Migration Restrictions and Criminal Behavior: Evidence from a Natural Experiment*

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[OUTLINE, PRELIMINARY AND INCOMPLETE]

Abstract

We estimate the causal effect of immigrants' legal status on criminal behavior exploiting exogenous variation in migration restrictions across nationalities driven by the last round of the European Union enlargement. Unique individual-level data on a collective clemency bill enacted in Italy five months before the enlargement allow us to compare the post-release criminal record of immigrants from new member countries with a matched control group of pardoned inmates from candidate member countries. Difference-in-differences in the hazard rate of re-arrest between the two groups before and after the enlargement show that obtaining legal status lowers the recidivism of economically motivated offenders, but only in areas that provide relatively better labor market opportunities to legal immigrants. We provide a search-theoretic model of criminal behavior that is consistent with these results.

Keywords: immigration, crime, legal status

JEL codes: F22, K42, C41

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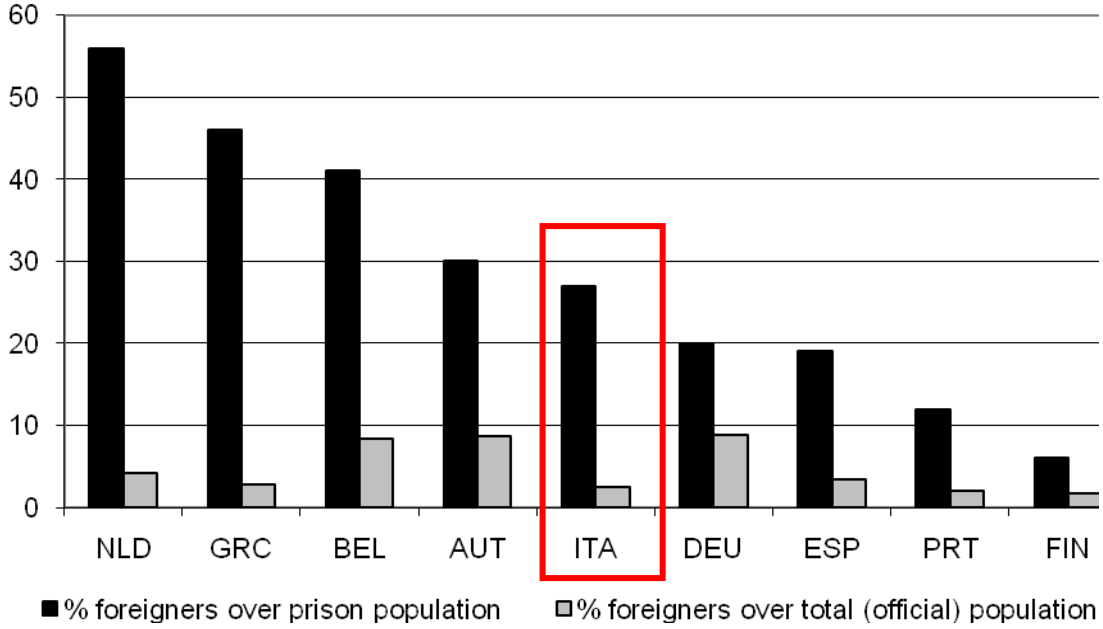
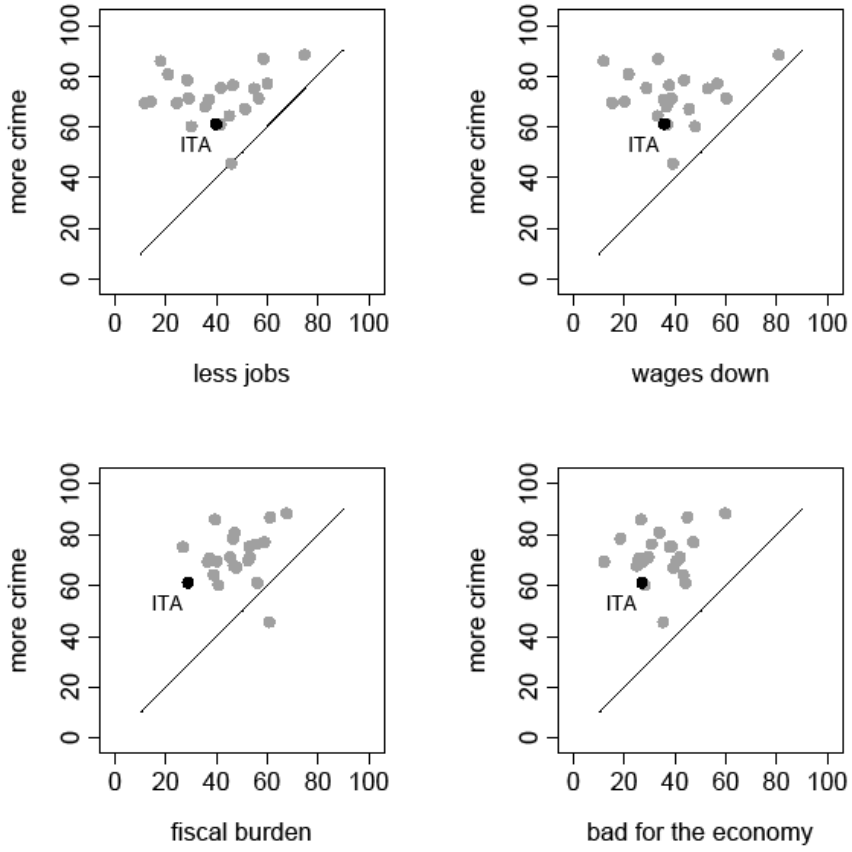
Motivation

