

**Economics 270c**  
Graduate Development Economics

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Graduate Development Economics

Lecture 5 – February 17, 2009

## Macroeconomic growth empirics

Lecture 1: Global patterns of economic growth and development (1/20)

Lecture 2: Inequality and growth (1/27)

## The political economy of development

Lecture 3: History and institutions (2/3)

Lecture 4: Corruption (2/10)

Lecture 5: Patronage politics (2/17)

Lecture 6: Democracy and development (2/24)

↕ Lecture 7: War and Economic Development (3/3)

↕ Lecture 8: Economic Theories of Conflict (3/10) – Guest lecture by Gerard Padro

## Human resources

Lecture 9: Human capital and income growth (3/17)

Lecture 10: Increasing human capital (3/31)

Lecture 11: Labor markets and migration (4/7)

Lecture 12: Health and nutrition (4/14)

Lecture 13: The demand for health (4/21)

## Other topics

Lecture 14: Environment and development (4/28)

Lecture 15: Resource allocation and firm productivity (5/5)

## Additional topics for the development economics field exam

-- Ethnic and social divisions

-- The Economics of HIV/AIDS

- Prerequisites: Graduate microeconomics, econometrics
- Grading:
  - Four referee reports – 40%
  - Second referee report due today
  - Third referee report due in two weeks, Mar. 3, 2009

Two problem sets – 20%

Research proposal – 30%

Class participation – 10%

No final exam

- All readings are available online (see syllabus)
- Additional references on syllabus



# Lecture 5 outline

- (1) Patronage politics in less developed countries
- (2) Politically connected firms in Pakistan, Khwaja and Mian (2005)
- (3) The political benefits of a government social program in Uruguay, Manacorda, Miguel and Vigorito (2009)
- (4) The price of political opposition in Chavez's Venezuela, Hsieh et al (2008)

# (1) Patronage politics and development

- Political patronage: disbursing favors (i.e., public office, jobs, contracts, subsidies in return for some valued service – such as voting for the patron's party or labor for his electoral campaign
- Patron-client relationships are thought to be central to party politics in many Latin American, Asian and African democracies / pseudo-democracies
  - Often organized along ethnic, religious, class lines
- Party patronage networks can be mobilized into militias (e.g., Rwanda, Kenya, India, Venezuela)

# (1) Patronage politics and development

- What strategies do political leaders / parties use to gain political support?
  - Whom do they target for favors, and why?
- How do individuals / voters respond to these favors?
  - Heterogeneous responsiveness?



## (2) Khwaja and Mian (2006, *QJE*)

- Related to Fisman (2001): do firms with “political ties” get more loans and / or less strict enforcement of loans in Pakistan during 1996-2002?
- How do political conditions, and in particular political accountability, affect these patterns?

## (2) Khwaja and Mian (2006, *QJE*)

- A case study of the banking sector in Pakistan. Top government bank officials are political appointees, but not so for private banks

## (2) Khwaja and Mian (2006, *QJE*)

- A case study of the banking sector in Pakistan. Top government bank officials are political appointees, but not so for private banks
  - 1992: Government banks 92% of all lending
  - 1996-2002: 64% of all lending

## (2) Khwaja and Mian (2006, *QJE*)

- As part of the banking reforms in the mid-1990s, a centralized credit information bureau was developed and this forms the basis for their dataset
- They have the universe of all bank loans in Pakistan (!), 93,316 firms, 112,685 loan pairs, over 25 quarters
- Data on 68 private banks, 23 government banks
- Unique and phenomenal dataset

## (2) Khwaja and Mian (2006, *QJE*)

- They also obtained a database of all candidates in national and state elections in the 1990s, and matched up the names to the directors of private firms. These firms are “politically connected”
  - Likely attenuation bias towards zero: shared names, mismatches / typos, “connected” non-politicians missed

## (2) Khwaja and Mian (2006, *QJE*)

- What is the institutional set up of the banks, and their links to politicians?

These results offer a particular mechanism of political rent seeking consistent with the institutional environment of Pakistan's banking and political system. Politically powerful firms obtain rents from government banks by exercising their political influence on bank employees. The more powerful and successful a politician is, the greater is his ability to influence government banks. This influence stems from the organizational design of government banks that enables politicians to threaten bank officers with transfers and removals, or reward them with appointments and promotions. Government banks survive such high levels of corruption because of the soft-budget constraints that often characterize state institutions [Kornai 1979, 1986].

TABLE I  
SUMMARY STATISTICS

Panel A: Loan-level variables					
Variable	Mean	S.D.	Obs.		
<i>Loan Size</i> ('000s of 1995 Pak Rs.)	6,669	89,298	112,685		
<i>Default Rate (%)</i> :					
Unweighted	16.85	30.22	112,685		
<i>Default Rate (%)</i> : Loan size weighted	17.61	31.06	112,685		
<i>Recovery Rate (%)</i> :					
(conditional on default)	8.55	24.50	24,562		
<i>Rate of Return (%)</i>	93.46	35.70	89,223		
<i>Interest Rate (%)</i>	14.05	2.90	89,223		
<i>Loan Type</i>	<i>Fixed</i>	<i>Working Capital</i>	<i>Letter of Credit</i>	<i>Guarantees</i>	<i>Other</i>
Percent of total lending	32%	49%	7%	7%	5%
Panel B: Borrower/firm attributes					
<i>Politically Connected</i>	<i>No</i>	<i>Yes</i>			
Percent of total firms	77%	23%			
Percent of total lending					
(of total loans)	63% (74%)	37% (26%)			
<i>Size (percentile)</i>	<i>0-50</i>	<i>50-75</i>	<i>75-95</i>	<i>95-99</i>	<i>99-100</i>
Percent of total lending					
(of total loans)	6% (42%)	3% (21%)	13% (23%)	23% (9%)	55% (5%)
<i>Location (City Size)</i>	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Unclassified</i>	
Percent of total lending					
(of total loans)	8% (17%)	12% (15%)	74% (52%)	6% (16%)	

The basic empirical specification employed to test for political preference uses the cross-sectionalized data. For firm  $i$  borrowing from bank  $j$ , we use OLS to estimate

$$(2) \quad Y_{ij} = \alpha_j + \beta_1 \cdot \textit{Political}_i + \gamma_1 \cdot \mathbf{X}_i + \gamma_2 \cdot \mathbf{X}_{ij} + \varepsilon_{ij},$$

where  $Y_{ij}$  is one of the measures of preferential treatment mentioned above, and  $\textit{Political}_i$  is an indicator variable for whether a firm is politically connected.  $\mathbf{X}_i$  are firm level controls such as firm location, industry, and size,  $\mathbf{X}_{ij}$  is a loan type (working capital, fixed investment) control, and  $\alpha_j$  is a bank fixed effect. The controls  $\mathbf{X}_i$ , and  $\mathbf{X}_{ij}$  are introduced nonparametrically: we include fixed effects for firm size (5 categories), the number of creditors the firm has (8 categories from 1 to greater than 7), a firm's group size (3 categories), city (134 cities) and industry (21 categories), and the loan type (5 categories). This results in a total of 268 dummy variables (including the 91 bank dummies).  $\beta_1$  in (2) is our coefficient of interest that captures the preferential treatment a politically connected firm receives, and henceforth will be referred to as the “political preference” effect.



We use the following specification to test whether the *same* firm receives (greater) preferential treatment if it is politically connected when it borrows from a government compared with a private bank:

$$(3) \quad Y_{ij} = \alpha_i + \alpha_j + \beta_1 \cdot \textit{Political}_i * \textit{GOV}_j \\ + \gamma_1 \cdot \mathbf{X}_{ij} + \gamma_2 \cdot \mathbf{X}_{ij} * \textit{GOV}_j + \varepsilon_{ij},$$

where in addition to the variables in (2),  $\alpha_i$  is a firm fixed effect and  $\textit{GOV}_j$  is an indicator variable for whether the lender is a government bank or not. Our coefficient of interest,  $\beta_1$ , is the “differences-in-differences” estimate of political preference.  $\beta_1$  captures the extent to which a politically connected firm receives preferential lending from a government bank as compared with a

TABLE III  
ARE POLITICALLY CONNECTED FIRMS GIVEN PREFERENTIAL TREATMENT?

Dependent variable	Log loan size (1)	Rate of return (2)	Default rate (3)	Recovery rate (4)	Interest rate (5)
Politically connected	0.37 (0.08)	-6.08 (2.46)	6.22 (1.98)	-1.09 (1.14)	0.09 (0.05)
Controls	YES	YES	YES	YES	YES
$R^2$	0.26	0.28	0.29	0.24	0.43
No. of Obs.	112,685	89,223	112,685	24,562	89,223

Base default among unconnected firms is 14.8% → 6.2 is an increase of 42%

TABLE IV  
ARE POLITICALLY CONNECTED FIRMS FAVORED BY GOVERNMENT BANKS ONLY?  
DEFAULT RATE

	Default rate (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
	Government banks only		Private banks only		All banks	Firms borrowing from both government and private banks
Politically connected	10.92 (4.12)	9.13 (1.92)	-0.02 (0.27)	-0.78 (0.26)	-0.78 (0.26)	—
Politically connected * government bank					9.91 (1.90)	1.4 (1.04)
Constant	19.87 (2.60)	—	6.05 (2.03)	—	—	—
Controls	NO	YES	NO	YES	YES <sup>a</sup>	Firm fixed effects <sup>b</sup>
$R^2$	0.02	0.3	0.004	0.15	0.33	0.78
No. of Obs.	61,897	61,897	50,788	50,788	112,685	18,819

TABLE V  
ARE POLITICAL FIRMS FAVORED BY GOVERNMENT BANKS ONLY?  
ACCESS TO CREDIT

Dependent variable	Log loan size		
	(1)	(2)	(3)
	Data restricted to firms that borrow from both government and private banks		
Government bank	0.07 (0.03)	-1.19 (0.14)	-0.2 (0.03)
Politically connected * government bank	0.29 (0.05)	-0.21 (0.22)	0.13 (0.05)
Government bank * log firm size		0.14 (0.02)	
Politically connected * government bank * log firm size		0.041 (0.03)	
Government bank * firm default rate			1.9 (0.11)
Politically connected * government bank * firm default rate			0.56 (0.17)
Firm fixed effect	YES	YES	YES
$R^2$	0.81	0.81	0.83
No. of obs.	10,880	10,880	10,880

TABLE VI  
TESTING FOR POLITICAL STRENGTH AND PARTICIPATION

Dependent variable	Log loan size				
	(1)	(2)	(3)	(4)	(5)
	Data restricted to firms that borrow from both government and private banks				
Government bank	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)
Politically connected * government bank	0.25 (0.06)	0.26 (0.05)	0.25 (0.05)	0.23 (0.05)	0.67 (0.20)
Politically connected * government bank * percentage votes	0.69 (0.47)				
Politically connected * government bank * win		0.63 (0.32)			
Politically connected * government bank * victory margin			0.53 (0.29)		
Politically connected * government bank * winparty				0.29 (0.13)	
Politically connected * government bank * electoral participation					-1.04 (0.53)
Firm fixed effect	YES	YES	YES	YES	YES
$R^2$	0.81	0.81	0.81	0.81	0.81
No. of Obs.	10,880	10,880	10,880	10,880	10,880

