

# TRUST THY NEIGHBOUR?: EVIDENCE FROM PARTITION IN INDIA

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# Motivation



- According to UN. High Comm. For Refugees, 70.8 million displaced people by 2018 (2.3 million in 2018):
  - 26 million of them refugees
  - 41.3 internally displaced people

# Motivation



- Angry Protests within recipient areas (atleast by some sections of society)





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- "Outsiders"
  - Taste Discrimination
  - Economic Rationale



# Research Question

- In this paper we examine how inflow of migrants may affect the average trust of households living in migrant recipient societies in the long run
- Whether there is evidence that such trust levels *causally affect* economic prosperity and economic decisions of households

# Findings

- One standard deviation Increase in *Prop of Displaced Pop* (4.15 %) reduces *Index of Social Cohesion and Trust* by 10 %
- One standard deviation increase (decrease) in *Index of Social Cohesion and Trust*
  - Increases (reduces) *Per capita Income* and *per capita consumption* of Households by around 29%
  - Increases (reduces) the *probability to run business* by 16%
  - Increases business earnings business households

# Literature: Social Capital

- Social capital influences economic outcomes
  - Knack and Keefer (1997): GDP
  - La Porta et al (1997): Large Organizations
  - Guiso, Sapienza and Zingales (2009): Bilateral trade, FDI and portfolio investments in the European region countries.
  - Tabellini (2008): Output per capita
  - Algan and Cahuc (2010): Inherited Trust and Growth
  - Putnam (1993): Public Goods

*We focus on the impact on Individual Household outcomes*

# Literature: Forced Displacement

- Partition: Bharadwaj, Khwaja and Mian (2015)  
refugee flows due to Partition of India (1947) altered literacy, occupational structure and gender ratio in affected areas.
- Bharadwaj and Mirza (forthcoming): places inhabited by refugees after the Partition of India (1947) have done better in terms of agricultural yields and embraced high-yield variety of seeds as well improved technology in agri. Production: *Largely based on Punjab due to Green Revolution*



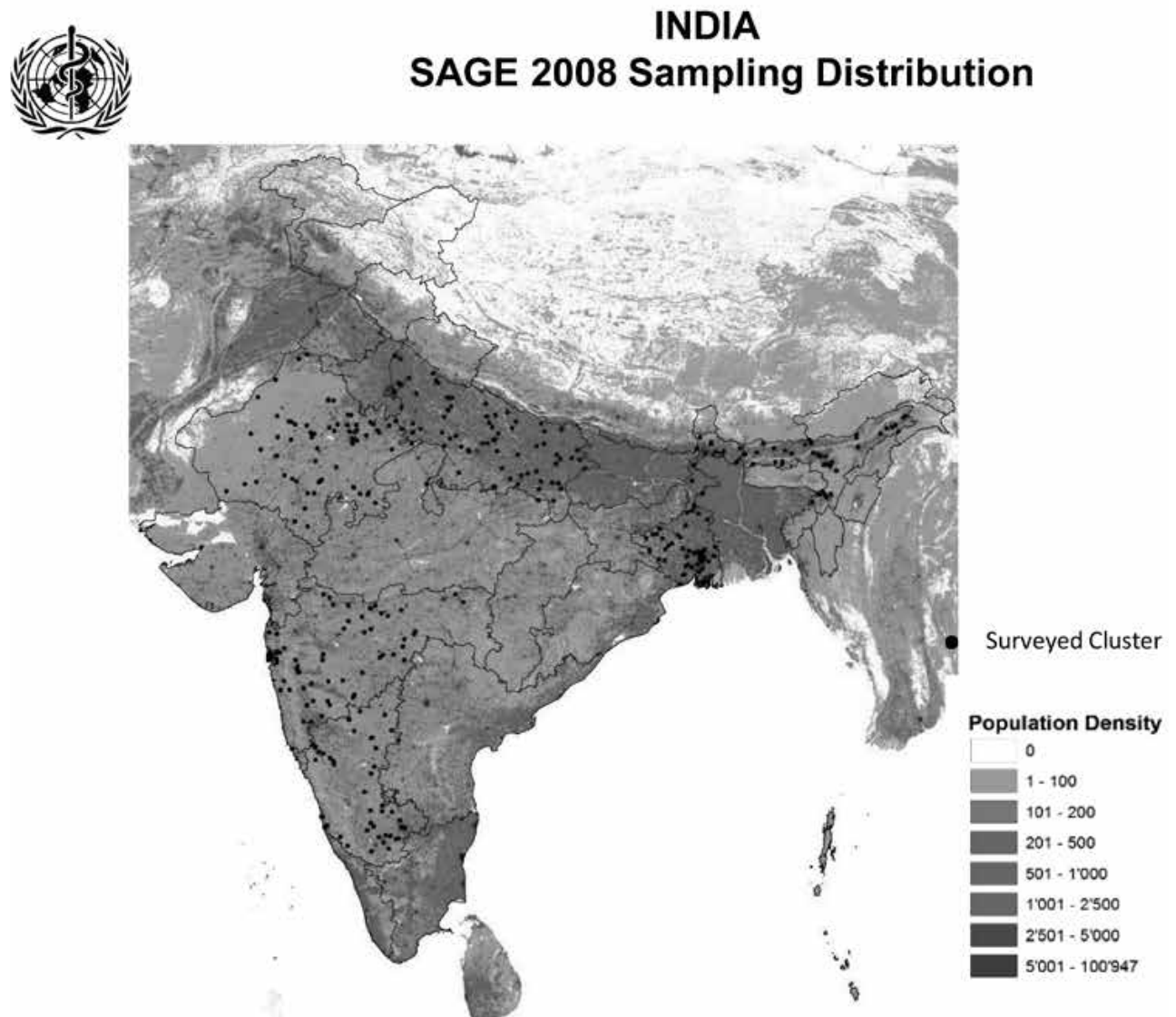
# Literature: Forced Displacement

- Kondylis (2010): displacement due to Bosnia and Herzegovina War (1992-1995) influenced unemployment in the affected communities.
- Tur-Prats and Caicedo (2019): Spanish Civil War (1936-1939) had a persistently long-run negative impact on generalized trust

