Y r_Y s_Y))}{\delta} \right) \right)$$

$$(4) \quad \frac{(1-\rho) \frac{\partial v_A^*}{\delta \partial r_X}}{\left( 1 + \exp \left( \frac{(v_A^*(t_X r_X s_X) - v_A^*(t_Y r_Y s_Y))}{\delta} \right) \right) \left( 1 + \exp \left( \frac{(v_A^*(t_X r_X s_X) - v_A^*(t_Y r_Y s_Y))}{\delta} \right) \right)} + \frac{\rho \frac{\partial v_N^*}{\delta \partial r_X}}{\left( 1 + \exp \left( \frac{(v_N^*(t_X r_X s_X) - v_N^*(t_Y r_Y s_Y))}{\delta} \right) \right) \left( 1 + \exp \left( \frac{(v_N^*(t_X r_X s_X) - v_N^*(t_Y r_Y s_Y))}{\delta} \right) \right)} + \mu \frac{\partial \pi}{\partial r_x} = 0$$

$$(5) \quad (1-\rho) \frac{\partial v_A^*}{r_X} + \rho \frac{\partial v_N^*}{r_X} + \mu \frac{\partial \pi}{\partial r_X} = 0$$

b. Aristocratic Public Good Allocations

$$(6) \quad (1-d\rho)v_A^*(t,r,s)+d\rho v_N^*(t,r,s)$$

$$(7) \quad d\rho \frac{\partial v_N^*}{\partial r}(t,r,s) + (1-d\rho) \frac{\partial v_A^*}{\partial r}(t,r,s) + \mu \frac{\partial \pi}{\partial r} = 0$$

c. Technology and Preferences in the Village Economy

$$(8) \quad f(t,a,l) = \phi g(t,r) a^{1-\alpha} l^\alpha$$

$$(9) \quad u(c,s) = \ln(c) + h(s)$$

$$(10) \quad c_A = \phi g(t,r) f(a/(1-\rho), l + l_h) - w l_h$$

$$(11) \quad c_N = w l$$

$$(12) \quad w = \alpha \phi g(t,r) f(a/(1-\rho), (l-r)/(1-\rho)) / ((l-r)/(1-\rho)) = \alpha \phi g(t,r) f(a, l-r) / (l-r)$$

$$(13) \quad y = \phi g(t,r) f(a, l-r) / (1-\rho)$$

## Land Classes as Income Classes and Interest Groups

Assume:

(a)  $l_h > 0$ , landed are net importers of labor

(b)  $c_A(1-\tau) > c_N(1-\theta\tau)$ , landed are richer than landless

Then, road programs preferred by poor landless; public irrigation preferred by rich landed

$$(14) \quad \frac{\partial c_A^*}{\partial r} - \frac{\partial c_N^*}{\partial r} = \frac{(1-\alpha)w}{1-\rho} \left( \frac{(1-r)g_r(r)}{\alpha g(t,r)} - 1 \right) < 0, \text{ if } g_r'(r) - g_t'(t) < \frac{\alpha g(t,r)}{1-r}$$

$$(15) \quad \frac{\partial c_A(t,r,s)}{\partial t} - \frac{\partial c_N(t,r,s)}{\partial t} = \frac{g_t'(t)}{g(t,r)} w l (c_A/c_N - 1) > 0$$

## Implications for Local Democratization

$$(16) \quad \frac{\partial r_D^*}{\partial d} = \frac{1}{z_0} (z_{11} p_s^2 + z_{14}^2 h''(s)) \frac{(1-\alpha)\rho}{(l-r+\alpha(l\rho-r))} : \text{Local democracy delivers better roads}$$

$$(17) \quad \frac{\partial t^*}{\partial d} = -\frac{1}{z_0} (z_{12} p_s^2 + z_{14} z_{24} h''(s)) \frac{(1-\alpha)\rho}{(l-r+\alpha(l\rho-r))} < 0 : \text{Local democracy reduces public irr. investments}$$

$$(18) \quad \frac{\partial s^*}{\partial d} = -\frac{p_s}{z_0} (z_{11} z_{24} - z_{14} z_{12}) \frac{(1-\alpha)\rho}{(l-r+\alpha(l\rho-r))} : \text{Local democracy may not affect schools}$$

Effects of landless population share on roads and public irrigation depends on the form of local government:

$$(19) \quad \frac{\partial r_D^*}{\partial \rho} = -\frac{1}{z_0} (z_{11} p_s^2 + z_{14}^2 h''(s)) \frac{(1-\alpha)(\alpha l - d(l - (1-\alpha)r))}{(l-r+\alpha(l\rho-r))^2}$$

$$(20) \quad \frac{\partial t^*}{\partial \rho} = \frac{1}{z_0} (z_{12} p_s^2 + z_{14} z_{24} h''(s)) \frac{(1-\alpha)(\alpha l - d(l - (1-\alpha)r))}{(l-r+\alpha(l\rho-r))^2}$$