TABLE VII  
TIME SERIES TEST OF POLITICAL STRENGTH

Dependent variable	Log loan size			
	Data restricted to politically connected firms that experience change in political status			
	(1)	(2)	(3)	(4)
In power?	-0.120 (0.027)		-0.106 (0.028)	-0.105 (0.027)
In power *	0.186 (0.032)		0.170 (0.032)	0.168 (0.033)
government bank				
Party in power?		-0.132 (0.028)	-0.120 (0.028)	-0.120 (0.028)
Party in power *		0.170 (0.033)	0.153 (0.033)	0.150 (0.036)
government bank				
In power * party in				0.008
power *				(0.040)
government bank				
Fixed effects	Firm * bank- type, quarter	Firm * bank- type, quarter	Firm * bank- type, quarter	Firm * bank- type, quarter
$R^2$	0.79	0.79	0.79	0.79
No. of Obs.	29,405	29,405	29,405	29,405

# The costs of political influence / corruption

- Deadweight loss from tax revenue (if defaulted funds are effectively government transfers): 0.15-0.3% of GDP
- The loss if the diverted funds are being squandered rather than invested (although they cannot rule out that they are being used at least somewhat productively): given an investment market-to-book ratio for Pakistan of 2.96, this translates into 1.6% of GDP per year
- Broader general equilibrium impacts on firm strategy, exit and entry decisions, mark-ups, wasteful rent-seeking “investments” of time and resources... The negative efficiency costs of this system could be much larger

### (3) Manacorda et al (2009)

- A central political economy question:  
how much do targeted transfers boost political support for the government?
  - Few solid answers due to econometric difficulties related to endogenous targeting
- Estimate the impact of a large anti-poverty cash transfer program on political support for the government, the Uruguay *PANES* program
- Use individual micro-data on political support and quasi-random program assignment (regression discontinuity design)



## Related literature

- Do voters trade off consumption and ideology?
  - A key assumption in leading models
- **Swing voter** models (Lindbek and Weibull 1987, Dixit and Londregan 1996, 1998; Persson and Tabellini 2002)
  - Optimal to target relatively unaligned voters
- Or favor **core supporters**: “leaky bucket”, political machines, commitment (Cox and McCubbins 1984; Verdier and Snyder 2002)

# Related literature

- Empirical evidence on the impact of transfers on political support has been hampered by:
  - Reverse causality (political party strategy targeting core supporters / swing voters)
  - Omitted variables (e.g., poverty)
  - Limited micro-data at the individual level
- Quasi-experimental evidence scarce; aggregate data (US evidence – Levitt and Snyder 1997, Chen 2008)
  - Related literatures on strategic targeting (Case 2000, Schady 2002), vote buying

# The probabilistic voting model

- Based on the Lindbeck and Weibull (1987) and Dixit and Londregan (1996, 1998) models
- The governing party (A), opposition (B) can both make transfers to voters
- Two factors determine voting choices:
- Consumption =  $\text{Income}(Y_g) + \text{Transfers}(T_{Ag})$
- Ideological affinity (preference for party B) of individual  $i$  in group  $g$ ,  $X_{ig} \sim F_g$

# The probabilistic voting model

- Individual  $i$  supports the governing party iff:

$$X_{ig} \leq U_g(Y_g + T_{Ag}) - U_g(Y_g + T_{Bg}) \equiv X_g^*$$

- Proportion of A votes in group  $g = F_g(X_g^*)$

Y-axis: densities

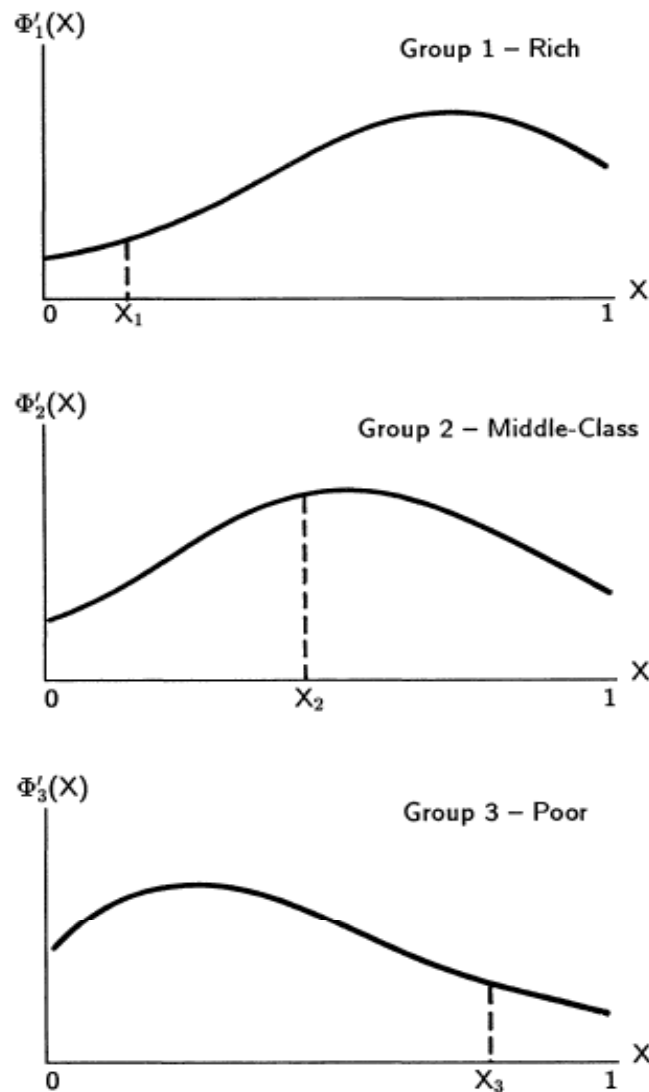


FIGURE I  
Densities and Cut-points for Different Socioeconomic Groups

the left party takes the poor for granted, and writes off the rich;  
both parties compete for the support of the middle group.

Y-axis: densities

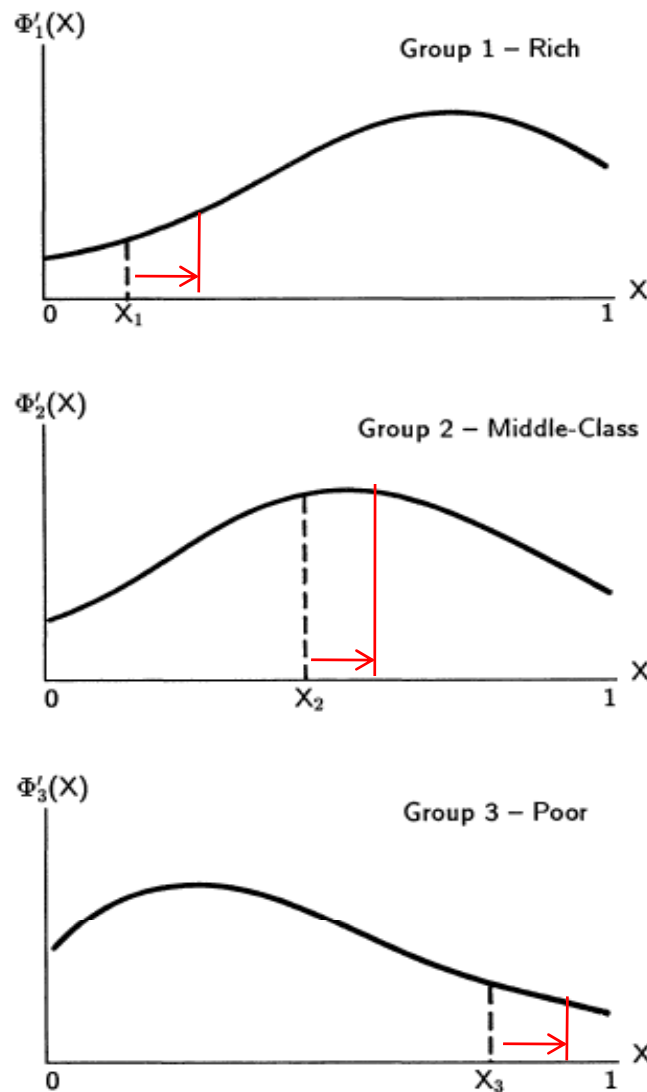
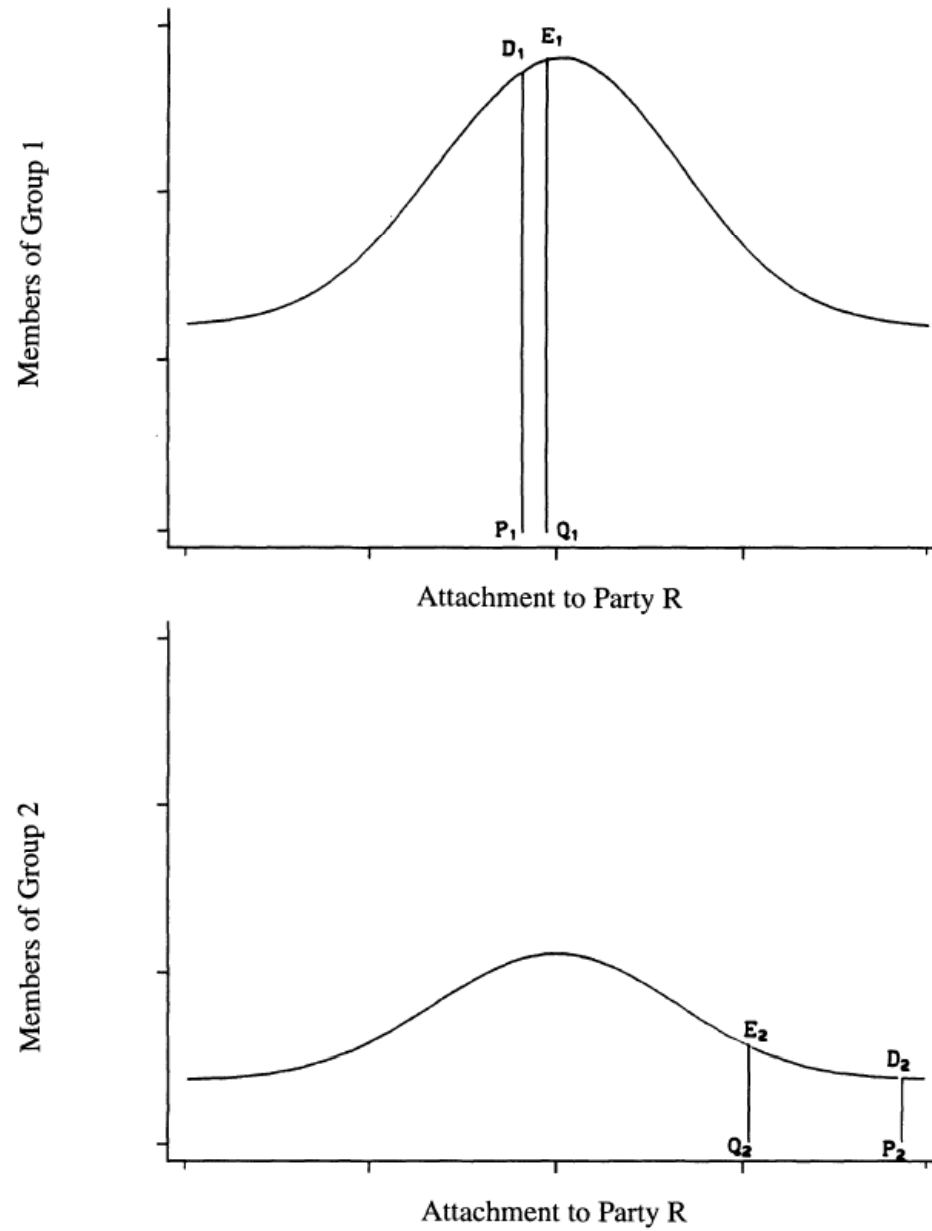


