

M1

# M7 Social Assistance and Labor Market Outcomes

## Lessons from the evaluation of the Uruguayan PANES

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Buenos Aires  
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## Diapositiva 1

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**M1**

Subsidy to informality

Dynamic incentives

There are also good outcomes (despite lower insurance) - reduction in poverty

income and substitution effects

income and Proxy means testing

Marco, 06/04/2011

**M7**

govt amazing

and so BPS

Marco, 07/04/2011

# Structure

- *PANES*
  - Design and targeting
  - data
  - evaluation strategies (quasi-experimental)
- Findings [with V. Amarante, E. Miguel, A Vigorito, M Zerpa...]
  - Labor supply and earnings
  - Birth outcomes
- [Ignore channels]

## Preview of main findings

- Sizeable formal labor supply disincentives
- But not such to offset cash transfer → total income rises
- Very pronounced effects of cash in hand on low birth weight

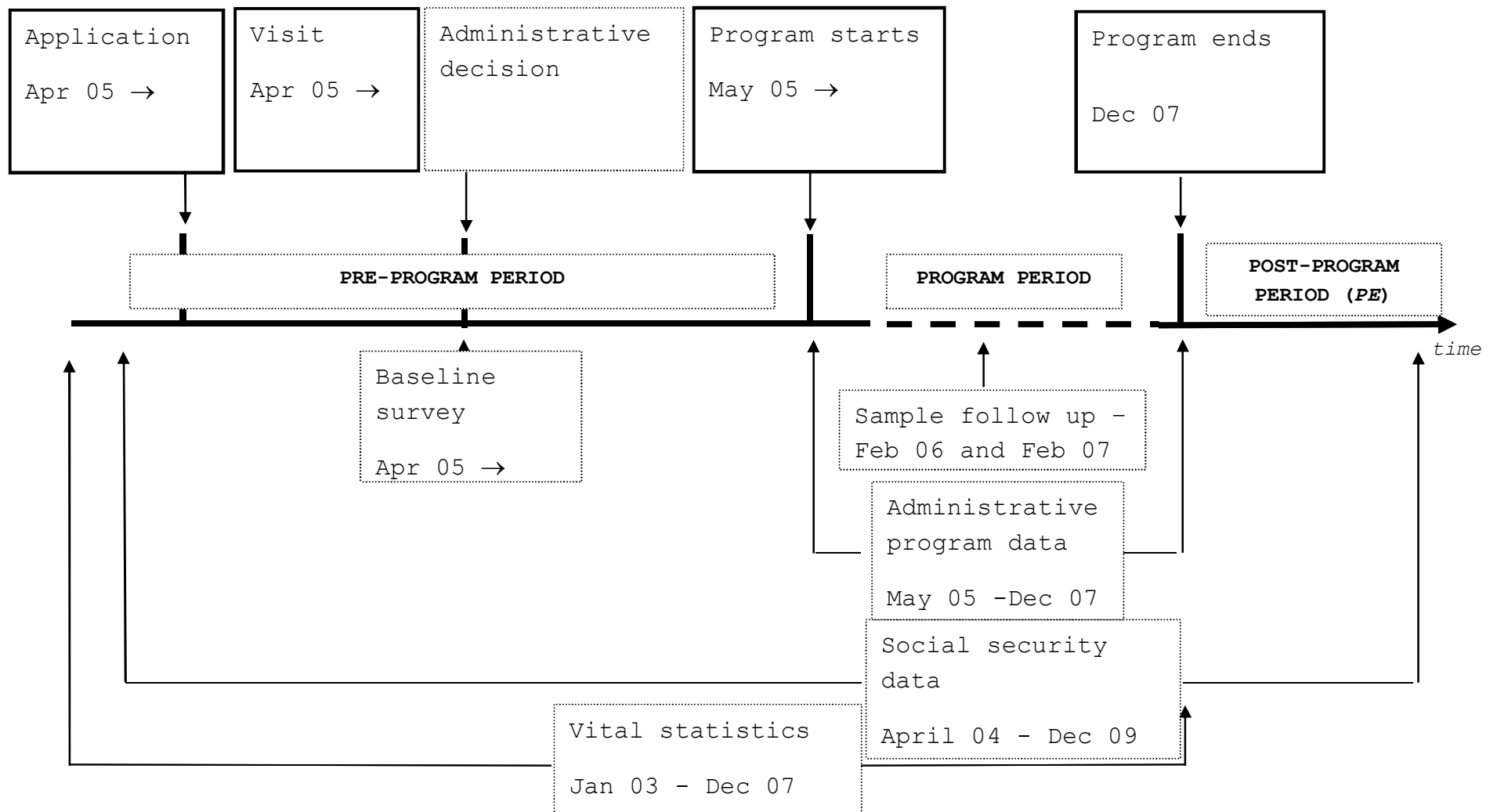
## *Plan de Atención Nacional a la Emergencia Social*

- 2001/02 economic crisis
- Temporary (04/05 -12/07) [ $\rightarrow$  *Plan de Equidad* (01/08 $\rightarrow$ )]
- Monthly cash transfer UY\$=1,360=US\$56 (=PPP US\$100)  
=50% of self-reported pre-treatment income
- (Food Card -US\$13 -US\$306)
- +other minor ingredients (TxU, RdS..)