*Our Paper is closest to the last one, but we also explore it's consequences on economic welfare of households*

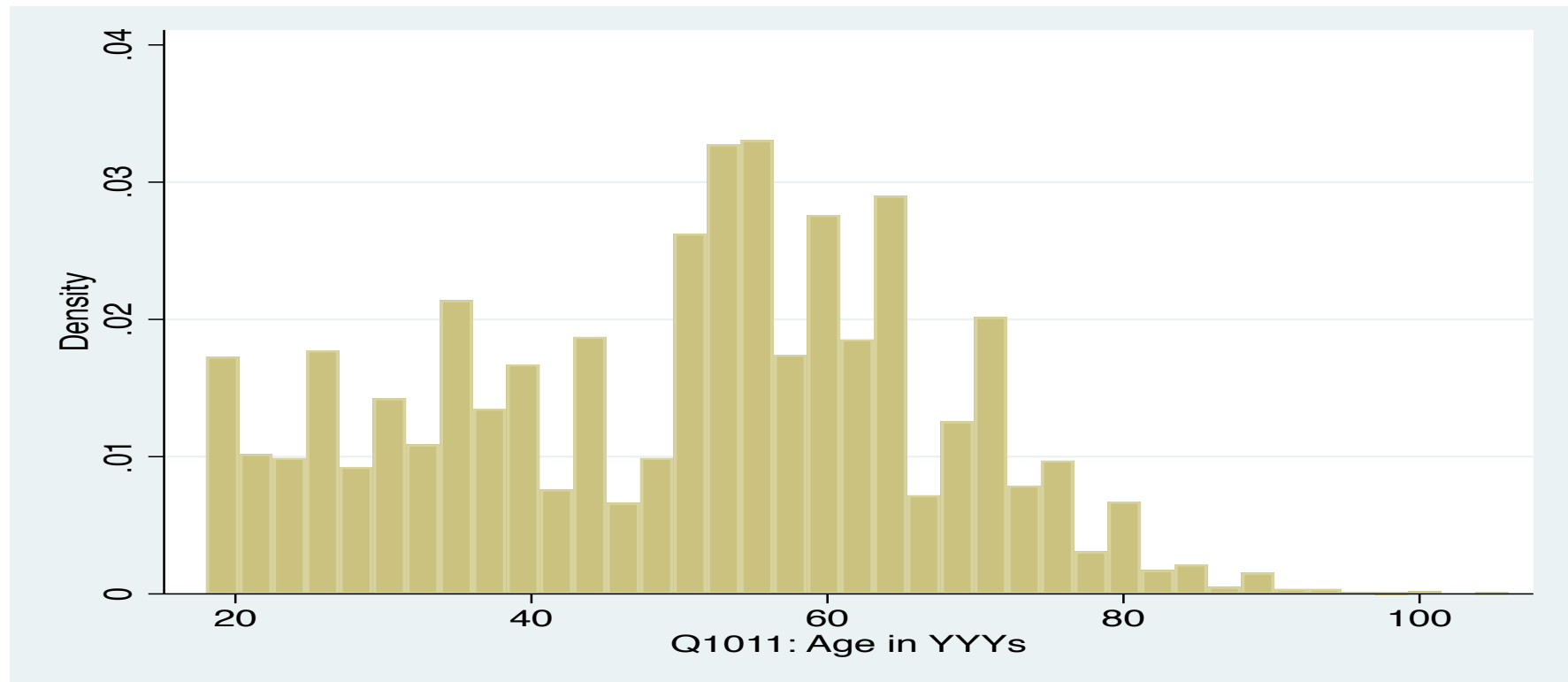
- World Health Survey/ SAGE: *Self declared Trust and Community Engagement: 2007*
  - 9027 Individual for whom all data is available
  - 6 States of India- 121 districts in 2007
  - These map to 105 1951-vintage districts of these states:  
Enough number of Clusters as the treatment will be clustered at this level

**Figure 2.1** Geographic distribution of PSUs across the SAGE Wave 1 India sample



# Data

- Over-samples older people, it has fair share of older people, which is good for our analysis.



# Trust-Cohesion Variable

## Section 6000: Social Cohesion

Time Begin  :

We would like to shift away from questions about your direct health. This section of the survey asks your opinions about other areas and issues in your life. The following questions are to get your opinions about community, social and political aspects in your life.

We'd like to know about some of your involvement in your community. For all of these, I want you just give me your best guess.