FIGURE I  
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FIGURE 1  
FAVORING GROUP 1 AT THE EXPENSE OF GROUP 2

Dixit and Londregan 1996



# The probabilistic voting model

- Individual  $i$  supports the governing party iff:

$$X_{ig} \leq U_g(Y_g + T_{Ag}) - U_g(Y_g + T_{Bg}) \equiv X_g^*$$

- Proportion of A votes in group  $g = F_g(X_g^*)$

- Marginal effect of a transfer on votes for A:

$$\partial F_g(X_g^*) / \partial T_{Ag} = f_g(X_g^*) U_g'(C_{Ag}) \equiv \beta_g$$

- Two implications of the classic model:
  - Larger impacts among ideologically centrist groups ( $\partial \beta_g / \partial f_g(X_g^*) \geq 0$ ), the poor ( $\partial \beta_g / \partial Y_g \leq 0$ )



# The probabilistic voting model

- The ruling party sets the transfer schedule to maximize votes  $V_A$  s.t. budget balance condition,  $\sum_g \{N_g T_{Ag}\} = 0$
- An intuitive first order condition, equating the marginal vote gain from increased transfers across all social groups  $f_g(X_g^*) U_g'(C_{Ag}) = \lambda_A$  for all  $g$ 
  - This finding generalizes to the strategic game (Dixit and Londregan, 1996)
- This paper cannot explore if transfers approximate this condition since there is only data on a population subset, households near program eligibility threshold

## The Uruguay *PANES* program

- Uruguay is an upper middle income Latin American country, with a robust democracy and low corruption indicators (Table 1)
- Major 2001-04 economic crisis: income fell 11%
  - The left-wing *Frente Amplio* (FA) coalition won November 2004 elections promising to help the poor and displaced

# Human development and democracy in selected countries (Table 1)

Table 1: Human development and democracy in Uruguay and selected countries

	UNDP <i>Human Development Report</i>				<i>The Economist</i> Intelligence Unit democracy index				
	Human Development Index	GDP per capita (PPP)	Life expectancy	Gross school enrolment rate	Democracy	Rank	Electoral process	Functioning of govt.	Political culture
<b>Uruguay</b>	<b>0.852</b>	<b>9,962</b>	<b>75.9</b>	<b>88.9</b>	<b>Full</b>	<b>27</b>	<b>10.00</b>	<b>8.21</b>	<b>6.88</b>
USA	0.951	41,890	77.9	93.3	Full	17	8.75	7.86	8.75
Argentina	0.869	14,280	74.8	89.7	Flawed	54	8.75	5.00	5.63
Brazil	0.800	8,402	71.7	87.5	Flawed	42	9.58	7.86	5.63
Chile	0.867	12,027	78.3	82.9	Flawed	30	9.58	8.93	6.25
Colombia	0.791	7,304	72.3	75.1	Flawed	67	9.17	4.36	4.38
Mexico	0.829	10,751	75.6	75.6	Flawed	53	8.75	6.07	5.00
Venezuela	0.792	6,632	73.2	75.5	Hybrid	93	7.00	3.64	5.00

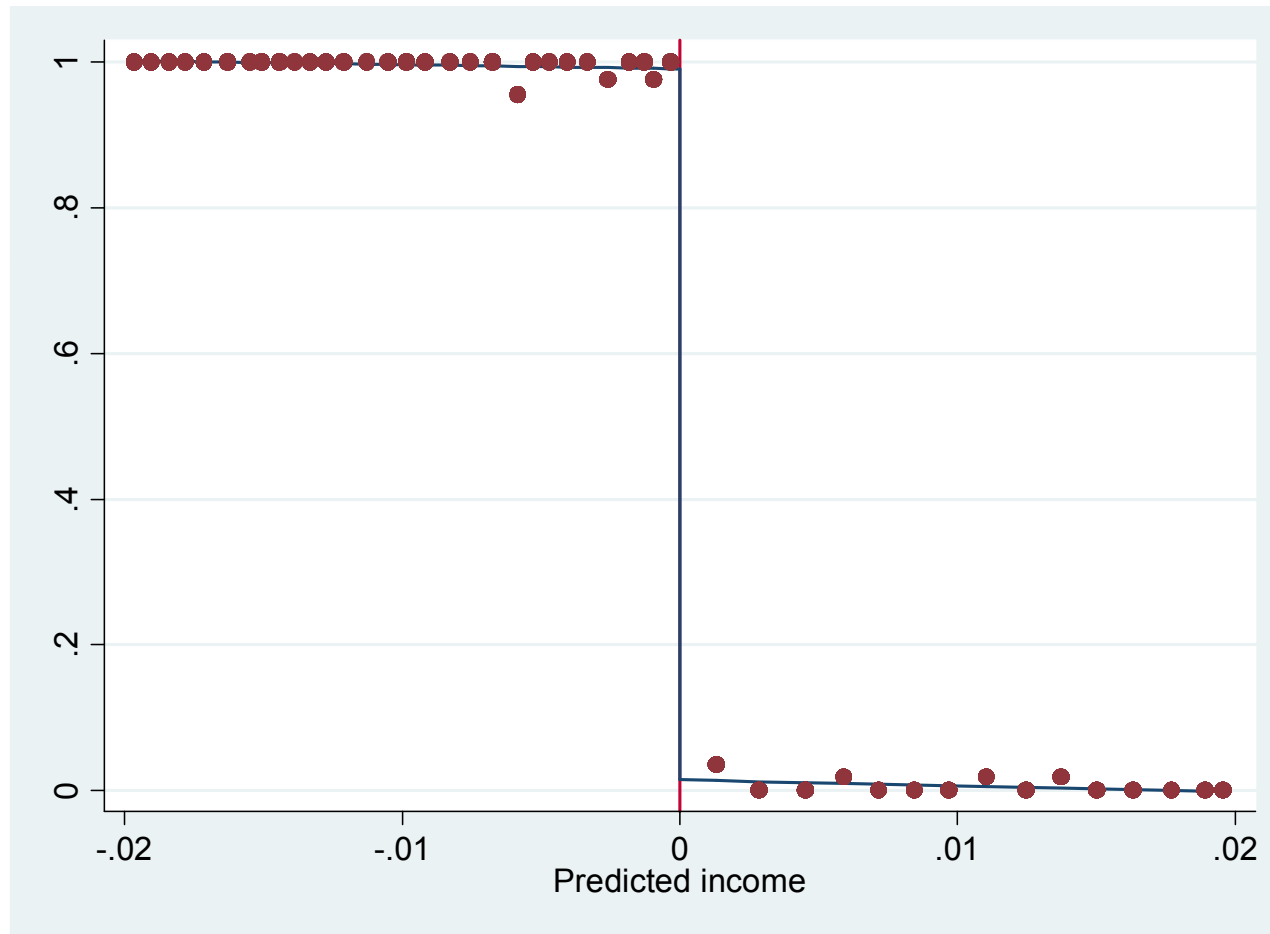
## The Uruguay *PANES* program

- The *PANES* (Plan de Atención Nacional a la Emergencia Social) anti-poverty program was temporary by design, from 4/2005 to 12/2007
  - Transfers were officially conditional on education and health behaviors, not enforced
- Program components:
  - Annual cash transfer = \$672, roughly 50% of average income for target households
  - Food card for HHs with children = \$156-396 per year
  - Other aspects: public works jobs, training, health care

# The Uruguay *PANES* program

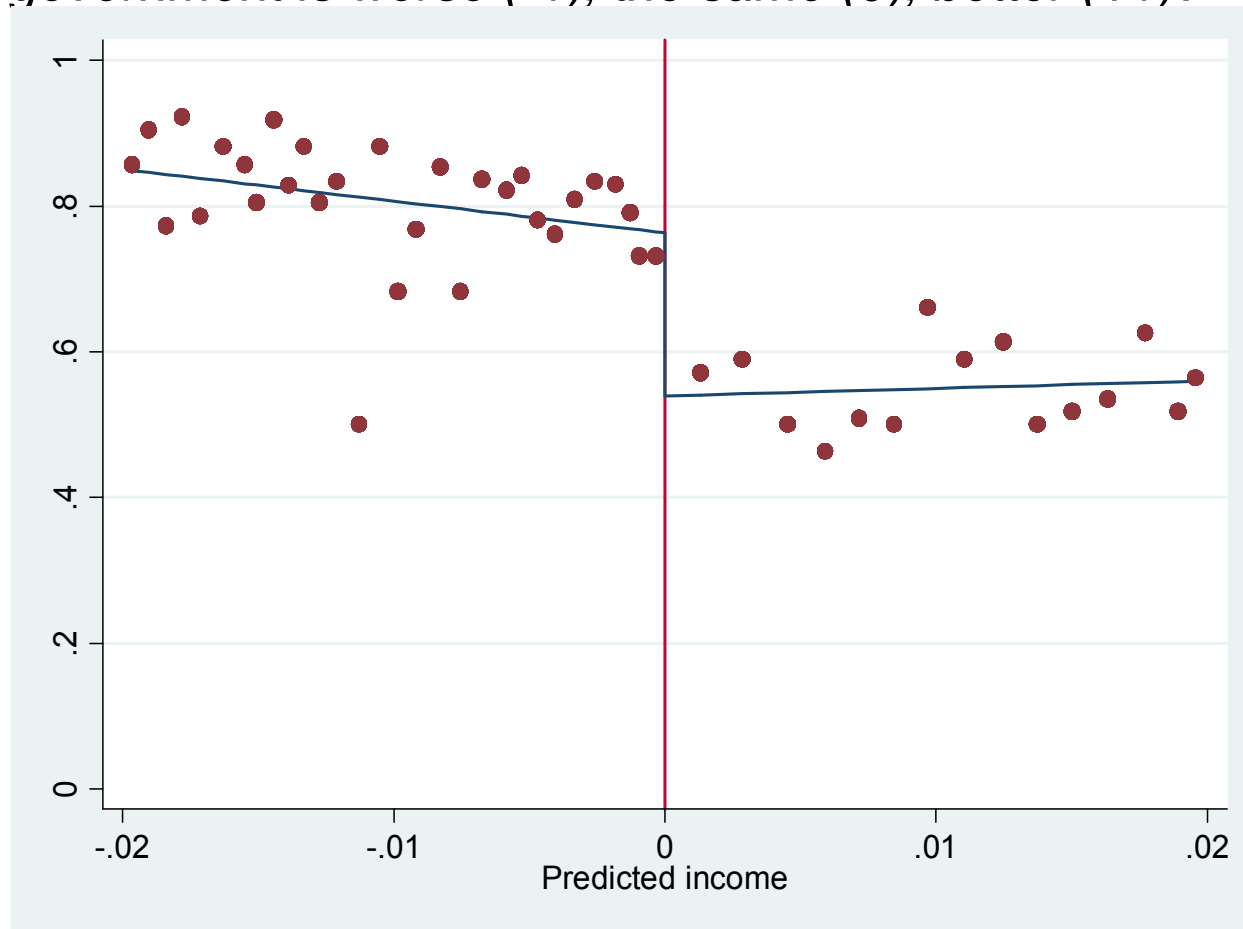
- 188,671 applicant households and 102,353 beneficiaries (8% of all households in Uruguay)
  - Total transfers are 0.41% of GDP, 2% of annual government social expenditures
- Pre-program survey data was used to construct a predicted income score; households and officials were not informed of the formula
  - *PANES* assignment based on a strict threshold
  - Follow-up survey 18 months later: 3000 HH's near discontinuity; no reference to *PANES*