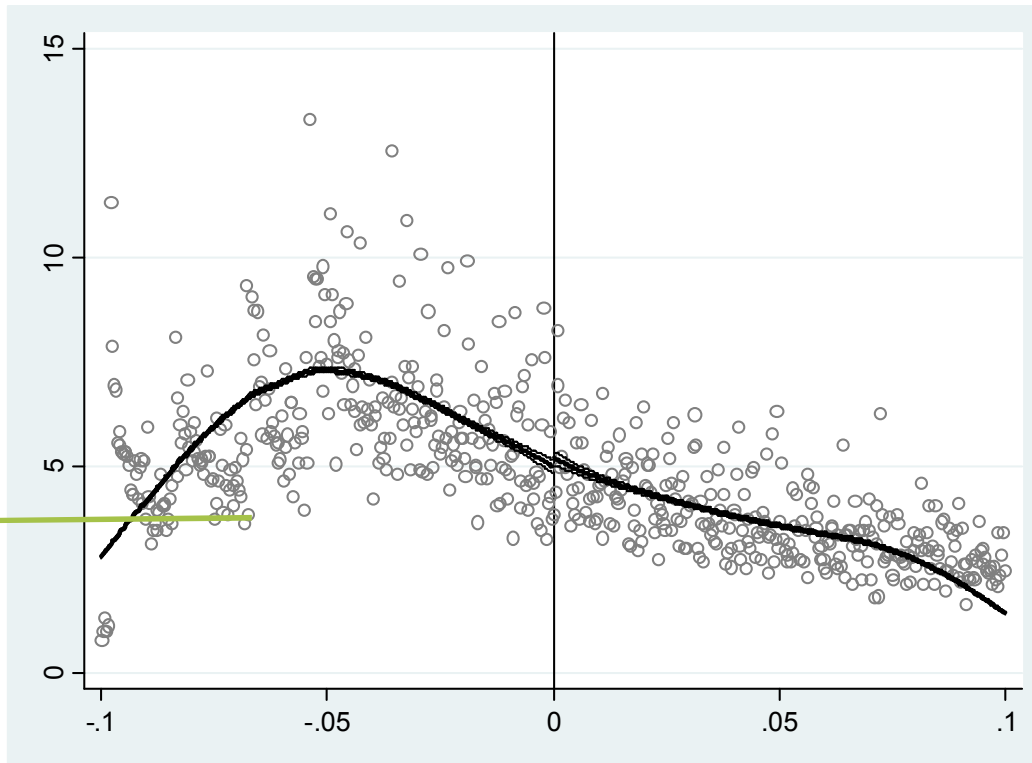
# Eligibility

- Target population: poorest 10%
- 190k applicant/100k beneficiary households = 750k individuals (14% pop.)
- Explicitly ruled out randomization
- Proxy means-test: discontinuous function of poverty score (linear combination of baseline “exogenous” characteristics)
- + Income means-test
- De facto unconditional
- Entry into the program staggered