Foreigners in prison and total population (European countries)

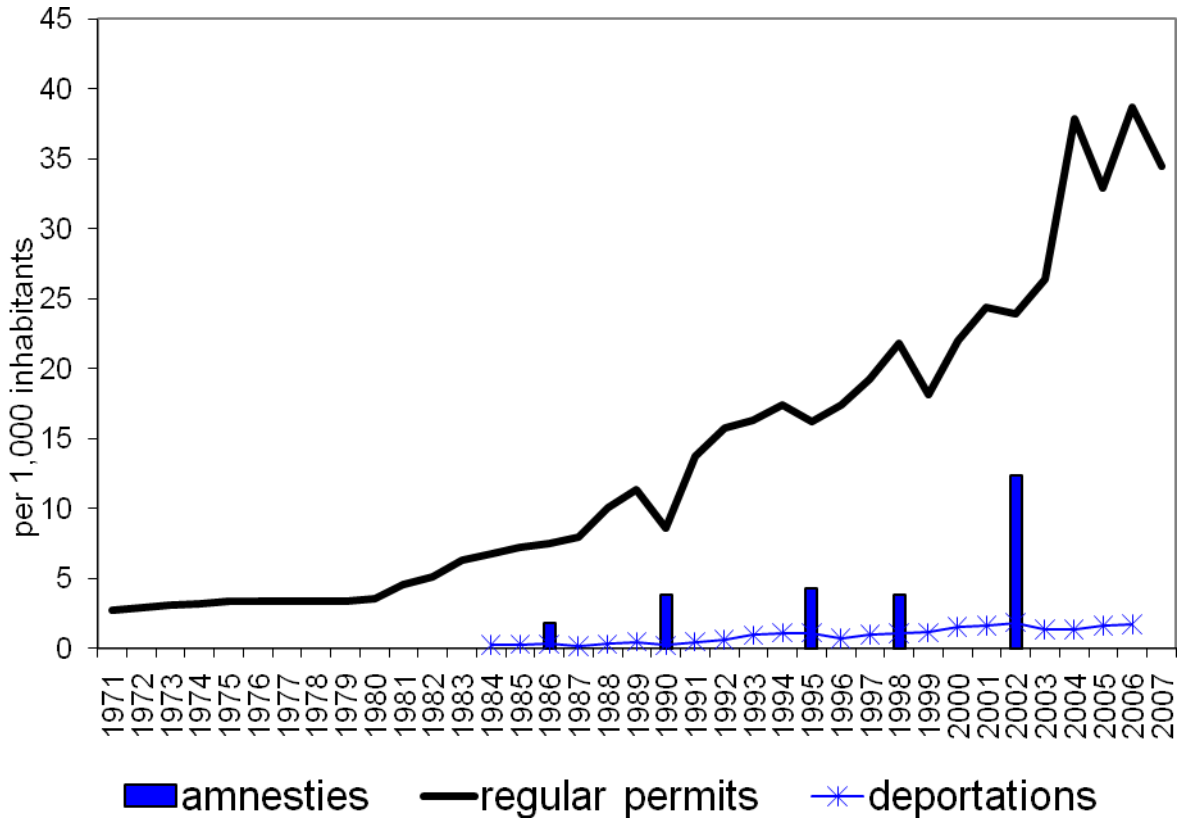


Natives' concerns about immigration (ESS 2002): % of people worried about…



Introduction

Illegal immigration in Italy



- 70%-80% of foreigners in prison are illegal aliens (**not** because of immigration offenses)
- Criminal behavior of legal aliens similar to natives (≈2% offenders)

Institutional background:

1. illegal immigrants can not work in the official sector
2. if apprehended, they are expelled, NOT incarcerated

Theoretical framework: ambiguous effect of migration restrictions

1. worse labor market opportunities (in the official sector) lowers opportunity cost of crime for illegals, ↑ crime
2. incapacitation of illegals (through expulsions), ↓ crime

Contribution

estimate the effect of migration restrictions on crime

Threats to identification:

1. illegal immigrants usually unobserved
2. self-selection into legal status

