

Education in a Globalizing Economy



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Objective and Research Projects

- To study how community networks shape investments in human capital in India.
 - 1) Caste networks and schooling decisions in Bombay
 - 2) Caste networks, female income, and household decisions in South Indian tea estates

Insights

- Marriage plays a very important role in keeping these networks in place.
- While networks might have served a useful role when they were first put in place, the strength of existing networks might actually be a liability when the economy is restructured.

A. Schooling in Bombay

- Economic liberalization increased the returns to English schooling in the 1990s.
- English schooling increased in this period, but differentially by caste.

Figure 3: English Schooling - net parental education effect - Boys

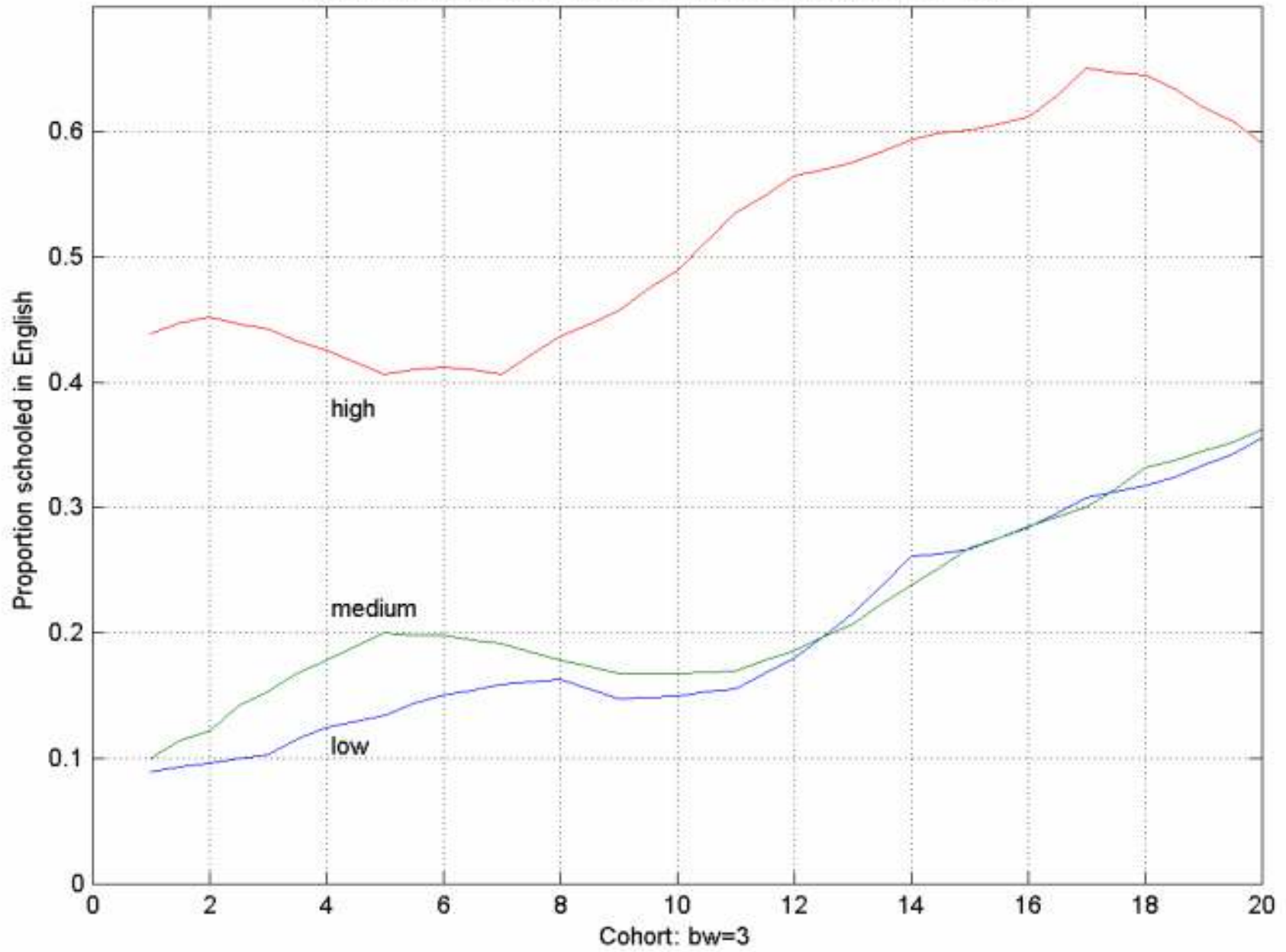
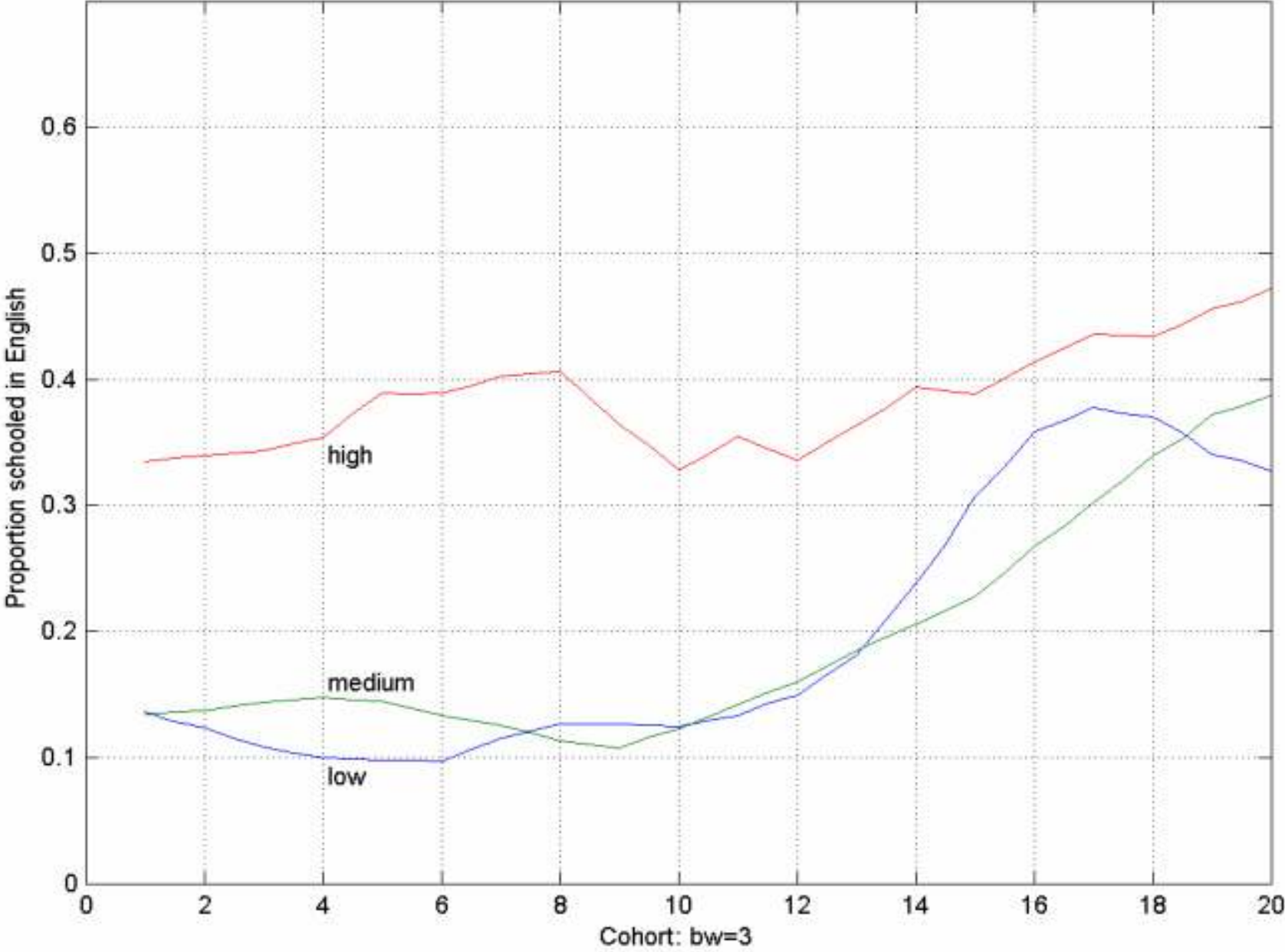