## Timing of *PANES*, program and data



## Distribution of poverty score

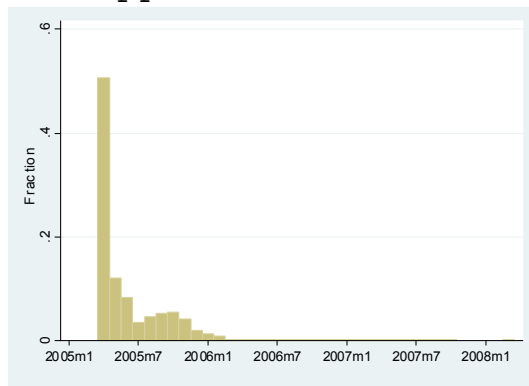


NO EVIDENCE OF SCORE MANIPULATION

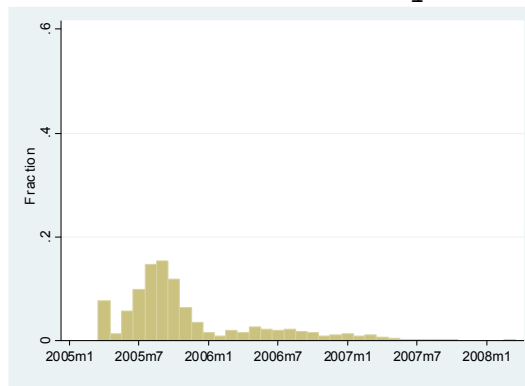


## Distribution of *PANES* program dates

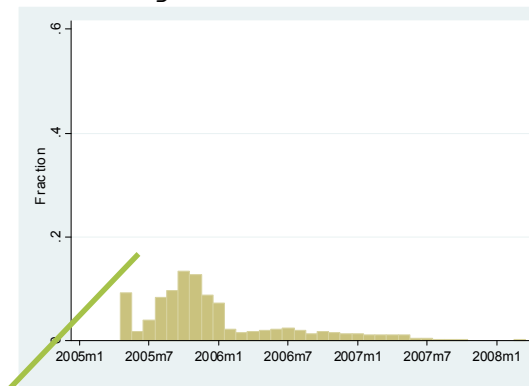
A: Application



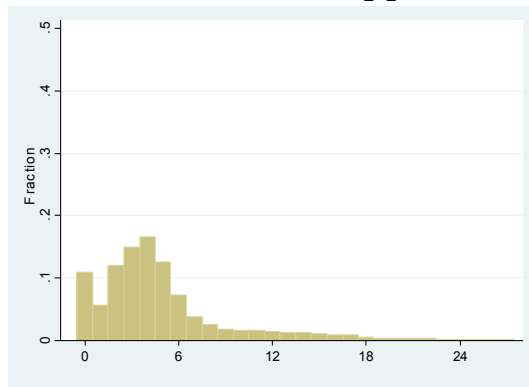
B: Baseline survey



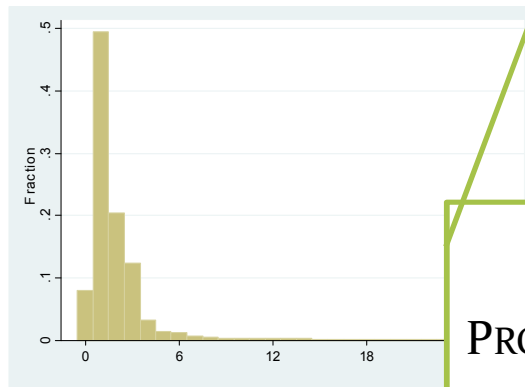
C: Program start date



D: Baseline - application



E: Start date - baseline

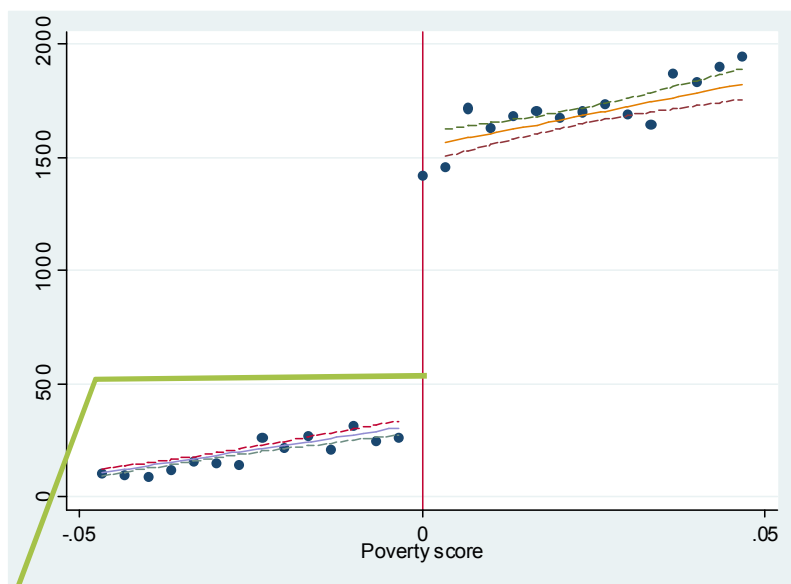


PROGRAM ENTRY STAGGERED

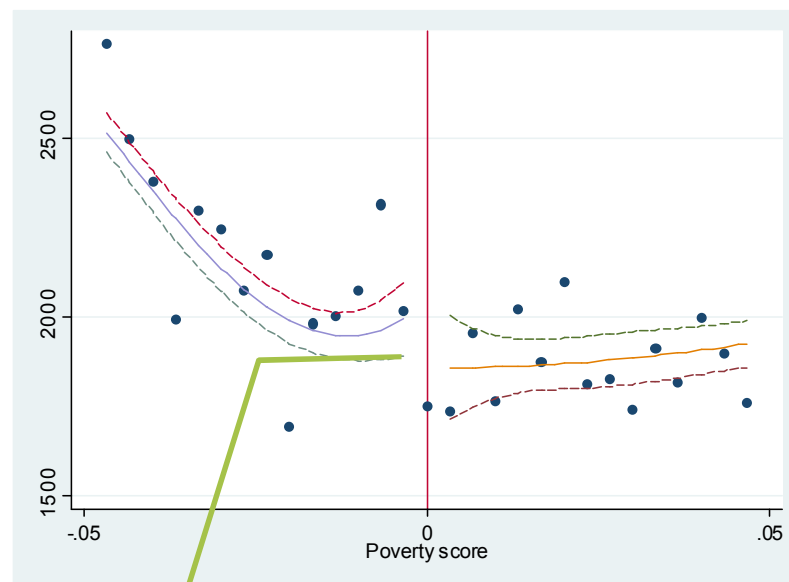
## Social Assistance and LM outcomes

- Negative labor supply effect, income + substitution
- (increase in informality?)
- Potentially positive LT effects
- LAC evidence mixed
- Identification strategy: RD - Compare eligible (treatment) and ineligible (control) individuals in neighborhood of poverty score threshold

## Fraction in program and HH earnings as a function of poverty score - 2<sup>nd</sup> sem. 2007



PARTICIPATION DISCONTINUOUS IN  
POVERTY SCORE



OPPOSITE DISCONTINUITY IN HH  
EARNINGS

## Diapositiva 10

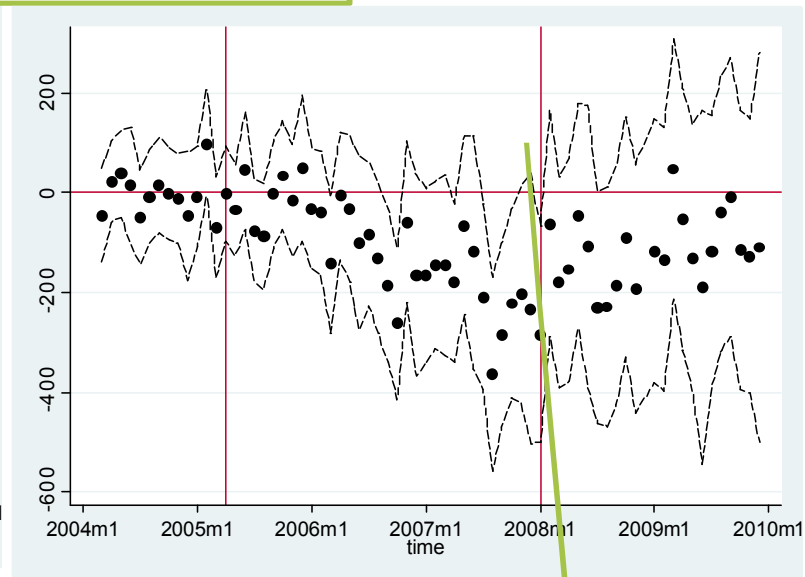
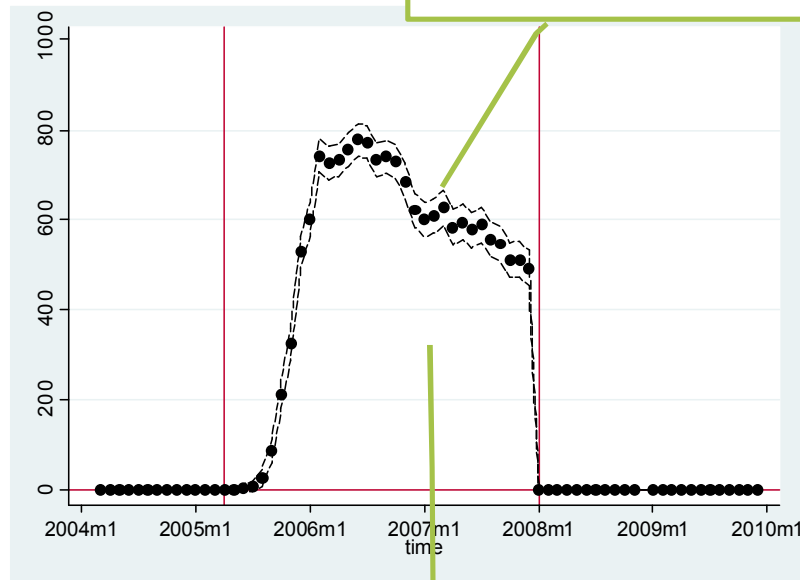
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**M18**