	How often in the last 12 months have you ...	NEVER	ONCE OR TWICE PER YEAR	ONCE OR TWICE PER MONTH	ONCE OR TWICE PER WEEK	DAILY
Q6001	... attended any public meeting in which there was discussion of local or school affairs?	1	2	3	4	5
Q6002	... met personally with someone you consider to be a community leader?	1	2	3	4	5
Q6003	...attended any group, club, society, union or organizational meeting?	1	2	3	4	5
Q6004	... worked with other people in your neighborhood to fix or improve something?	1	2	3	4	5
Q6005	... had friends over to your home?	1	2	3	4	5
Q6006	... been in the home of someone who lives in a different neighbourhood than you do or had them in your home?	1	2	3	4	5
Q6007	... socialized with coworkers outside of work?	1	2	3	4	5
Q6008	... attended religious services (not including weddings and funerals)?	1	2	3	4	5
Q6009	... gotten out of the house/your dwelling to attend social meetings, activities, programs or events or to visit friends or relatives?	1	2	3	4	5



# Trust-Cohesion Variable

- Take each question and convert into a dummy: = 1 if it takes 3 and above (So more than one or twice a month), zero otherwise

# Trust-Cohesion Variable

Next, we'd like to know how much you trust different groups of people.

		To a very great extent	To a great extent	Neither great nor small extent	To a small extent	To a very small extent
Q6014	First, think about people in your neighbourhood. Generally speaking, would you say that you can trust them...?	1	2	3	4	5
Q6015	Now, think about people whom you work with. Generally speaking, would you say that you can trust them ...?	1	2	3	4	5
Q6016	And how about strangers? Generally speaking, would you say that you can trust them ...?	1	2	3	4	5

- Dummy variable that takes the value 1 if responses takes 1 or 2

# Trust Cohesion Variable

- Add all the variables together (Multiple Indicator Index)
  - Results are true for each of the variables separately

# Partition

- We use the plausibly exogenous part of the variation in migration during India's partition
  - Look at **proportion of Partition displaced people among the population in districts of India in 1951**
  - This proportion is not random. We model predictors of this proportion using census data from 1931 and other geographical variables and show that we can explain 61 % of the variation
  - *We include the list of these variables in our regression*

# Partition

- Partition is a big event

May have led to changes in atleast 3 important things

- Confounding impact of Pop Growth (control for Total population 2001)
- Confounding impact of Urbanisation (control for Fraction of population urban 2001)
- Confounding impact of changes in Proportion of Muslims in each district (Muslim Proportion 2001)



# Partition

- In addition sudden changes at time of independence may have it's own dynamics
  - Sudden change in urbanization post independence: control for Share of 1951 population that is urban
  - Led to an increase in education as more literate people came across the border: control for 1951 literacy rate
  - Change in religious composition: control for share of muslims in 1951
  - Also control for prop of other migrants in 1951. Partition caused movement of population in general. So it is important to take that into account

# Exogeneity

- Our assumption is that the variation in the Proportion of displaced people conditional on all these variables is *exogenous and measures the exposure to "outsiders" in 1951 (and perhaps subsequently)*
- Accounts of Partition history (Kurdasiyan) point out that a one of the things that dictated migration was whether one had existing networks in places of destination
  - Will mean we provide an under-estimate of the effect on trust and social cohesion