Figure 4: English Schooling - net parental education effect - Girls



- Q: Why is there no convergence for boys?
- A: Bombay's labor market was historically organized along caste lines.
 - "[Caste] clusters formed within particular trades and occupations ... [this] occupational distribution reflected neither [traditional rural] caste vocation nor the inheritance of special skills." (Chandavarkar 1994: 122,123).
- Male working class (lower caste) networks hold the lower caste boys back.

Descriptive statistics

- The occupational distribution, a product of historical circumstances, varies by caste and persists across generations, particularly among the men.
- Working class jobs are associated with
 - Higher levels of referrals (networking)
 - Lower levels of English schooling.

Occupational Choice by Caste

Relationship to student:	parent			grandparent		
Caste:	low	medium	high	low	medium	high
	(1)	(2)	(3)	(4)	(5)	(6)

Panel A: fathers and grandfathers

Employment (%)	97.37	97.31	99.06	98.87	98.86	99.28
Percent working class	53.64	42.91	18.01	56.24	49.92	19.42

Panel B: mothers and grandmothers

Employment (%)	20.56	20.91	51.23	19.31	18.59	15.57
Percent working class	44.44	31.53	9.09	75.00	51.14	7.14

Regression Results

- Study the effect of referrals in the previous generation on language of instruction for boys and girls.
- Higher referrals lower the probability of being sent to English school, but only for boys.
- Other household characteristics have the same effect for boys and girls.