Marco, 07/04/2011

## RD estimates of eligibility on PANES transfers and HH earnings - by month

PER-HH TRANSFER = UY\$600-800



PROGRAM PARTICIPATION INCREASES  
RAPIDLY AND THEN FALLS

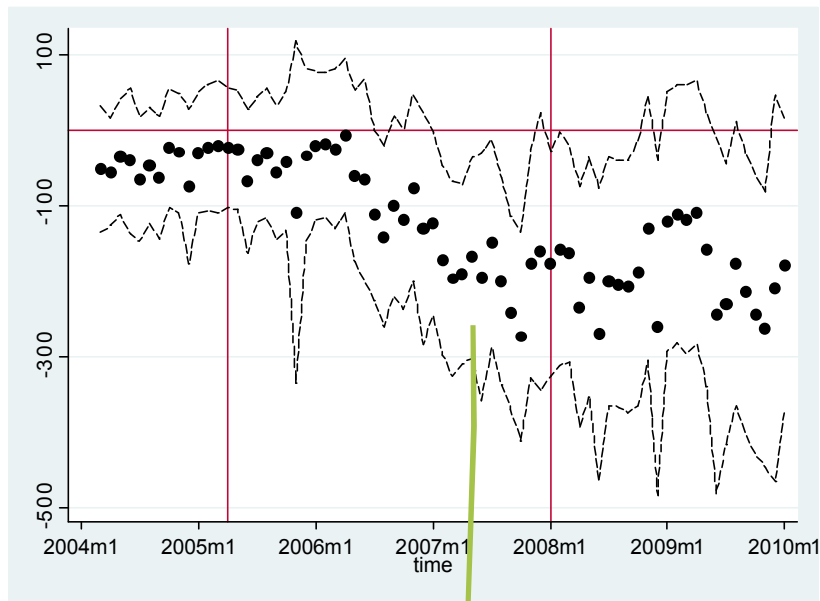
OPPOSITE – BUT SMALLER -EFFECTS ON EARNINGS =  
UY\$ 0-200

PERSIST AFTER END OF PROGRAM

DYNAMIC INCENTIVES OF WELFARE? (EFFECT ON  
ACCESSION RATES)

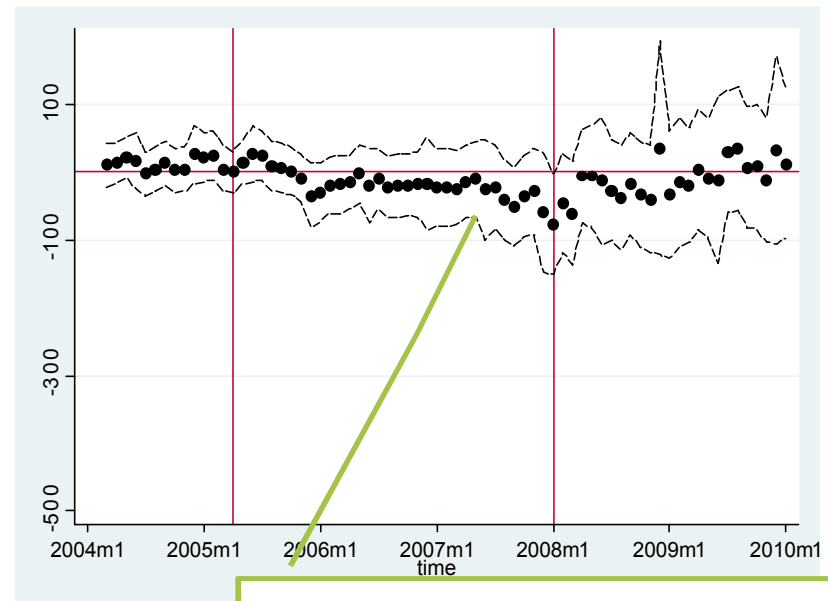
## RD estimates of eligibility on earnings by month and gender