## Data Sources

1. 1982 NCAER Rural Economic Development Survey (REDS) Village Module

259 villages in 16 major states, 5000 households

2. 1999 NCAER Rural Economic Development Survey (REDS99) Village Module

Same villages, with design changes

3. 1991 Indian Census

Matched to REDS villages

4. National and State legislation on democratization

## Basic Estimating equation

$$(21) \quad P_{njt} = \gamma_0 + \gamma_1 \rho_j + \gamma_2 d_{jt} + \gamma_3 \rho_j d_{jt} + \gamma_4 \tau_{jt} + \gamma_5 \rho_j \tau_{jt} + \gamma_6 A_j + \gamma_7 H_{jt} + \gamma_8 \phi_{jt} + \mu_j + \epsilon_{jt}$$

Three estimation problems for identifying the  $\gamma$  parameters:

1. Spatial variation in unobserved “cultural” preferences ( $\mu_j$ ) for equity, investments across India

Remedy: Fixed-effects (bars identification of direct  $\rho$  effects ( $\gamma_1$ ))

2. Technology measure  $\phi_{jt}$  contains error, potentially correlated with time-varying error ( $\epsilon_{jt}$ )

Remedy: Instrumental variables (crop conditions, crop-specific technology  $\Delta$ )

3. Public goods distribution may affect democratization

Test: Instrumental variables (state legislation on governance)

Table 1  
Means and Standard Deviations of Economic Variables: 1982-1999

Variable/Year	1982	1991	1999
<b>Village Public Goods</b>			
<i>Pucca</i> road	.310 (.463)	.705 (.457)	.748 (.435)
Government pumps, tanks, wells	.293 (.456)	-	.346 (.476)
Public secondary school	.403 (.614)	.553 (.674)	.644 (.724)
<b>Village Characteristics</b>			
Total land area (acres)	1791 (2153)	1791 (2153)	1791 (2153)
Proportion households landless	.267 (.256)	.267 (.256)	.267 (.256)
Population size	2642 (3466)	3311 (4948)	3877 (5510)
HYV productivity index	561.9 (352.7)	-	1001.9 (500.4)

Table 2  
Fixed-Effects IV Estimates: Village Public Goods and Village Governance

Variable	<i>Pucca</i> Road			Irrigation facilities			Public School		
Elected <i>panchayat</i>	.111 (1.20)	-.151 (0.97)	-.354 (0.69)	.278 (1.90)	.762 (6.15)	.0939 (0.25)	.141 (1.82)	.121 (1.05)	.102 (0.23)
Elected <i>panchayat</i> x local $\rho$	-	.882 (2.46)	.892 (2.41)	-	-1.75 (7.03)	-1.74 (6.25)	-	.0546 (0.17)	.0443 (0.14)
Elected <i>panchayat</i> x state $\rho$	-	-	.597 (0.44)	-	-	.200 (1.58)	-	-	.0681 (0.06)
Revenue authority	- .0962 (0.52)	-.443 (2.49)	-.447 (2.47)	.406 (1.55)	.148 (0.77)	.149 (0.81)	.0555 (0.32)	-.212 (1.47)	-.208 (1.47)
Revenue authority x local landless prop.	-	2.12 (2.13)	2.08 (2.12)	-	1.77 (1.61)	1.46 (1.26)	-	1.66 (1.68)	1.63 (1.75)
Log of HYV yield	.296 (0.84)	.383 (0.94)	.392 (0.96)	.133 (0.31)	.0251 (0.05)	.0177 (0.04)	.415 (1.44)	.443 (1.36)	.430 (1.34)
Log of population size	.0728 (1.07)	.0827 (1.16)	.0828 (1.17)	.0732 (1.01)	.0685 (0.92)	.0620 (0.84)	.0572 (0.64)	.0616 (0.70)	.0597 (0.69)
N	700	700	700	480	480	480	740	740	740

## Conclusions

Evidence consistent with:

1. The poor are remarkably responsive to the changes in the returns to English.
2. Caste as a community network plays an useful role in one segment of the labor market
3. Social norms associated with lower castes are slowing the convergence across groups in the acquisition of English skills, perhaps sub-optimally
4. These caste-based social norms are affecting gender differences in schooling that would appear to reduce the gender gap in earnings - more investment in the dynamic, English-speaking sector by girls in lower/middle castes compared with boys.
5. Local democratization improves the allocation of local public resources to the poor, although role in augmenting growth unclear.
6. Institutions matter for shaping how development - perhaps induced by globalization - affects the poor.

Future work:

1. Will globalization erode the hold of castes? - inter-marriage
2. What role do castes play in a democratic regime?