Caste Networks and Schooling Choice

Dependent variable: Sample:	English schooling				
	boys only		girls only		boys and girls
	(1)	(2)	(3)	(4)	(5)
Referrals	-1.060 (0.164)	-0.377 (0.148)	-0.646 (0.160)	0.124 (0.167)	--
Referrals - boy	--	--	--	--	-0.398 (0.091)
Father studied in English	0.320 (0.037)	0.236 (0.033)	0.388 (0.037)	0.309 (0.026)	--
Mother studied in English	0.351 (0.041)	0.220 (0.028)	0.441 (0.071)	0.269 (0.045)	--
Father's years of education	--	0.023 (0.004)	--	0.020 (0.003)	--
Mother's years of education	--	0.023 (0.003)	--	0.026 (0.003)	--
Family income	--	0.005 (0.005)	--	0.009 (0.003)	--
R ²	0.173	0.274	0.146	0.272	0.163
Number of observations	2,405	2,286	2,228	2,093	4,635

B. Female Income, Caste, and Household Decisions in South India

- Now look *within* the household to understand how social affiliation shapes decisions.
- Women belonging to historically disadvantaged communities might have a disproportionately strong incentive to move their families away from traditional economy to the modern market economy when resources are made available to them.

The Setting: Tea estates in South India

- Female workers earn 15% more than male workers.
- Low and high caste households have same income and access to social services.
- These unusual patterns have been in place for multiple generations.

Caste Comparisons in Tea Estates - Parents

Gender:	men		women	
Caste:	low	high	low	high
	(1)	(2)	(3)	(4)
Panel A: Individual characteristics				
Age	41.90 (0.17)	41.92 (0.26)	38.46 (0.16)	38.34 (0.24)
Income	18.58 (0.19)	19.02 (0.28)	21.46 (0.09)	21.43 (0.13)
Schooling	5.97 (0.06)	5.56 * (0.09)	3.84 (0.07)	3.34 * (0.09)
Panel B: Marriage and retirement				
Married within <i>jati</i>	--	--	0.98 (0.003)	0.95 * (0.01)
Married to relative	--	--	0.54 (0.01)	0.64 * (0.01)
First generation worker	0.08 (0.01)	0.15 * (0.01)	0.14 (0.01)	0.26 * (0.01)
Parents retired in origin location	0.29 (0.01)	0.40 * (0.02)	0.37 (0.01)	0.47 * (0.02)
No. of observations	2,515	1,181	2,515	1,181

Caste Comparisons in Tea Estates - Children

Child's gender:	boy		girl	
Caste:	low	high	low	high
	(1)	(2)	(3)	(4)
Panel A: Marriage				
Married within <i>jati</i>	0.87 (0.02)	0.86 (0.02)	0.93 (0.01)	0.89 * (0.01)
Married relative	0.40 (0.02)	0.56 * (0.03)	0.48 (0.02)	0.57 * (0.02)
Spouse grew up in origin location	0.20 (0.02)	0.33 * (0.03)	0.26 (0.01)	0.33 * (0.02)
Panel B: Schooling				
Attended secondary school in origin	0.25 (0.01)	0.33 * (0.01)	0.22 (0.01)	0.28 * (0.01)
Years of schooling	9.47 (0.06)	9.32 (0.09)	9.36 (0.07)	8.82 * (0.09)
Panel C: Residence				
Child lives in origin location	0.28 (0.02)	0.36 * (0.03)	0.28 (0.01)	0.39 * (0.02)

Regression Results

- Controlling for total household income, an exogenous increase in female income among the low castes significantly
 - Increases child schooling
 - Lowers probability that children will be married to a relative, sent to school in the ancestral location, and ultimately end up living there.
- Female income effects, in contrast are absent among the high castes.

Marriage, Schooling and Residential Location

Dependent variable: Caste:	child married relative		secondary school to origin		years of schooling		child resides in origin	
	low	high	low	high	low	high	low	high
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: First Set of Instruments								
Female income	-0.065 (0.025)	-0.013 (0.017)	-0.033 (0.011)	-0.028 (0.021)	0.213 (0.106)	0.058 (0.091)	-0.056 (0.019)	-0.034 (0.015)
Total income	0.022 (0.010)	0.007 (0.006)	0.009 (0.006)	0.032 (0.012)	0.003 (0.028)	-0.023 (0.030)	0.011 (0.008)	0.015 (0.006)
Overid test (p-value)	0.85	0.77	0.00	0.00	0.00	0.01	0.52	0.96
No. of observations	1,235	651	4,346	2,060	3,302	1,585	1,707	819

Conclusions

- Historically disadvantaged groups, and disadvantaged individuals within those groups, might invest more in modern economy (human capital) when resources are made available to them.
 - Low caste girls move into English schools in Bombay, boys held back by networks
 - Low caste mothers invest in children's schooling in South India
- Providing economic opportunities to disadvantaged groups in globalizing economy may have big pay-offs.