Males



AVERAGE EARNINGS GAP FALLS FOR  
MEN

Females

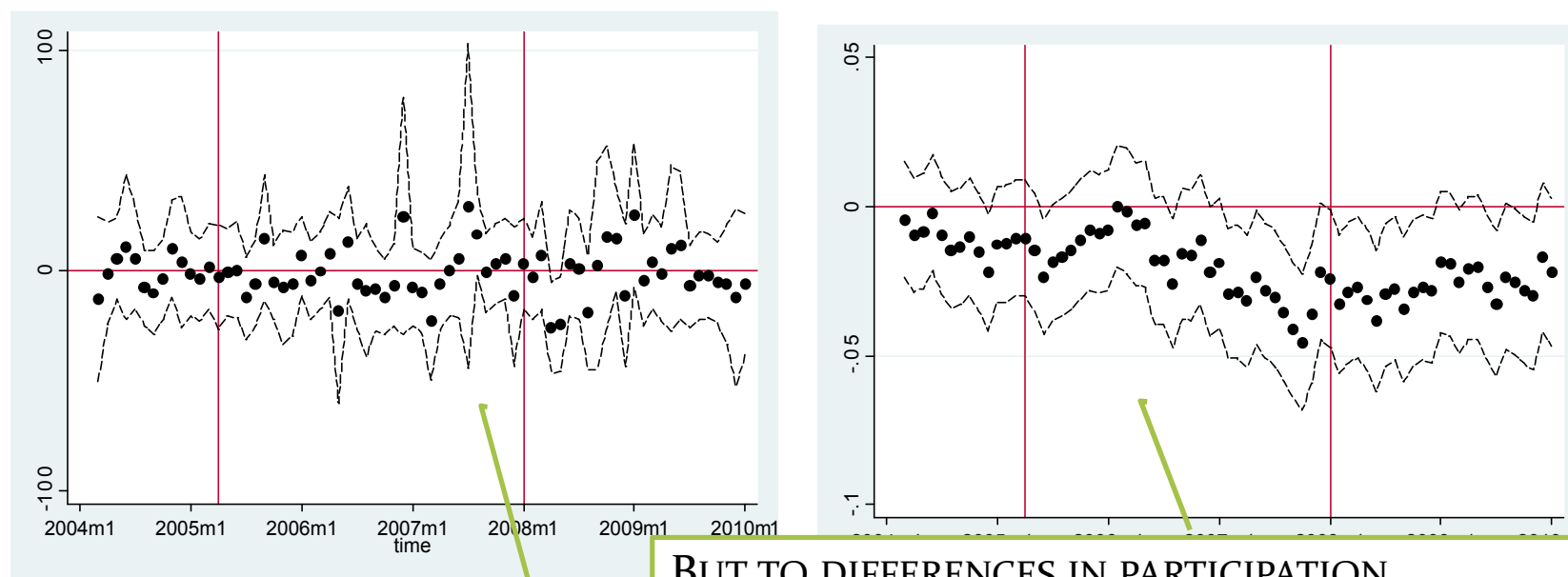


EFFECT FOR WOMEN SMALLER

## RD estimates of eligibility on earnings by gender

	(1)	(2)
<u>Males</u>		
Pre-program	29.34 (23.68)	
Program	-61.85** (27.30)	-76.22*** (28.60)
Post-program	-120.7** (49.22)	-143.9*** (51.23)
<u>Females</u>		
Pre-program	10.85 (9.847)	
Program	-19.75* (11.96)	-23.23* (12.61)
Post-program	-34.78 (25.05)	-40.42 (26.25)
Individual fixed effects	No	Yes