# Interesting Feature of Our dataset

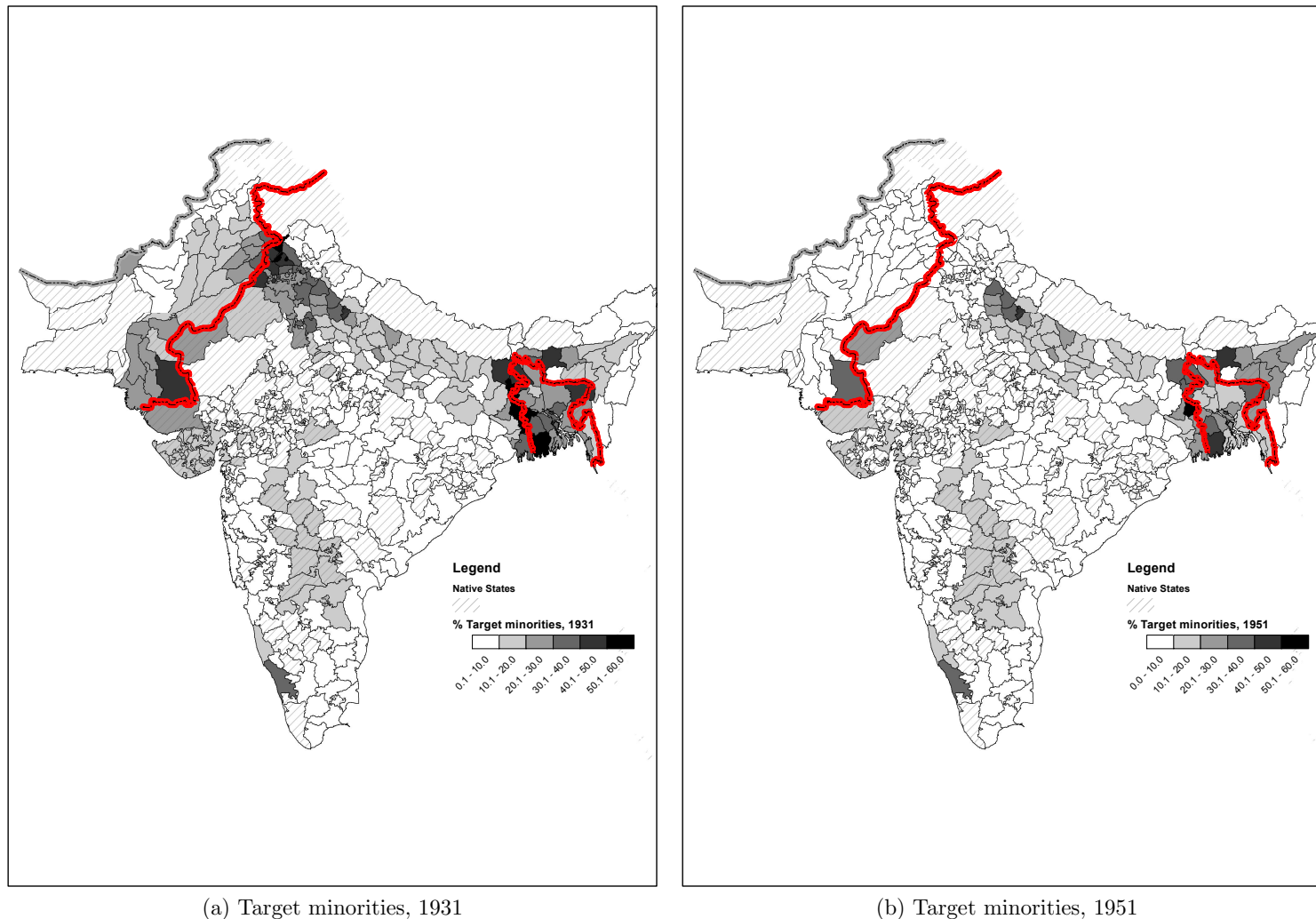
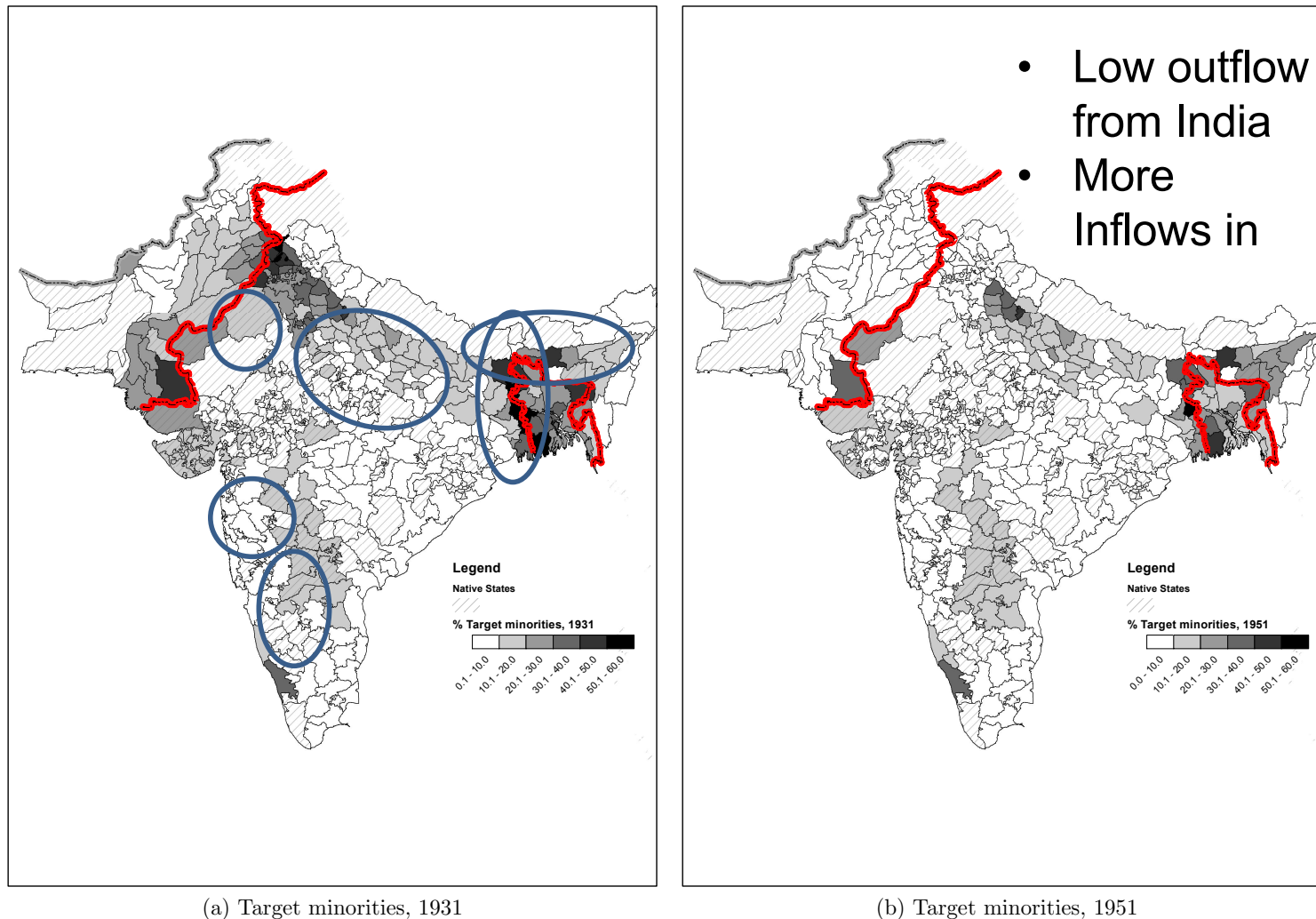


Figure 1: **Partition and the Religious Homogenization of the Indian subcontinent, 1931-1951**

source: 1931, 1951 censuses of India and Pakistan and Bharadwaj et al. (2008a). Target minorities include Hindus and Sikhs in independent Pakistan and Bangladesh, and Muslims in independent India.