# *PANES* eligibility and participation (Figure 1)



# *PANES* eligibility and political support for the government (Figure 2)

*“In relation to the previous government, do you believe the current government is worse (-1), the same (0), better (+1)?”*



# Regression discontinuity analysis

- Predicted income score,  $S_i$   
*PANES* eligibility threshold,  $E$   
Normalized income score,  $N_i \equiv S_i - E$

$$(4) \quad y_i = \beta_0 + \beta_1 1(N_i < 0) + f(N_i) + 1(N_i < 0)g(N_i) + u_i$$

- $f$  and  $g$  are flexible (polynomial) controls, with  $f(0)=g(0)=0$
- The coefficient of interest is  $\beta_1$



# *PANES* Eligibility, participation and government support (Table 2)

Table 2: Program eligibility, participation, and political support for the government

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A:	First stage: Ever received <i>PANES</i> (dep. var.)					
Program eligibility	0.991*** (0.003)	0.976*** (0.010)	0.964*** (0.021)	0.991*** (0.003)	0.977*** (0.010)	0.964*** (0.024)
Panel B:	Reduced form: Government support (dep. var.)					
Program eligibility	0.256*** (0.026)	0.223*** (0.054)	0.249*** (0.087)	0.231*** (0.028)	0.209*** (0.056)	0.269*** (0.090)
Panel C:	IV: Government support (dep. var.)					
Ever received <i>PANES</i>	0.258*** (0.026)	0.229*** (0.055)	0.258*** (0.089)	0.234*** (0.028)	0.214*** (0.057)	0.279*** (0.093)
Score controls	None	Linear	Quadratic	None	Linear	Quadratic
Other controls	No	No	No	Yes	Yes	Yes

# *PANES* Eligibility, participation and government support (Table 2)

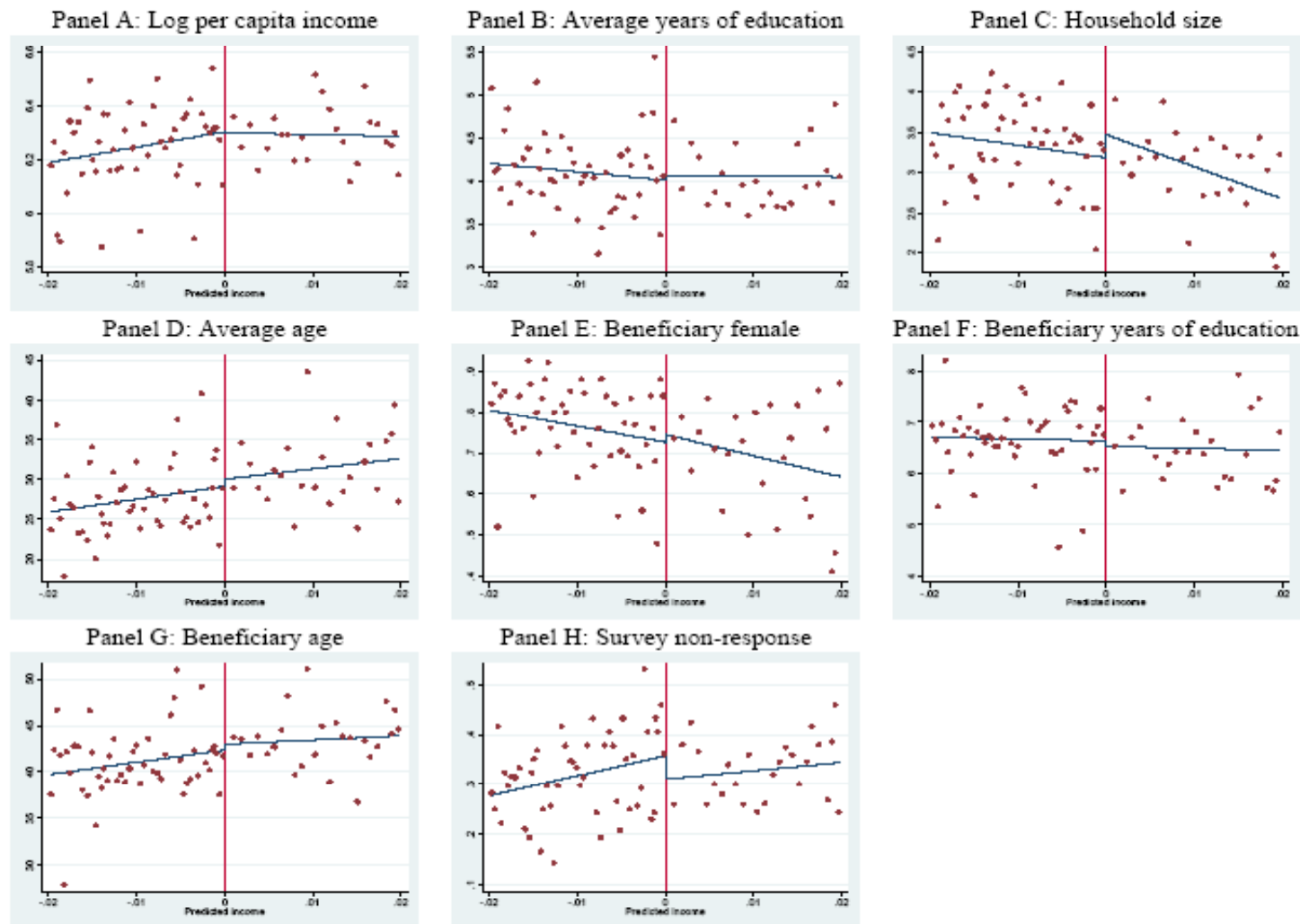
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Other controls	No	No	No	Yes	Yes	Yes

# Program costs and impact magnitudes

- *PANES* cost per household = US\$880 per year
  - Per voting age adult =  $\text{US\$880}/1.78 = \text{US\$495}$
- Cost per additional political supporter is  $\text{US\$495}/0.28 = 1,768$  to  $\text{US\$495}/0.21 = 2,357$ , or 32-43% of 2006 Uruguay GDP per capita
- If these effects apply to all beneficiaries, the program increased the FA vote share by 1.7 percentage points
  - An increase of 1 percentage point would cost 0.9% of total government social spending

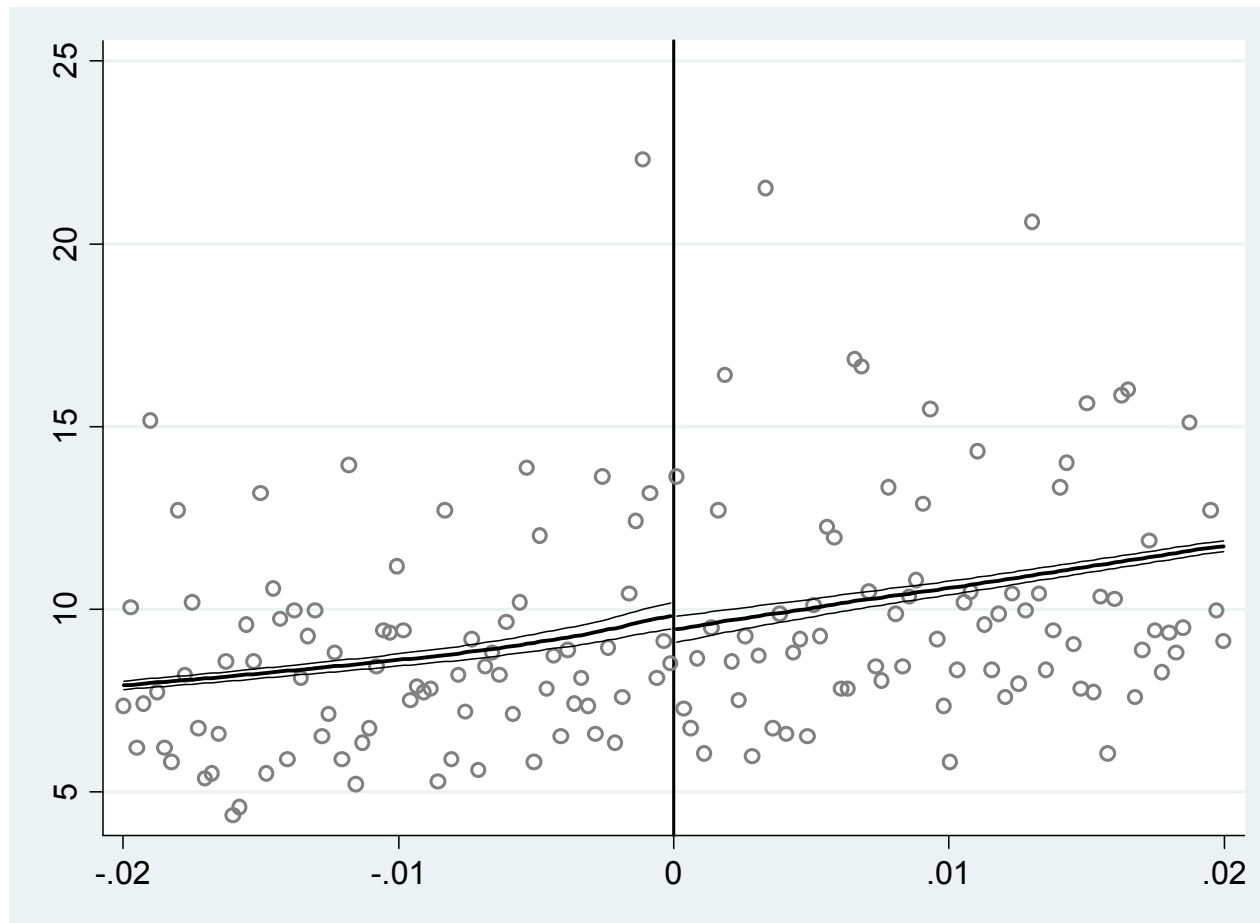
# Regression discontinuity validity checks, baseline characteristics (Figure A2)