## RD estimates of eligibility on daily wages and participation by month - males

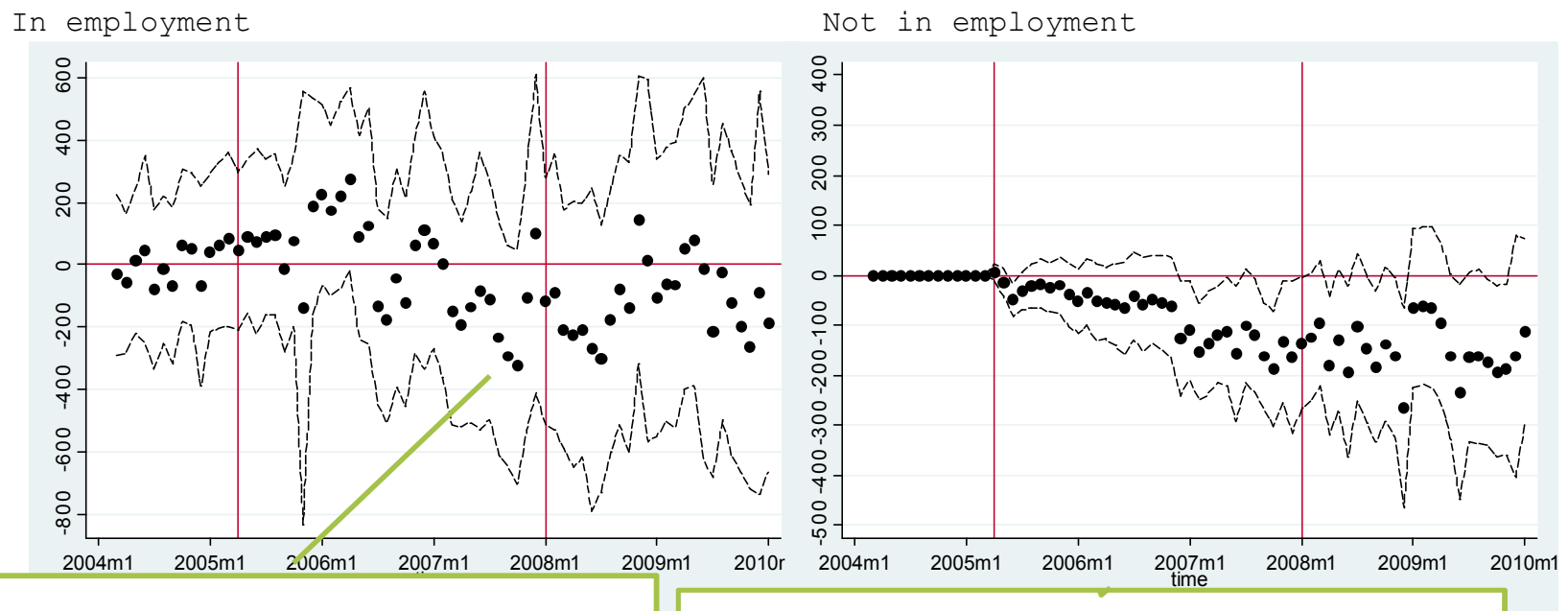


DIFFERENCES IN EARNINGS NOT DUE TO DIFFERENCES IN  
WAGE RATES

BUT TO DIFFERENCES IN PARTICIPATION



## RD estimates of eligibility on earnings – by employment status in pre-PANES period - by month - males



NO EFFECT AMONG THOSE IN  
FORMAL WORK BEFORE PROGRAM

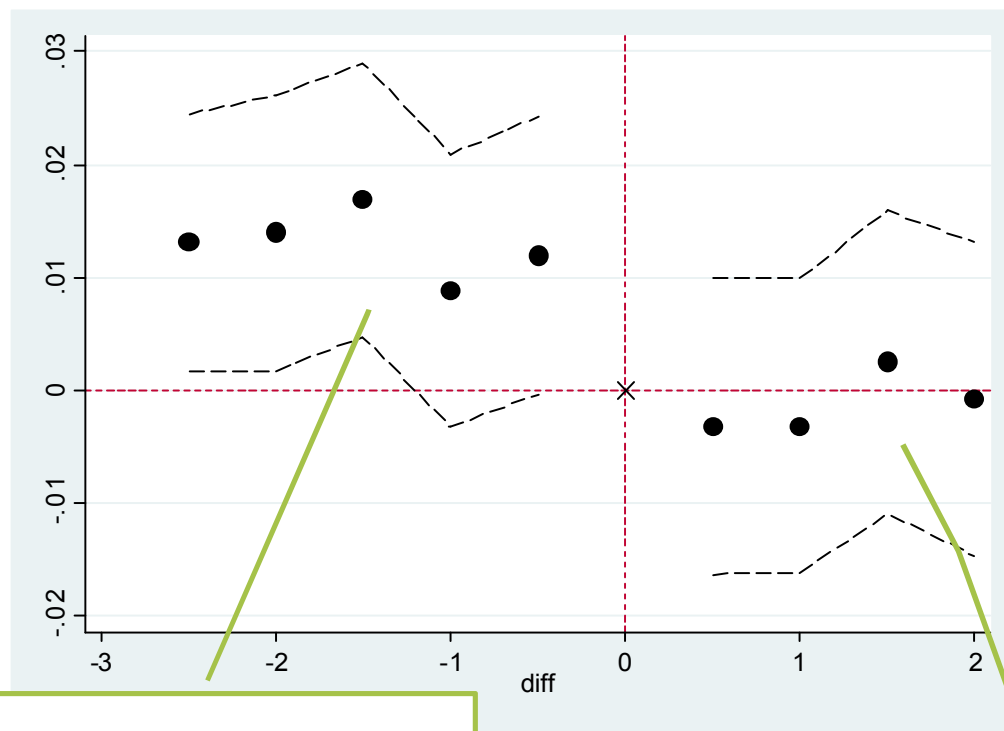
EFFECT IS AMONG THOSE OUT OF FORMAL  
EMPLOYMENT BEFORE PROGRAM  
(MAJORITY)

FORMAL WORK DECISIONS IRREVERSIBLE?

# Social Assistance and birth outcomes

- Can cash transfers break cycle of inter-generational poverty?
- Little evidence on cash in-hand, unrestricted cash social assistance in uterus
- Behavioural responses and channels
- Two identification strategies:
  - Staggered entry dates – Diff-in-Diff
  - Discontinuity in baseline score – RD
  - + 2SLS