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Jha & Wilkinson, APSR

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# Partition

- The areas we are looking at have more of the flavor of what happens in actual one way refugee movements than the more studied (in economics) partition events on the west (Undivided Punjab) which was an exchange of population



# Proportion of Pop that is Displaced

District Level (1951)	Prop.: Dist. Pop 1951 Displaced			
	Mean	St. Dev.	Min	Max
<i>ALL</i>	2.13	4.80	0.00	37.29
ASSAM	3.10	2.52	0.62	8.35
KARNATAKA	0.05	0.15	0.00	0.57
MAHARASHTRA	0.76	1.54	0.01	6.79
RAJASTHAN	2.54	4.12	0.03	15.78
UTTAR PRADESH	0.67	1.09	0.02	4.85
WEST BENGAL	8.79	9.81	0.09	37.29

# Other data sets

- SECC village data
  - To examine village level heterogeneity
- ICRISAT: Soil type data at the district level
- GIS data on geography
- District mappings between 1931, 1951 (Prashant Bharadwaj). Rest by authors

# Prop of Pop. Displaced 1951: OLS

Not Fertile Soil Type	-6.586*	Latitude	0.151
	(3.452)		(0.744)
Prop. Lit 1931	-25.16	Longitude	0.271
	(33.05)		(0.653)
English Literate 1931	74.33	Average River Length	0.0552
	(84.25)		(0.148)
Prop. Muslim 1931	20.67**	Coastal District	-0.0903
	(8.476)		(2.331)
Prop. Brahman 1931	21.98	Distance to Big City	-0.000200
	(14.71)		(0.00491)
Prop. Urban 1931	2.307	Elevation	-0.00270
	(8.537)		(0.00254)
Dummy: Princely State	-2.335	Constant	-34.52
	(2.261)		(41.75)
Distance to Border:west	0.00150	State Fixed Eff	Yes
	(0.00791)	Observations	105
Distance to Border:east	0.0114	R-squared	0.611
	(0.00776)		

Rob. Std. err. in parentheses

# Empirical Model

$$SocCoh_{ihds} = \alpha_s + \theta PropDisp_{ds} + \beta_1 Ind_{ihds} + \beta_2 HH_{hds} + \beta_3 Geog_{ds} \\ + \beta_4 Curr_{ds} + \beta_5 Hist_{ds} + \varepsilon_{ihds}$$

- Ind: Gender, Age, Years of Education, Marital Status
- HH: Permanent Status, SC, ST, Hindu, HH size, Average edu level (-i), Average Age of HH, Per capita Value of Land Holding

# Empirical Model

$$SocCoh_{ihds} = \alpha_s + \theta PropDisp_{ds} + \beta_1 Ind_{ihds} + \beta_2 HH_{hds} + \beta_3 Geog_{ds} \\ + \beta_4 Curr_{ds} + \beta_5 Hist_{ds} + \varepsilon_{ihds}$$

- Geog: All the variables in the previous regression, Dummy for Rural
- Curr: Prop of Muslims 2001, Pop:2001, Prop of Urbanisation:2001



# Empirical Model

$$SocCoh_{ihds} = \alpha_s + \theta PropDisp_{ds} + \beta_1 Ind_{ihds} + \beta_2 HH_{hds} + \beta_3 Geog_{ds} \\ + \beta_4 Curr_{ds} + \beta_5 Hist_{ds} + \varepsilon_{ihds}$$

- Hist
  - 1931: Dummy princely, Engl Literacy, Muslim Share, Brahmin Share
  - 1951: Urbanisation 1951, Literacy 1951, Muslim Prop 1951, Prop of Pop who are migrants (not cross border), Gender Ratio:1951
- Standard errors clustered by 1951 districts

# Result 1

Dep: Var: Index of Social Cohesion	No Controls	Geog. History State FE	Current	Indiv/HH
Prop.: Dist. Pop 1951 Displaced	-0.07*** (0.0254)	-0.06*** (0.0152)	-0.08*** (0.0176)	-0.08*** (0.0176)

# Main Result

Dep: Var: Index of Social Cohesion	No Controls	Geog. History State FE	Current	Indiv/HH
Prop.: Dist. Pop 1951 Displaced	-0.07*** (0.0254)	-0.06*** (0.0152)	-0.08*** (0.0176)	-0.08*** (0.0176)

- Mean of Index of Social Cohesion: **3.8**
- One standard Deviation Increase in Prop of Pop Displaced (4.15 %) reduces Index of Social Cohesion by **10 %**
- Other Sign Coeff include 1951 Migration (-), Gender(+), Education (+), Land(+), Age (-), Prop of Muslims 1951 (+), Distance to Border (+)