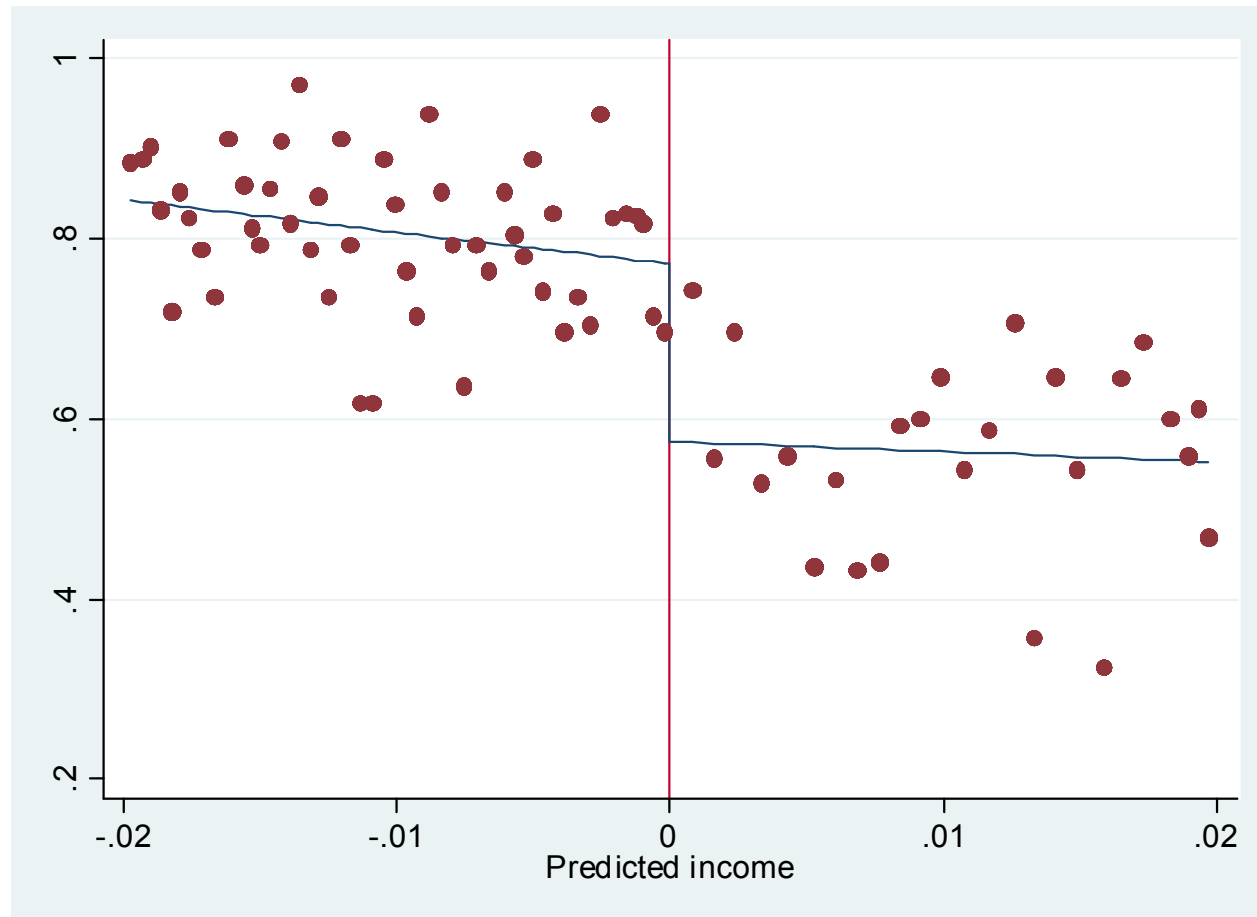
# Regression discontinuity validity checks, baseline characteristics (Table 3)

Dependent variable:	(1)	(2)	(3)
Log per-capita income at baseline	-0.046* (0.027)	0.002 (0.057)	0.011 (0.093)
Average years of education at baseline	0.056 (0.101)	-0.046 (0.208)	-0.216 (0.308)
Household size at baseline	0.303*** (0.116)	-0.296 (0.244)	-0.599* (0.359)
Average age at baseline	-3.928*** (1.087)	-0.826 (2.170)	-2.104 (3.173)
Beneficiary female	0.077*** (0.029)	-0.020 (0.058)	-0.037 (0.090)
Beneficiary years of education	0.185 (0.150)	0.107 (0.306)	0.279 (0.445)
Beneficiary age	-2.449*** (0.795)	-0.599 (1.565)	-2.138 (2.363)
Survey non-response rate	-0.011 (0.018)	0.047 (0.037)	0.026 (0.057)
Voted in 2004 elections	-0.002 (0.012)	0.021 (0.025)	0.037 (0.044)
Score controls	None	Linear	Quadratic

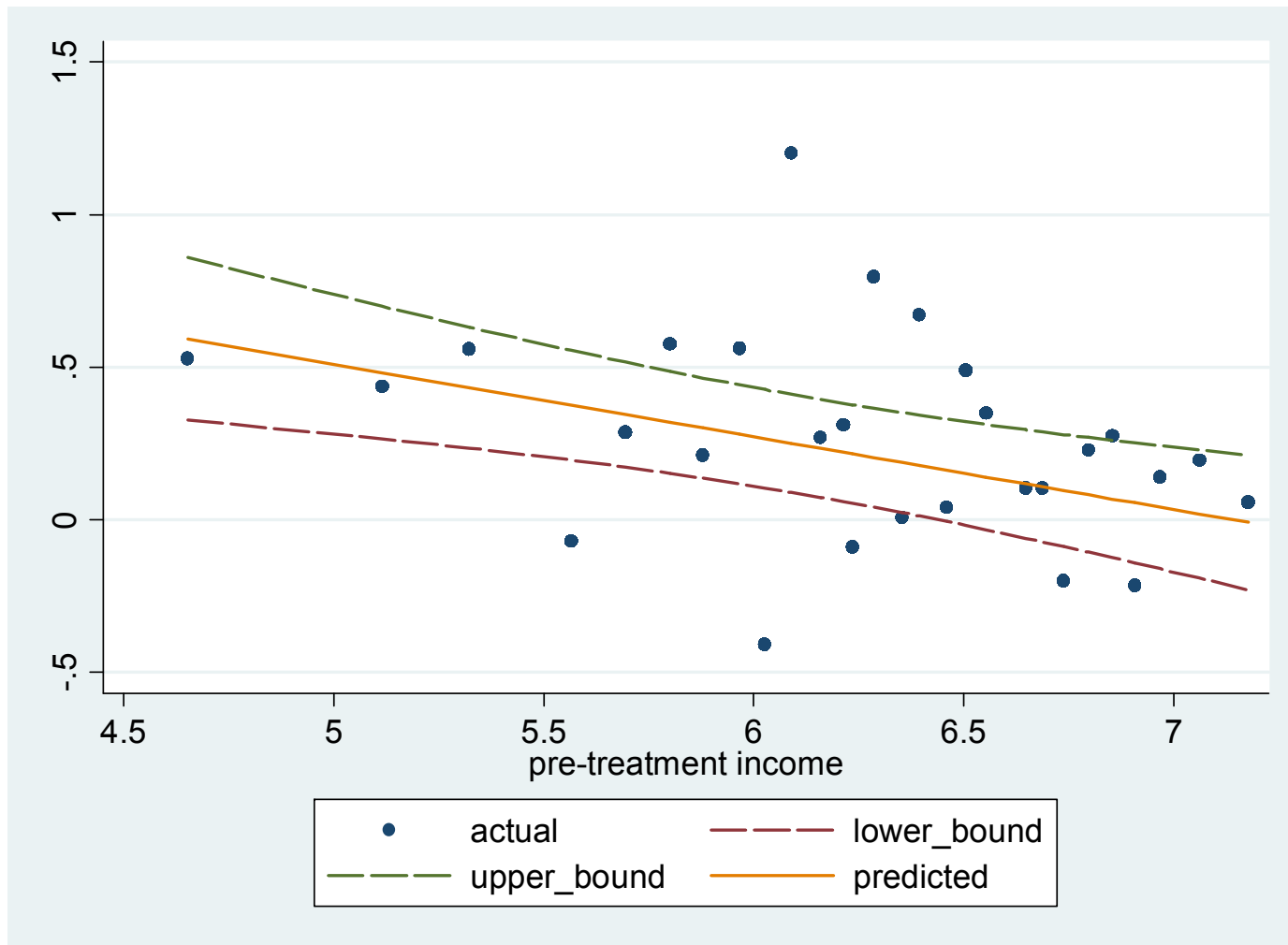
# Regression discontinuity validity checks, score distribution (Figure 3)



## A bounding adjustment for the worst-case scenario (from figure 3)



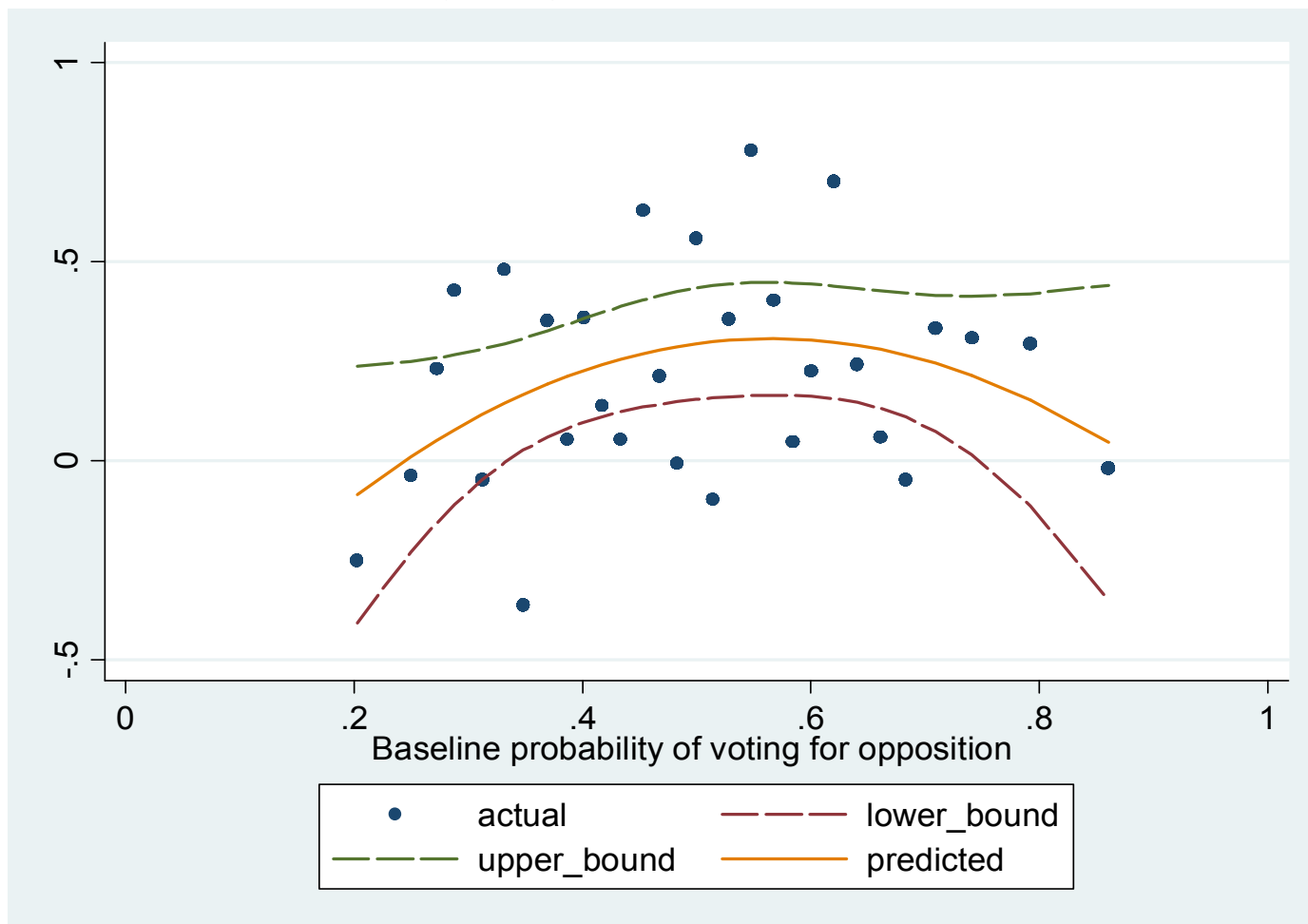
# Larger impacts in poor households (income from baseline survey), Figure 4