## Fraction of low weight births as a function of time to/since first income transfer

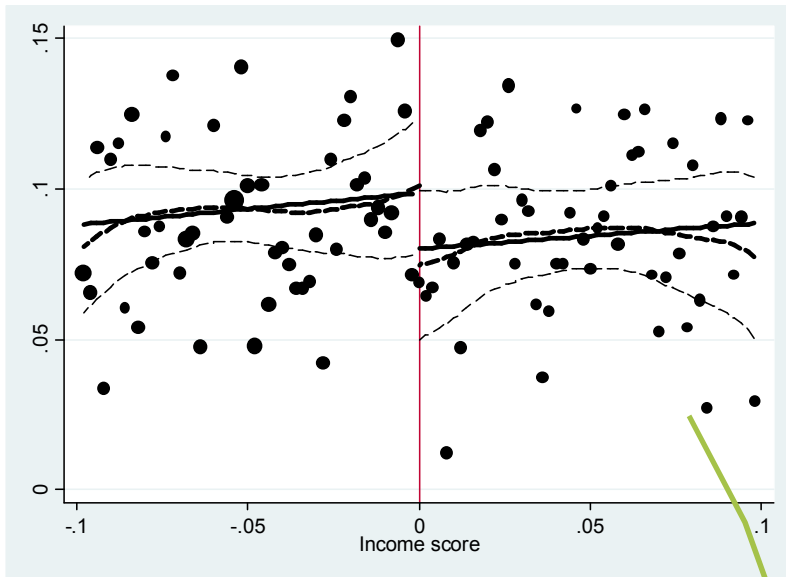


CHILDREN NOT EXPOSED TO  
PROGRAM IN UTEURS

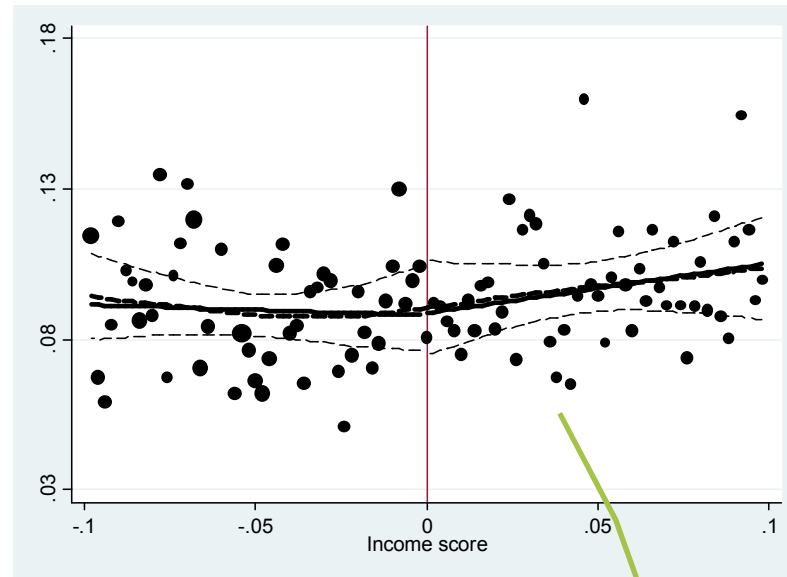
CHILDREN EXPOSED TO PROGRAM  
IN UTEURS

## Fraction of low weight births as a function of *PANES* income score

A: Program period



B: Pre-program period



ELEGIBLE: LOWER INCIDENCE OF  
LBW DURING PROGRAM

BUT NOT BEFORE PROGRAM

## Diapositiva 18

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**M17**

ted likes more full compliance

Marco, 21/12/2010

## Program effects on birth outcomes

	(1)	(2)	(3)	(4)
	-0.027*** (0.005)	-0.027*** (0.005)	-0.035*** (0.009)	-0.027*** (0.009)
Controls	No	Yes	Yes	Yes
Mother fixed effects	No	No	No	Yes
Sample	All	All	Panel	Panel

## Program effects on birth outcomes

	(1)	(2)	(3)	(4)	(5)	(6)
	-0.019** (0.009)	-0.023 (0.015)	-0.030*** (0.007)	-0.020 (0.014)	-0.036*** (0.013)	-0.050** (0.025)
Sample period	Program	Program	Pre- program and program	Pre- program and program	Pre- program and program	Pre- program and program
Income score range	All	-.1/+1	All	-.1/+1	All	-.1/+1
Income score function	Linear	Linear	Linear	Linear	Linear	Linear
Mother fixed effects	No	No	No	No	Yes	Yes
Observations	21,448	10,132	68,858	31,336	24,346	9,333

## Summary of main findings

- Negative, sizeable, persistent effect of PANES on formal labor market participation and earnings
- Informality?
- Reduction in incidence of LBW (-10% -30%)
- No evidence that effects driven by “behavioral adjustments”



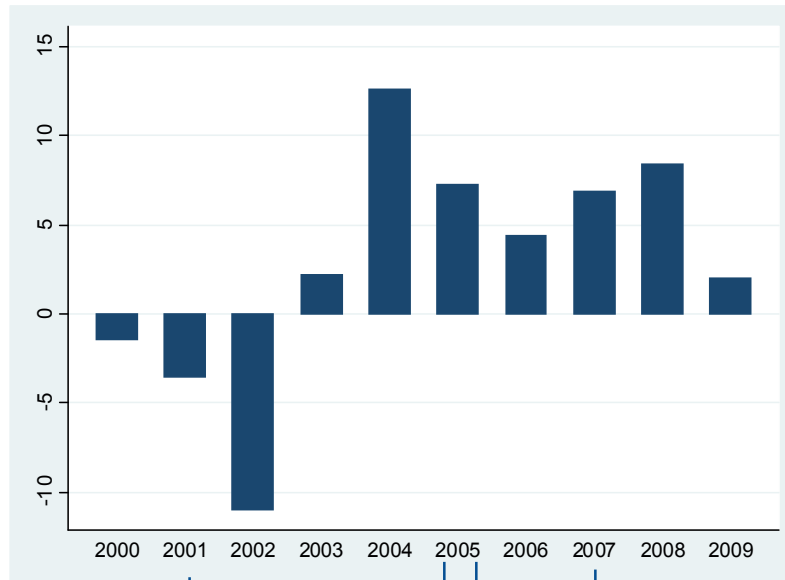
# Variables entering the income score

- type of household (head only; head and spouse; head and children; head, spouse and children only; with non-relatives, with relatives other than head, spouse or children)
- an indicator for public employees in the household
- an indicator for pensioners in the household
- average years of education of individuals over age 18 and its square
- interactions of age indicators (0-5, 6-17, 18-24, 25-39, 40-54, 45-64, 65 and over) with gender
- indicators for household head age
- residential overcrowding
- whether the household was renting
- toilet facilities (no toilet, flush toilet, pit latrine, other)
- durables ownership (e.g., refrigerator, TV, car, etc.)

# Background: Uruguay



# Background: Uruguayan *PANES*



Economic crisis (01/02)

Elections (Oct 04)

*PANES* (Apr. 05-Dec 07)



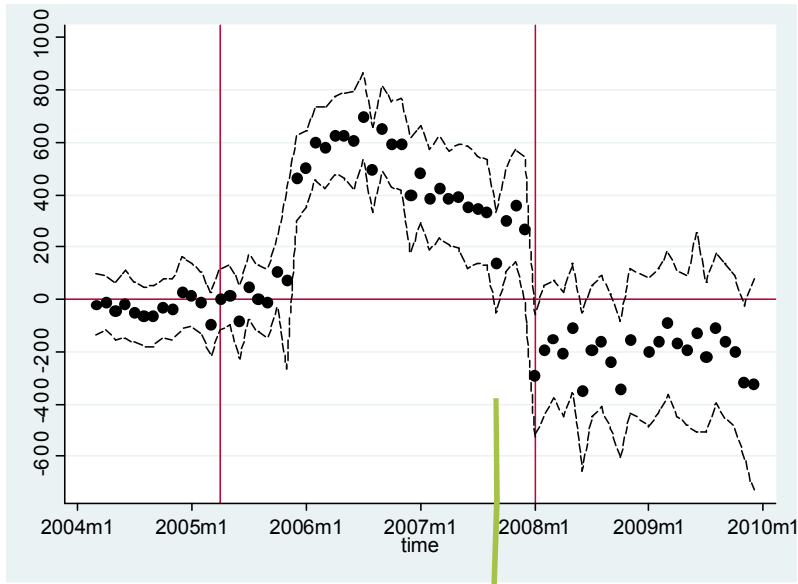
# Data

- Baseline survey (identifies households)
- Program data
- Sample follow-up
- [National household survey]
- Administrative data (linked by *cedula*)
  - Social security
  - Birth records