# Urban-Rural

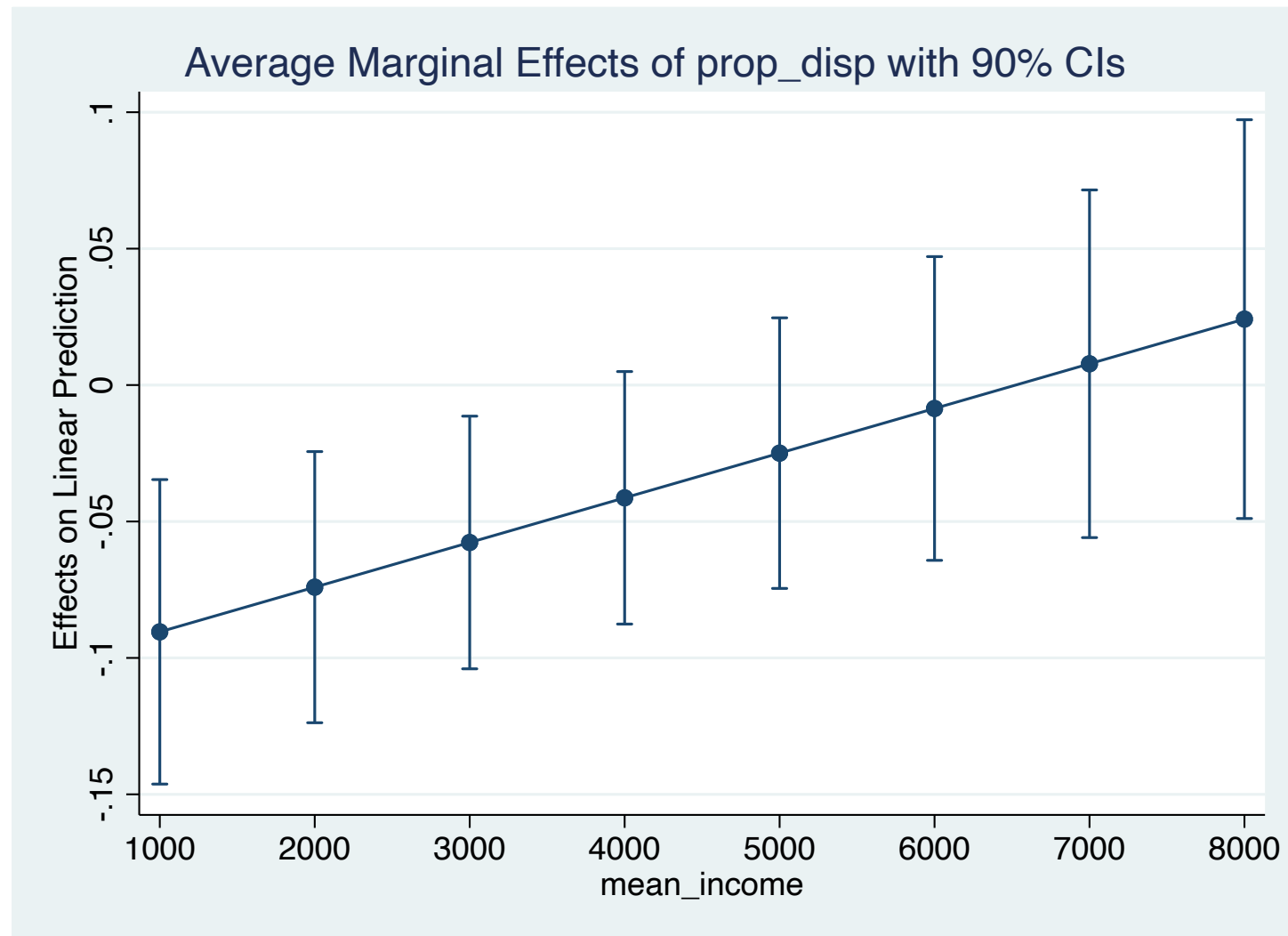
VARIABLES	Urban	Rural	Rural
Prop.: Dist. Pop 1951 Displaced	-0.198*** (0.0687)	-0.0681*** (0.0171)	-0.0412* (0.0209)
Constant	-25.37 (18.70)	-16.51*** (4.990)	-15.19*** (5.721)
SECC Controls	NO	NO	YES
ALL OTHER CONTROLS	YES	YES	YES
Observations	2,004	7,129	5,918
R-squared	0.242	0.206	0.230

Robust Clustered standard errors in parentheses

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

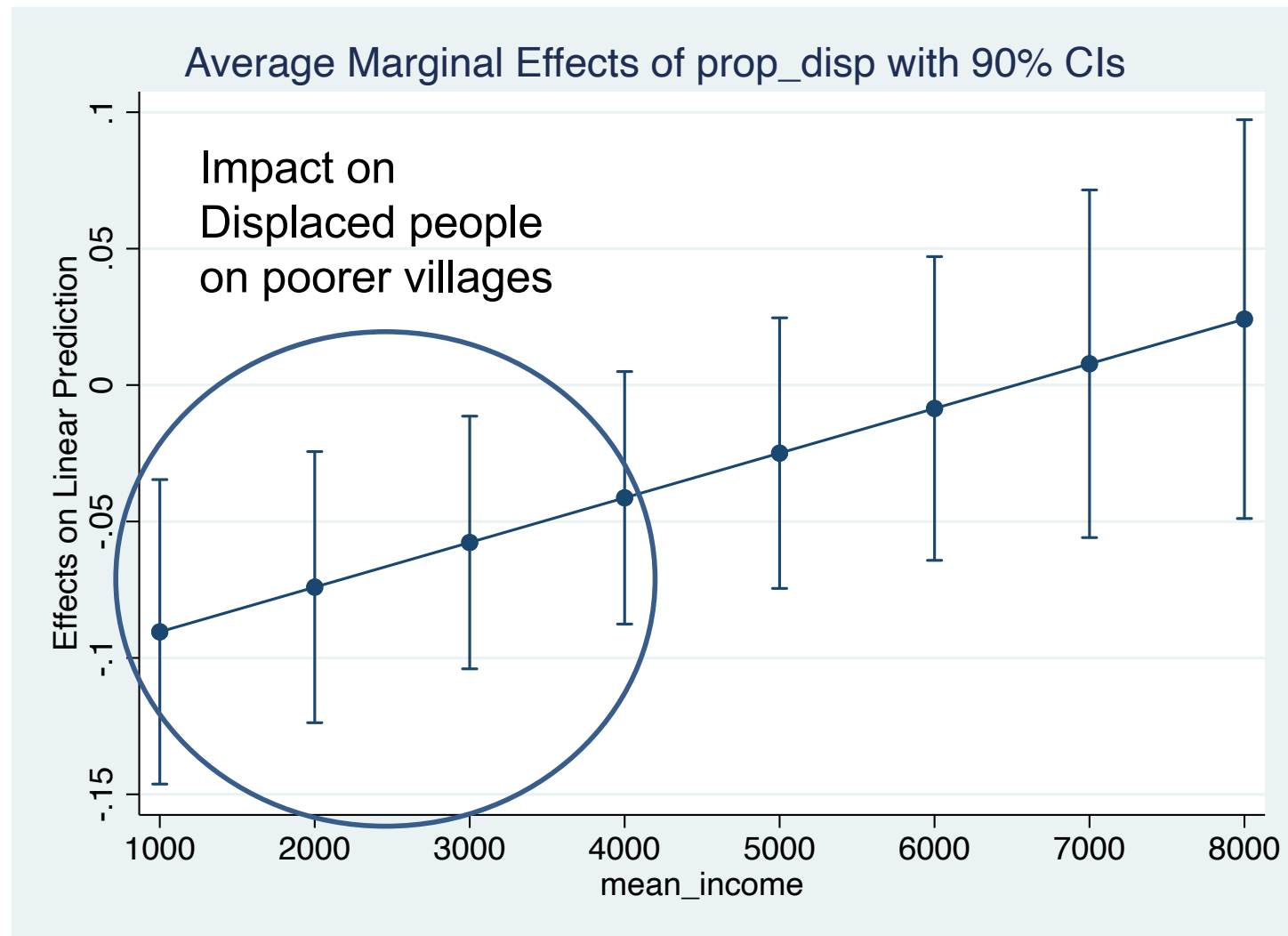
- SECC Controls: mean income of village, Prop of Pop 55+, Prop of Casual lab, Prop of Non Agr HHs, Illiteracy Rate, Average land holding of unirrigated land