# Impacts by predicted opposition support (*Latinobarómetro* 2001-04), Figure 4

- Least politically aligned voters are most responsive

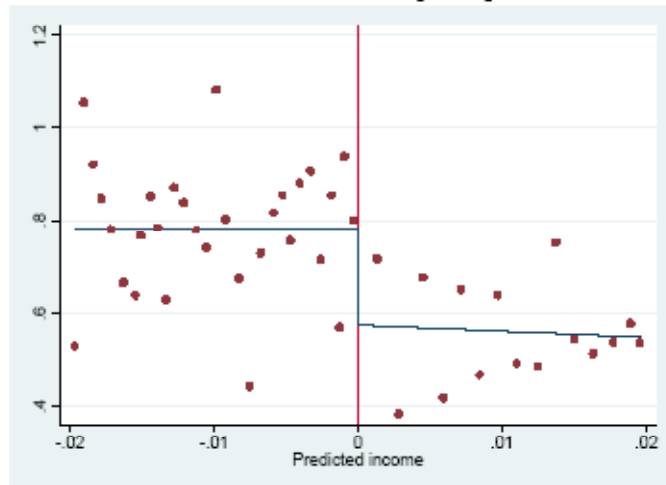


# Heterogeneous *PANES* effects, regression results (Table 4)

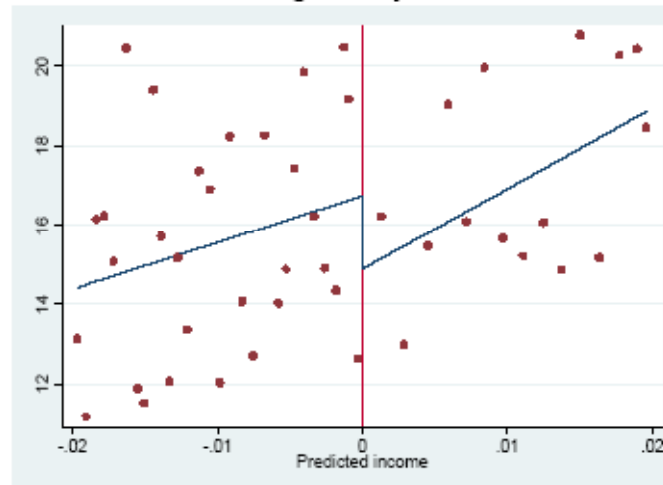
Panel A: RD estimates by household pre-treatment income	
Log pre-treatment household income	-0.238* (0.138)
Panel B: RD estimates by predicted respondent political orientation	
Predicted likelihood of voting for the opposition 2001-04	3.366** (1.640)
(Predicted likelihood of voting for the opposition 2001-04) <sup>2</sup>	-2.979* (1.560)

# Both objective and subjective wellbeing “channels” (Figure 5)

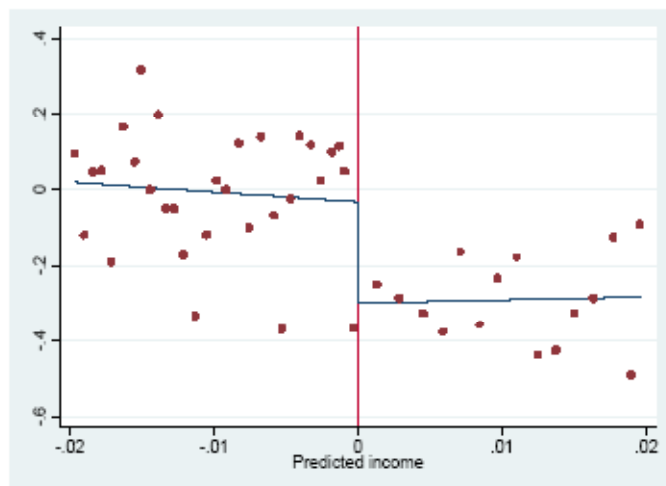
Panel A: Growth in household per capita income



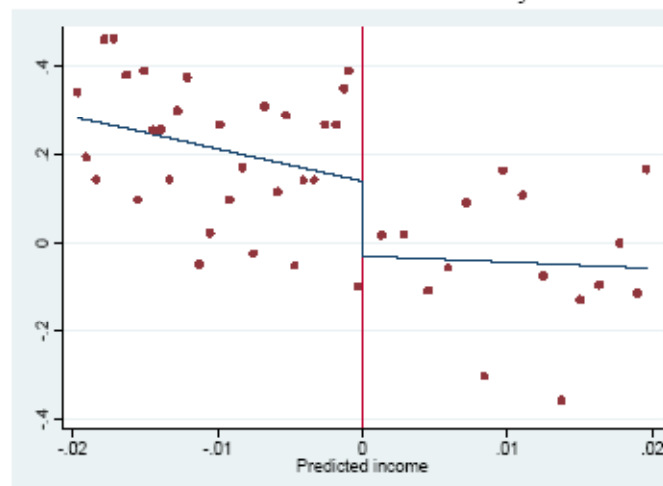
Panel B: Average weekly hours of work



Panel C: Satisfaction with current household situation

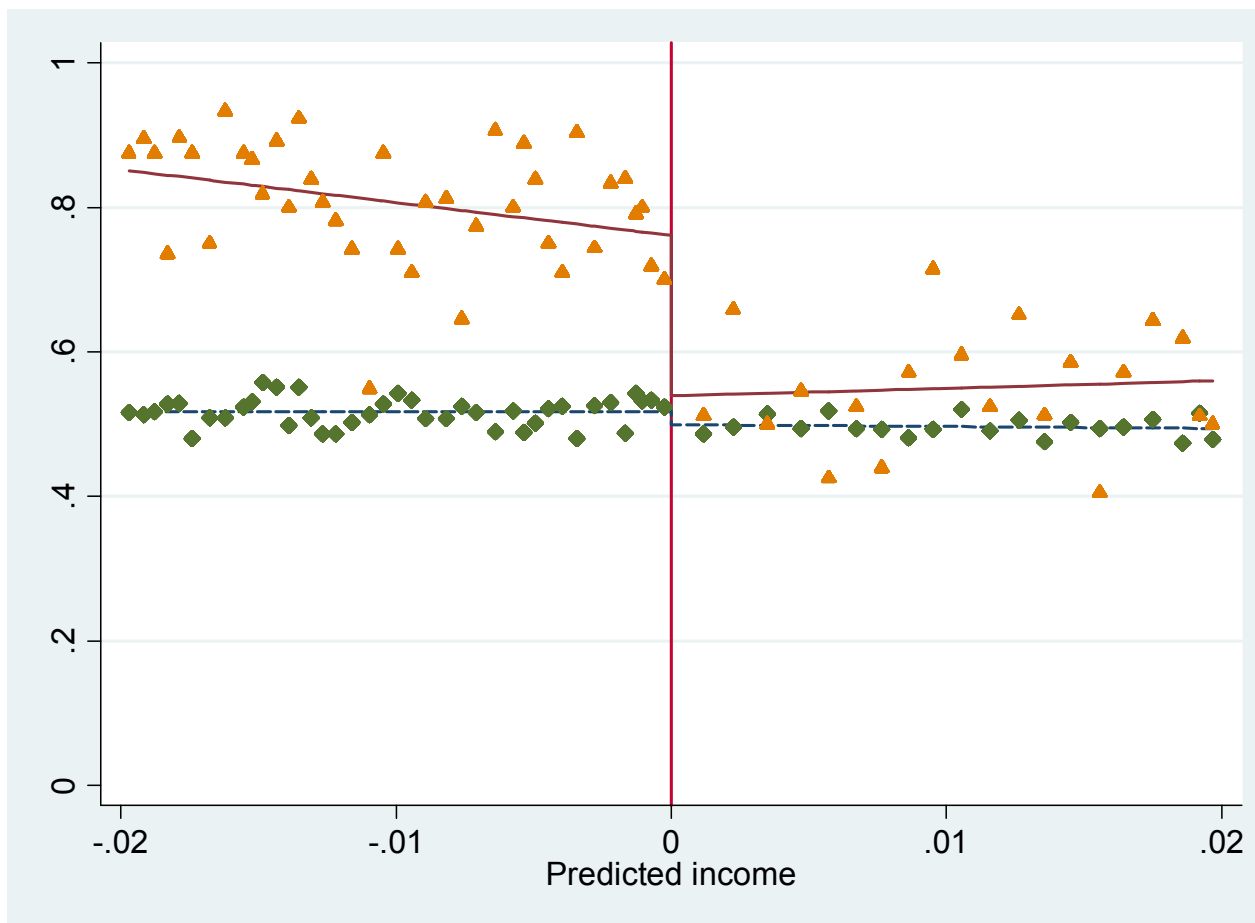


Panel D: Satisfaction with current country situation

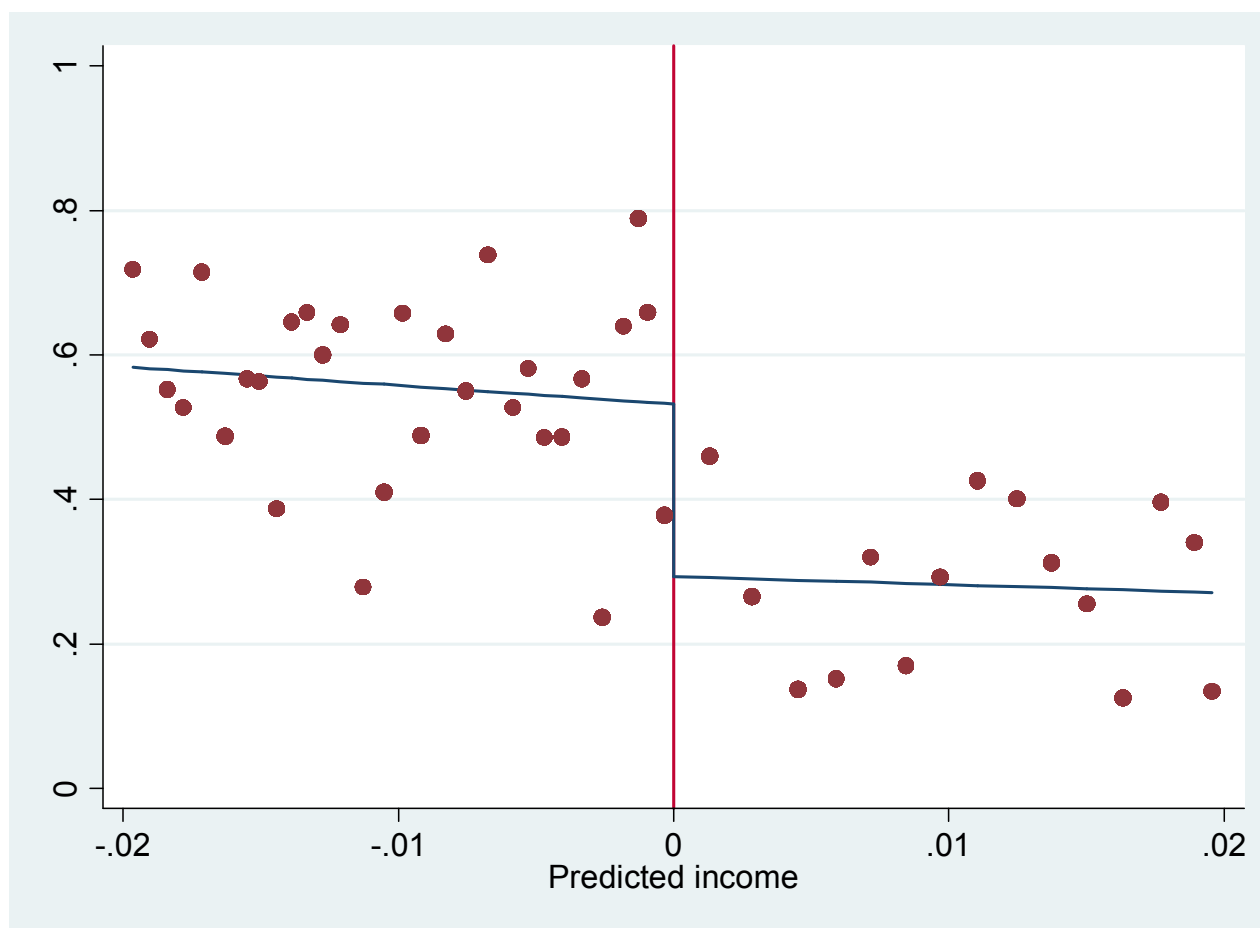


# Losers do not appear “bitter”, using predicted government support (figure 6)

- *Latinobarómetro 2005-06: “Do you approve or disapprove of the government administration headed by the President?”*