## Descriptive statistics by eligibility status and time

	Pre- <i>PANES</i> period (March 2004 – March 2005)		<i>PANES</i> period (April 2005 – December 2007)		Post <i>PANES</i> period (January 2008 – December 2009)	
	Eligible	Non- Eligible	Eligible	Non- Eligible	Eligible	Non- Eligible
Males						
Work	0.13	0.20	0.18	0.26	0.26	0.34
Monthly Earnings	404.66	743.47	733.97	1279.76	1425.97	2120.02
Monthly days work	2.49	4.38	3.26	5.62	5.13	7.35
Daily wage	176.66	179.69	241.54	242.1	297.44	305.49
In program	–	–	0.60	0.05	–	–
Ever in program	0.95	0.09	0.95	0.09	0.95	0.09
Monthly per adult <i>PANES</i> transfer	–	–	285.31	34.41	–	–
Females						
Work	0.09	0.13	0.10	0.16	0.14	0.23
Monthly Earnings	113.53	280.99	190.05	480.27	481.26	931.65
Monthly days work	1.03	2.34	1.29	3.06	2.54	4.66
Daily wage	113.92	127.97	151.02	166.96	201.68	210.45
In program	–	–	0.62	0.05	–	–
Ever in program	0.95	0.09	0.95	0.09	0.95	0.09
Monthly per adult <i>PANES</i> transfer	–	–	374.64	37.63	–	–

## RD estimates of eligibility on total household income - by month (excludes PE)



TOTAL HH INCOME INCREASES =  
UY\$400-600

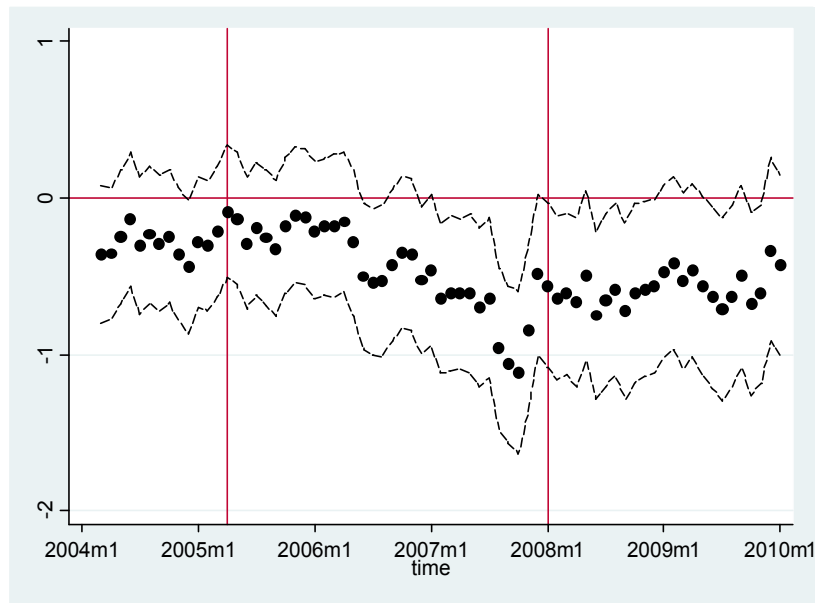
## Descriptive statistics - All births: Uruguay 2003-05 – by *PANES* status

	<i>PANES</i> applicants		Non- <i>PANES</i> Applicants
	Eligible	Ineligible	
<u>A.Pre-program period</u>			
Birth outcomes			
1. Low birthweight	0.10	0.09	0.08
Prenatal and natal care			
2. Total no. controls	6.53	7.53	8.28
Socio-economic indicators			
3. Mother incomplete primary ed.	0.12	0.05	0.04
4. Mother in work	0.12	0.18	0.43
5. Out of wedlock	0.80	0.72	0.52
<u>B.Program period</u>			
6. Low birthweight	0.09	0.09	0.08
7. Mother ever received income transfer	0.97	0.11	–
8. Income trans. during pregnancy (0/1)	0.55	0.06	–
9. Amount income tran. during pregnancy	607.52	69.21	–
Observations	50,939	20,872	163,370

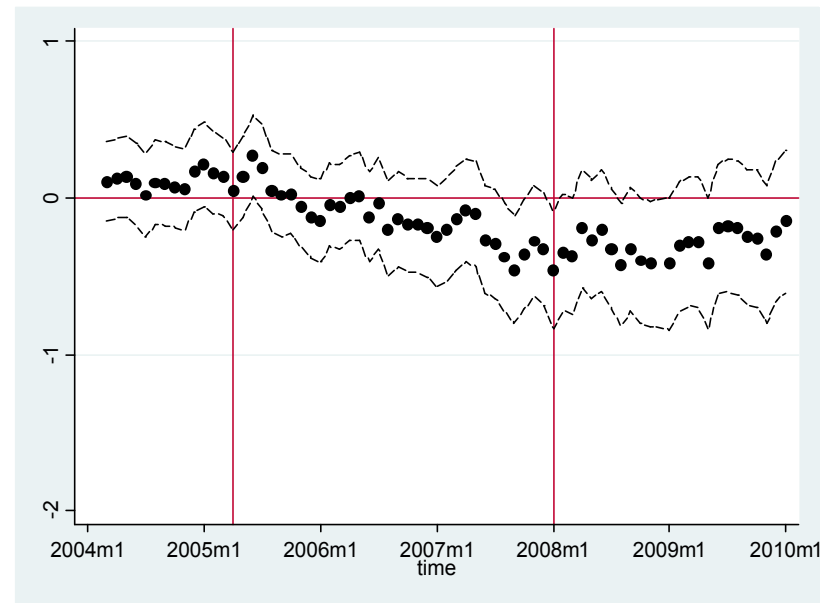


## RD estimates of eligibility on days of work (including zeros) by month

Males



Females



EFFECT ON EARNINGS DUE TO DIFFERENCES IN PARTICIPATION