# Interaction with Mean p.c. Village Income



Mean Income of per capita Village Income: 4000 with sd of 1200

# Interaction with Mean p.c. Village Income

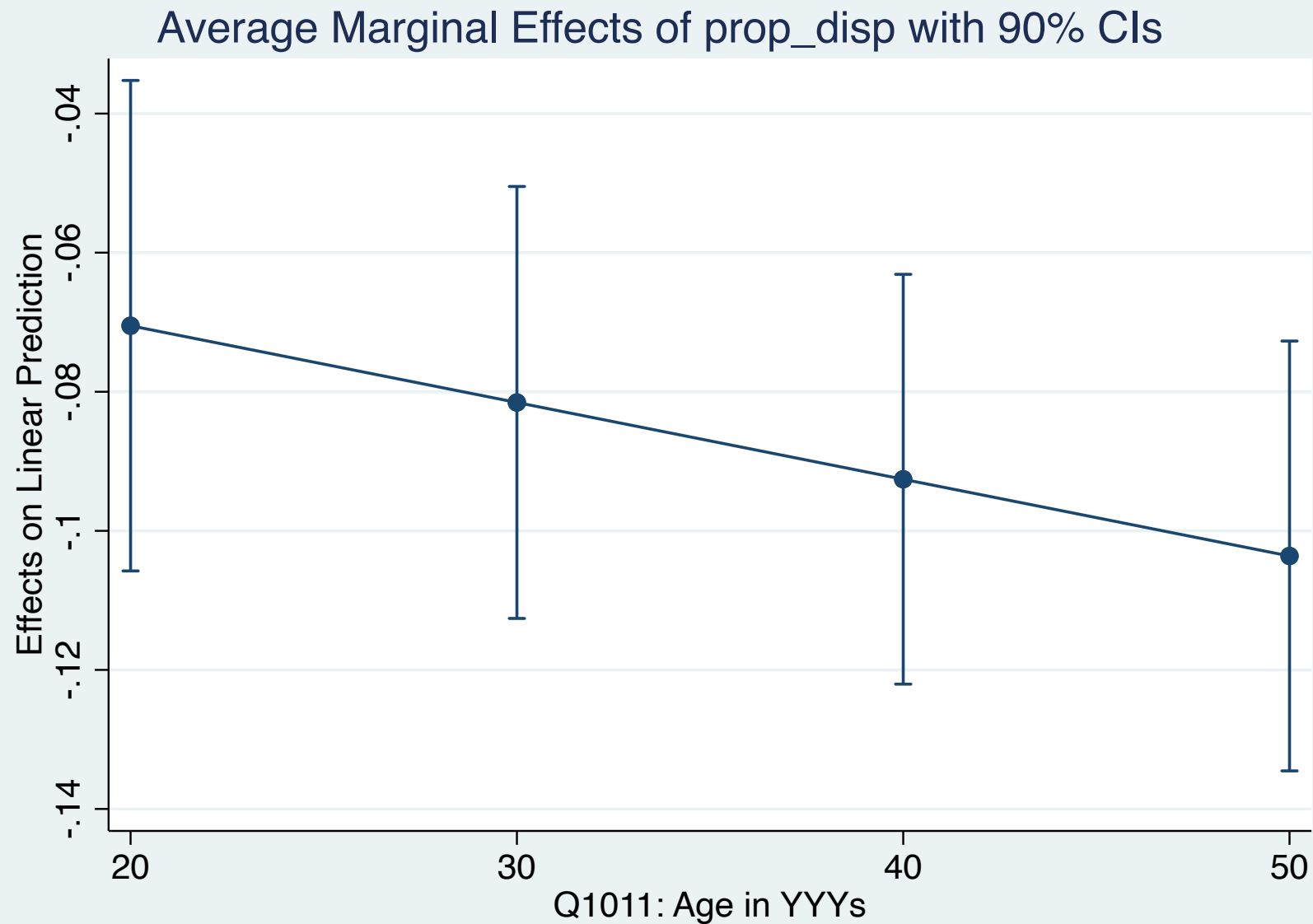


Mean Income of per capita Village Income: 4000 with sd of 1200

# Other Results

- No differential effects for male and females
- No different effect for those whose mother tongue is same as that of the dominant mother tongue