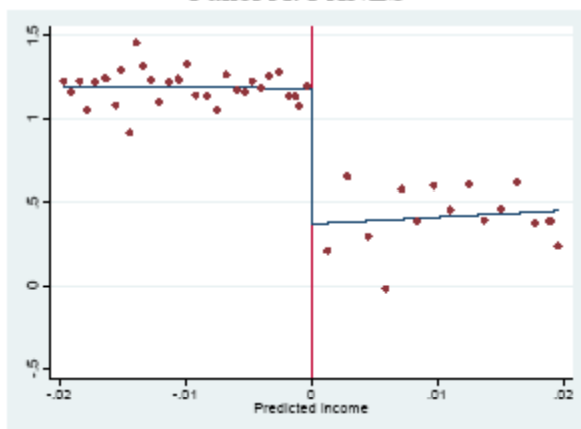


# Persistent effects after *PANES* ended Feb.-Mar. 2008, (figure 7)

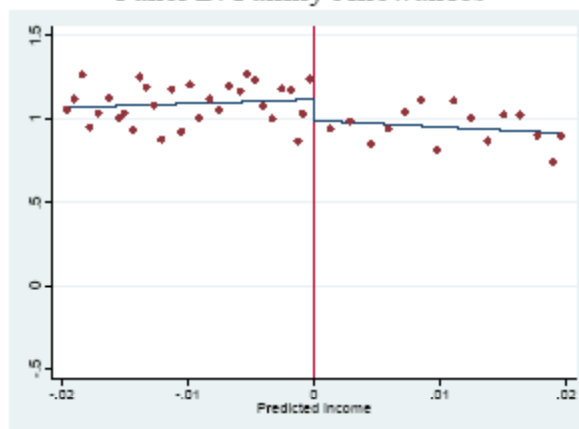


# Positive view of *PANES*, not other reforms (figure 8, 2008 follow-up survey)

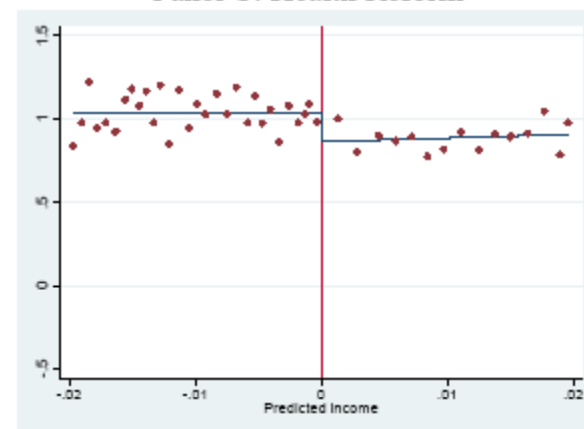
Panel A: *PANES*



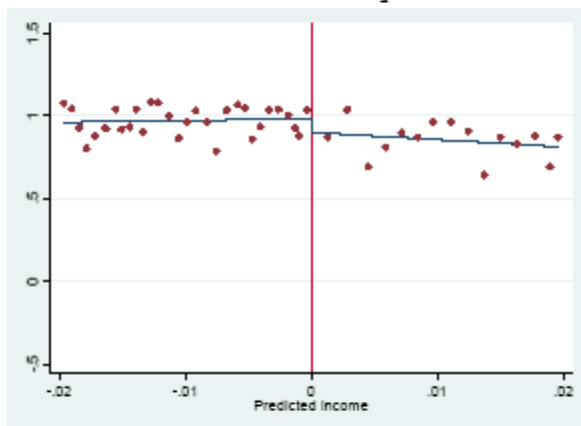
Panel B: Family Allowances



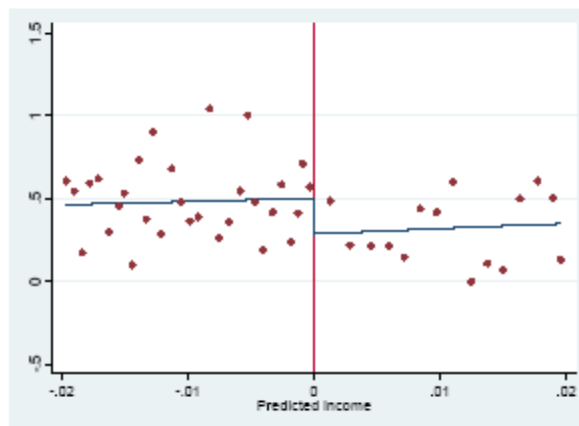
Panel C: Health Reform



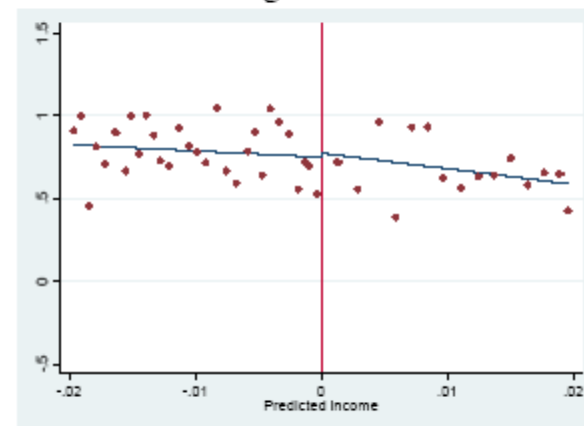
Panel D: *Plan de Equidad*



Panel E: Tax Reform



Panel F: Wage Council Reform



### (3) Manacorda et al – summary and discussion

- A large cash transfer boosted government political support 21-28 percentage points
  - Robust finding, passes RD validity checks
  - Effects persist after the end of the program
- Consistent with the probabilistic voting model, those most responsive to transfers were:
  - Poorer households
  - Political “centrists”, i.e., swing voters
- The “cost” of a vote was around US\$2,000
  - 1% vote gain costs 0.9% of social spending

### (3) Manacorda et al (2009) – conclusions

- Government transfers can have large political impacts, especially if well targeted
  - Political and social views are greatly affected by economic policies (as in DiTella et al. 2007)
  - How politicized is targeting? Latin American conditional cash transfer (CCT) programs typically target women, but there is no differential response among female headed HHs in Uruguay
  - Suggestive evidence *PANES* threshold was more generous in Uruguay's pro-opposition interior (closer to "swing voters"), but only five regions



## (4) Political Discrimination and the Economy

- How do political discrimination, polarization and conflict affect the economy?
  - Most existing work based on cross-country regressions
- Do individuals who join the political opposition pay a price in the labor market?
  - Patronage and clientelism are salient issues in many less developed countries
- Our case: Hugo Chávez's Venezuela

## (4) Venezuela's *Maisanta* List

- Unique data on all registered voters' (~12 million) signatures on recall referendum petitions
  - The data became widely available within Venezuela
  - Measures of real-world political behavior for the whole population, not just elites
- We match it to individuals in the Venezuelan national household survey
  - This provides a unique “window” into individual political affiliations and views

## (4) Sneak preview of results (if no time)

- Pro-opposition individuals have 5% lower earnings and lower employment rates after information release
  - They leave public sector jobs, and shift into informal jobs and lower paying sectors/occupations
  - Back-of-the-envelope calculation: job separations may be associated with a 3% drop in aggregate TFP

# Valuing political connections, preferences

- Estimating the economic benefits of political connections
  - Fisman (2001) on links to Suharto in Indonesia, Khwaja and Mian (2006) on Pakistani politicians and bank loans, Ferguson and Voth (2008) on Nazi Germany
  - Li et al (2007), Morduch and Sicular (2000) estimate returns to communist party membership in China
  - Dunning and Stokes (2007) on social programs
- Most estimates of the economic impacts of political instability use cross-country regressions
  - Alesina et al (1996): the average effect of a coup is around -1% of aggregate output

# Crash Course on Venezuela

- Venezuela has strong democratic traditions, and was spared the coups and violence that swept most of Latin America in the 1970s, 1980s
  - Venezuela's oil abundance is a defining characteristic
  - Per worker GDP declined 32% between 1978-1998
- Hugo Chávez, a former army officer, won December 1998 presidential elections with 56% of the vote
  - The conventional wisdom (only partially true): Chávez stoked the resentment of the “poor” and is despised by the business “elite”

# Hugo Chávez's Venezuela

- Chávez quickly moved to consolidate power in a new constitution, elections, extensive institutional reforms
  - “Recall” referendum new to the 1999 constitution
- A failed coup in April 2002 increased political polarization
  - Opposition mass demonstrations, National Strike (12/02-1/03), attempts to recall Chávez in 2002-2004
  - Chávez's popularity fell as the economy slumped

# Timing of the recall petitions

- Three waves of recall efforts in 2002-2004
  - (1) November 2002: 1.57 million signatures for a non-binding referendum calling for Chávez's resignation
    - Invalidated by the Supreme Court on a technicality
  - (2) August 2003: 2.79 million signatures submitted for a recall referendum against Chávez
    - Invalidated by the National Electoral Council since signatures were collected before the midpoint of Chavez's term in office (a constitutional requirement)

## Timing of the recall petitions

- (3) December 2003: 3.48 million signatures submitted to recall Chávez in officially supervised signing booths
  - Pro-government groups also submitted 1.5 million signatures to recall Congressional opposition leaders
  - The National Electoral Council rejects 34% of opposition signatures, to be re-validated May 2004
- In the meantime, Chávez's popularity rises in 2004, with higher oil prices and expanding social programs
- Recall Referendum was finally held in August 2004
  - 59% of voters oppose the recall, Chávez survives



## Lists of signers posted on the web

- January 2003: Pro-Chávez legislator Luis Tascón claims many signatures for the first petition were forged and posts the list of signers on his webpage
  - Tascón's List was updated with later petition waves

## Lists of signers posted on the web

- January 2003: Pro-Chávez legislator Luis Tascón claims many signatures for the first petition were forged and posts the list of signers on his webpage
  - Tascón's List was updated with later petition waves
- The *Maisanta* database (7/2004) is the most comprehensive database of petition signers
  - Distributed to government electoral “battle units”, later leaked to government offices, sold on Caracas streets
  - Quickly became well-known and politically salient
  - 12.3 million registered voters, 77% of voting age adults

# RETIRA TU FIRMA

El 40 % de las firmas presentadas por la Coordinadora Antichavista fueron trampeadas o clonadas; dicho de otra manera, son **Firmas Chimbas**.

Utilizaron las cédulas de tus difuntos, la de los abstencionistas crónicos, de los ancianos y a lo mejor la tuya también, pretendiendo sacar al presidente fraudulentamente. Los golpistas enloquecidos y obsesionados quieren robarte la paz, quitarte las misiones y matarte de hambre.

Si tu cédula, la de un amigo o la de un familiar fue utilizada: **DEBES RETIRARLA**  
Si firmaste presionado o estás arrepentido: **RETIRA TU FIRMA**.

**Búscate en los listados de los centros de votación o la página web [www.cne.gov.ve](http://www.cne.gov.ve).  
Si no puedes por estos medios, comunícate con el PPT a través de los números:  
0212-577.45.45, 578.02.12, 578.15.46 y 414.10.95, disponibles las 24 horas del día.**



**RETIRA TU FIRMA  
DEFIENDE LA DEMOCRACIA**

**Militantes de la Unidad**  
**[www.ppt.org.ve](http://www.ppt.org.ve)**

# The *Maisanta* database interface

Santa Inés (Rev.06/07/2004) R.E.P. (Marzo-2004) ? x

 Leeme Registros: 12,394,109

Ingrese su Número de Cédula:  \*\*\*TENDENCIA POLITICA\*\*\* Fecha Nac:

Apellidos y Nombre:

Dirección:

>> Listar Cédulas de mi Centro de Votación << >> Florentino <<

Centro Votación:

Dirección:

Región:

Fallecido: ☐

Abstencionista: ☐

Misión RIBAS: ☐

Vuelvan Caras: ☐

# The *Maisanta* database interface

Santa Inés (Rev.06/07/2004) R.E.P.(Marzo 2004) ? x

 Leeme Registros: 12.394.109

Ingrese su Número de Cédula:  **SI FIRMO CONTRA EL PRESIDENTE (VALIDA)** Fecha Nac:

Apellidos y Nombre:

Dirección:

>> Listar Cédulas de mi Centro de Votación << >> Florentino <<

Centro Votación:

Dirección:

Región:

Fallecido:

Abstencionista:

Misión RIBAS:

Vuelvan Caras:

# Uses and abuses of the petition information

- Frequent accusations the information was used to discriminate against firms, employees and job seekers
- *“Whoever signs against Chávez... their name will be there, registered for history, because they’ll have to put down their first name, their last name, their signature, their identity card number, and their fingerprint.”*  
-- Hugo Chávez, televised address, Oct. 17, 2003
- *“There are still places that use Tascon's List to determine who gets a job and who doesn't.”*  
-- Hugo Chávez, televised address, April 15, 2005

## An example

- Ms. Rocío San Miguel worked for 13 years as a contract worker for the Venezuela National Borders Council
  - Fired on March 12, 2004. Her boss: "How could it have occurred to you to sign against the guy who pays you?"
- Three other co-workers who had signed also fired
  - One decided not to validate his signature (in the *reparos*) and the lay-off letter was withdrawn
- Ms. San Miguel taped phone conversations where her boss stated she was fired for signing the recall petition
  - Case at Inter-American Human Rights Commission

# Uses and abuses of the petition information

- Media accounts of public sector workers fired for signing
  - Counter-claims that private pro-opposition firm owners fired or refused to hire Chavistas
  - In surveys, 24% of workers fired between 2002-2007 claimed it was due to their political opinions
- The database remains widely held and available
  - Even beyond *Maisanta*, political affiliations are increasingly salient due to rising political polarization, and this is important for the interpretation of our results



# Modeling the petition signing decision

- Many factors could affect individuals' signing decision:
  - The time costs of signing
  - A taste for expressing one's political preferences
  - How people expect to fare under Chavez versus the opposition helps shape preferences
- Expected punishments from the government and/or rewards from the opposition
  - Important once people knew names would be posted

# Modeling the petition signing decision

- Focus on signers vs. non-signers after 2004
  - Selection bias is a concern if signers and non-signers expect to have different income trends if Chavez wins, and these differences drive signing choices
- Can we interpret these differences as the “willingness to pay” for dissident political expression?
  - No. Only under the (incorrect) assumption that everyone fully expected Chavez to win the referendum

# Household Datasets

- Household Survey, biannually for 1997-II to 2006-I
  - Approximately 55,000 households per round in a rotating panel, households are retained for six semesters
  - High attrition across rounds make it difficult to exploit the panel, so we rely on repeated cross-sections
  - Individual earnings, employment, demographics

# Matching *Maisanta* and household data

- Maisanta identifies individuals' voting center, which can be placed in a particular locality (*parroquia*)
  - Locality information, exact date of birth and gender, uniquely identifies 45% of individuals in *Maisanta*
  - Another 19% are in DOB-gender-*parroquia* cells where all individuals share a political preference
- HHS data matched to *Maisanta* using these variables
  - 87,100 individuals, 296,087 individual-semester obs.
  - The matched, unmatched similar (Appendix Table 1)
  - Re-weight observations by 1/Locality match probability

## Results: Descriptive statistics on signers

- High rates of anti-Chavez petition signing, 34% signed at least one anti-Chavez petition (Table 1)
- Opposition signers have somewhat better baseline labor market outcomes, education, and are more likely to live in Caracas (Table 2)

**Table 1: Voters Signing Anti-Chavez Petitions**

	<b>Any Petition</b>	<b>One Petition</b>	<b>Two Petitions</b>	<b>Three Petitions</b>
<b><u>Petition Data</u></b>				
Number of signers	4,736,285	2,334,095	1,746,874	655,316
% of registered voters	29.1	14.4	10.7	4.0
<b><u>Household Survey</u></b>				
% of potential voters	33.7	16.6	12.6	4.4

Table 2: Characteristics of Chavez Opponents, Household surveys 1997-2002

	Opposition and Non-Signers, Mean (s.d.)	Opposition – Non-Signers, Difference (s.e.)
Log Labor Income (2000 Bolivares)	7.431 (0.791)	0.095 (0.009)
Employed (x 100)	91.5 (27.9)	-0.53 (0.27)
<u>Employed (x 100) in:</u>		
Private Formal	39.3 (48.8)	1.15 (0.60)
Public	17.1 (37.6)	2.27 (0.55)
Informal	43.6 (49.6)	-3.43 (0.63)
Age	36.6 (12.2)	1.27 (0.16)
Years of Schooling	8.29 (3.93)	0.78 (0.05)
Female	0.371 (0.483)	0.06 (0.01)
Lives in Caracas	0.139 (0.346)	0.04 (0.00)

# Results: Labor market effects

- Repeated cross-sections allow us to estimate effects of *Maisanta* information on labor market outcomes
  - Individual controls, year fixed effects
  - To partially address time-varying omitted variables, individual characteristics (female, year of birth, years of schooling, locality) are interacted with time trends



# Results: Household survey data estimates

- Drops in employment for opposition supporters after 2004 (Table 3)
- Earnings drop 5% for opposition supporters (Table 4)

**Table 3: Employment of Chavez Opponents, Household surveys 1997-2006**

	(1)	(2)	(3)	(4)
<b>Chavez Opponent x 2005-2006</b>	<b>-1.46</b> (0.72)	<b>-1.61</b> (0.72)	<b>-1.55</b> (0.71)	<b>-1.63</b> (0.70)
<b>Chavez Opponent x 2003-2004</b>	0.32 (0.40)	0.27 (0.40)	0.60 (0.40)	0.46 (0.39)
<u><b>Controls:</b></u>				
Demographics	NO	YES	YES	YES
Demographics x Time Trend	NO	NO	YES	YES
State	NO	NO	NO	YES

Figure 1: Employment of Chavez Opponents (relative to non-signers), Household Surveys 1997-2006



**Table 4: Earnings of Chavez Opponents, Household surveys 1997-2006**

	(1)	(2)	(3)	(4)
<b>Chavez Opponent x 2005-2006</b>	<b>-5.04</b> (1.73)	<b>-5.36</b> (1.49)	<b>-5.63</b> (1.49)	<b>-5.16</b> (1.48)
<b>Chavez Opponent x 2003-2004</b>	-0.33 (1.06)	-0.71 (0.92)	-0.90 (0.91)	-0.38 (0.91)
<u><b>Controls:</b></u>				
<b>Demographics</b>	NO	YES	YES	YES
<b>Demographics x Time Trend</b>	NO	NO	YES	YES
<b>State</b>	NO	NO	NO	YES

Figure 2: Earnings of Chavez Opponents (relative to non-signers), Household Surveys 1997-2006



# Aggregate implications of political polarization

- Both employers and employees may have a taste for working with others with similar political views
- Exogenous job displacement destroys job match surplus (Mortensen and Pissarides 1998)
  - Loss of firm-specific human capital and worse quality matches (in the short-run) reduce aggregate productivity
- Aggregate welfare consequences of political “churning”
  - Lentz and Mortensen (2008) estimate that the job match surplus is split roughly equally between workers and firms in Denmark (labor share of 55%)
  - If job match surplus is split equally (and other factors are unchanged), the reduction in aggregate value added due to politically-driven low quality matches is -3.4%

## (4) Results: Labor market effects

- Estimation concern: were generally pro-opposition sectors or occupations targeted by government policy?
- Specification check: *non-signers* with pro-opposition characteristics (education, occupation, sector) do not show falling earnings after 2004 (Table 5)
- Labor market churning: public sector employment decreases and informal employment rises for opposition signers (Table 6)
  - Effects at roughly 7-10% of baseline employment

Table 5: Returns to Opposition Characteristics for Non-Signers

	(1)	(2)	(3)	(4)	(5)
<b><u>Schooling</u></b>	<b>7.68</b> <b>(0.13)</b>				
Schooling x 2005-2006	-0.14 (0.25)				
Schooling x 2003-2004	0.68 (0.17)				
<b><u>Opposition Occupations</u></b>		<b>30.18</b> <b>(1.05)</b>	<b>16.68</b> <b>(1.01)</b>		
Opp. Occupation x 2005-2006		-3.93 (2.88)	-1.31 (2.53)		
Opp. Occupation x 2003-2004		0.53 (1.45)	3.41 (1.25)		
<b><u>Opposition Sectors</u></b>				<b>29.95</b> <b>(1.03)</b>	<b>17.09</b> <b>(0.94)</b>
Opp. Sectors x 2005-2006				2.66 (2.13)	6.74 (1.84)
Opp. Sectors x 2003-2004				<b>11.57</b> <b>(1.41)</b>	<b>12.21</b> <b>(1.22)</b>
<b><u>Controls:</u></b>					
Demographics	YES	NO	YES	NO	YES



**Table 6: Proximate Determinants of Opposition Earnings Loss**

	<b>Employment Type</b>		<b>Employment Sector</b>		<b>Occupation</b>	
	<b>Public</b>	<b>Informal</b>	<b>Earnings (avg. for non-signers)</b>	<b>Education (avg. for non-signers)</b>	<b>Earnings (avg. for non-signers)</b>	<b>Education (avg. for non-signers)</b>
<b>Chavez Opponent</b>	-0.96 (0.35)	-1.78 (0.44)	2.97 (0.27)	0.30 (0.02)	5.27 (0.35)	0.50 (0.02)
<b>Chavez Opponent x 2005-2006</b>	-1.67 (0.82)	2.81 (0.63)	-1.72 (0.64)	-0.08 (0.04)	-3.18 (0.65)	-0.27 (0.04)
<b>Chavez Opponent x 2003-2004</b>	-0.59 (0.48)	2.10 (0.59)	-0.58 (0.38)	-0.04 (0.02)	-0.36 (0.50)	-0.05 (0.03)

## (4) *Maisanta* – Discussion

- Political discrimination had adverse impacts for pro-opposition individuals in Venezuela
  - Workers who signed petitions had 5% lower wages and shifted into informal employment
  - Relevant for understanding populism and patronage in Latin America (Peronism in Argentina) and other settings (Putin's Russia) with weak institutional checks, balances
- These findings provide a partial explanation for the stability of dictatorships or pseudo-democracies when the price of political opposition is high
  - A rationale for “preference falsification” (Kuran 1995)



# Whiteboard #1

# Whiteboard #2

# Whiteboard #3

# Whiteboard #4

# Whiteboard #5