# Age Effects:





# Empirical Model 2

$$\begin{aligned} \text{Log}Y_{ihds} = & \alpha_s + \delta \text{SocCoh}_{ihds} + \mu_1 \text{Ind}_{ihds} + \mu_2 \text{HH}_{hds} + \mu_3 \text{Geog}_{ds} \\ & + \mu_4 \text{Curr}_{ds} + \mu_5 \text{Hist}_{ds} + \zeta_{ihds} \end{aligned}$$

Soc cohesion and Trust may be endogenous

# Empirical Model 2

$$\text{Log}Y_{ihds} = \alpha_s + \delta \text{SocCoh}_{ihds} + \mu_1 \text{Ind}_{ihds} + \mu_2 \text{HH}_{hds} + \mu_3 \text{Geog}_{ds} \\ + \mu_4 \text{Curr}_{ds} + \mu_5 \text{Hist}_{ds} + \zeta_{ihds}$$

- Identifying assumption is that conditional on all the covariates, Prop of Displaced Persons 1951 is an instrument for Soc Cohesion
  - First Stage has already been motivated (instrument is strong)
  - Exclusion? : Apart from the large number of controls already in the equation, more arguments in the robustness

# Impact of Soc Coh on Welfare

VARIABLES	Log Exp p.c. OLS	Log Income p. c. OLS	Log Exp p.c. IV-2SLS	Log Income p. c. IV-2SLS
Index of Social Cohesion	0.0129*** (0.00376)	0.0158*** (0.00552)	0.112*** (0.0425)	0.142* (0.0732)
All Contols	YES	YES	YES	YES
Observations	9,027	9,027	9,027	9,027

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## *First Stage*

Prop of Disp	0.084*** (0.013)	0.084*** (0.013)
F Stat	41.26	41.26

Robust standard errors in parentheses

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

# Impact on Occupation Structure: 21-60

Dep Variable: Occupation VARIABLES	Business IV-2SLS	Formal Salaried Job IV-2 SLS
Index of Social Cohesion	0.0650** (0.0327)	-0.03 (0.03)
All Controls	Yes	Yes
Observations	6,180	6180
First Stage		
Prop of Disp	-0.086*** (0.018)	-0.086*** (0.018)
F Stat	21.2	21.2

Robustclustered standard errors in parentheses

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

# Business Income

**Dep Variable: Log (1+ Trade Earning)**

**Among Those who Trade**

VARIABLES

IV- 2SLS

IV - 2SLS

Mean HH Soc Coh

0.742

0.379\*\*

(0.567)

(0.165)

Observations

5,847

2,265

First Stage

Prop. Disp.

-0.08

-0.09\*\*\*

(0.19)

(0.02)

F Stat

17.62

14.79

Robust clustered standard errors in parentheses

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

# Robustness

- Are people reporting lesser social cohesion generally negative people?
  - With bad reported interpersonal skills?
  - With bad reported subjective well being?
  - Worse reported quality of life

# Robustness- Exclusion

VARIABLES	Negative Interpersonal Skills	Postive Subjective well being	Quality Of Life
Prop. Disp.	-0.0148 (0.0133)	-0.0149 (0.0115)	-0.00175 (0.00368)
All Controls	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Observations	9,133	9,133	9,133
R-squared	0.109	0.205	0.145

Robust clustered standard errors in parentheses

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

# Robustness- Exclusion

- Perhaps lack of social interaction and trust is because places with higher proportion of displaced people are perceived to be unsafe

VARIABLES	Unsafe Alone	Unsafe On the street	Victim of a crime
Prop Disp.	-0.00346 (0.00356)	0.000793 (0.00306)	-0.000222 (0.000820)
All Controls	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Observations	9,133	9,133	9,133
R-squared	0.053	0.113	0.010

Robust clustered standard errors in parentheses

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



# Robustness- Exclusion

- Perhaps social cohesion and trust is confounded by lack of or greater political voice of people in districts with higher proportion of displaced people

VARIABLES	Interest in Politics	Person Voted	Say in Govt	Free Expression without fear
Prop. Disp.	0.00124 (0.00448)	0.00195 (0.00203)	-0.000652 (0.00437)	0.00434 (0.00486)
All Controls	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes
Observations	9,133	9,133	9,133	9,133
R-squared	0.080	0.100	0.152	0.166
Robust standard errors in parentheses				

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

# Robustness: Public Goods: Rural India

VARIABLES	Access to Public Goods (Village Level)	
	OLS	OLS
Prop Disp	-0.0114 (0.0216)	-0.0165 (0.0255)
Ind & HH Contols	Yes	No
Village Controls	Yes	Yes
State Fixed Effects	Yes	Yes
Observations	5,799	204
R-squared	0.666	0.657

Robust clustered standard errors in parentheses

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

# Conclusion

- Positive Social Cohesion and Trust leads to higher welfare. May work through higher business and trade activities, which need higher degree of interaction and trust in others
- Outsiders may lower such trust even in the long run and lead to lower economic welfare
- While this is not a reason not to let in outsiders due to humanitarian crises, its costs need to be understood and appreciated as well.

# Steps ahead

- Do this with block level data
- Field Experiments to complement these results