Empirical strategy:

1. natural experiment
   - August 1st 2006: collective pardon if ≤3 years of residual sentence
   - January 1st 2007: EU enlargement ➔ Romanian and Bulgarian pardoned individuals obtain legal status in Italy

2. individual-level data on universe of pardoned inmates
   - about 9,000 foreign males, 725 from new EU countries
   - info on recidivism and some individual characteristics

Methodology: prop. score weighting + diff-in-diff (Abadie 2005)

- compare recidivism of
  - new EU members vs. EU candidate countries
  - before vs. after the EU enlargement
- implementation: simple means, logit, cox, structural break tests + regression discontinuity

Main result:

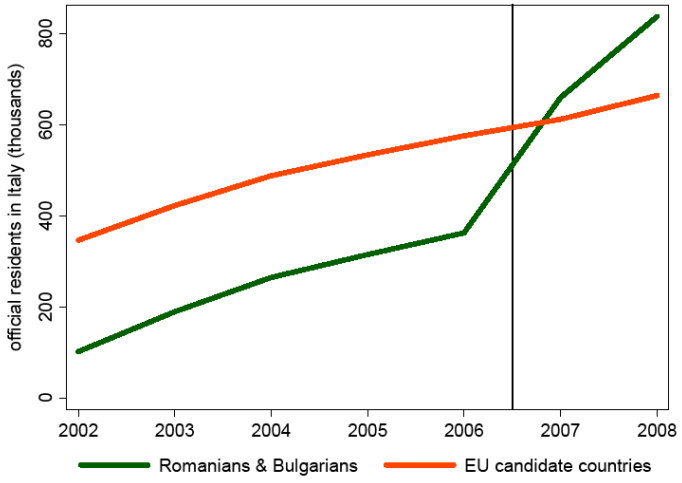
- effect on crime depends on the relative labor market opportunities of legal vs. illegal immigrants:
  - better in North ➔ ↓ crime
  - worse in South ➔ change in crime ≈ 0

The Natural Experiment (I)

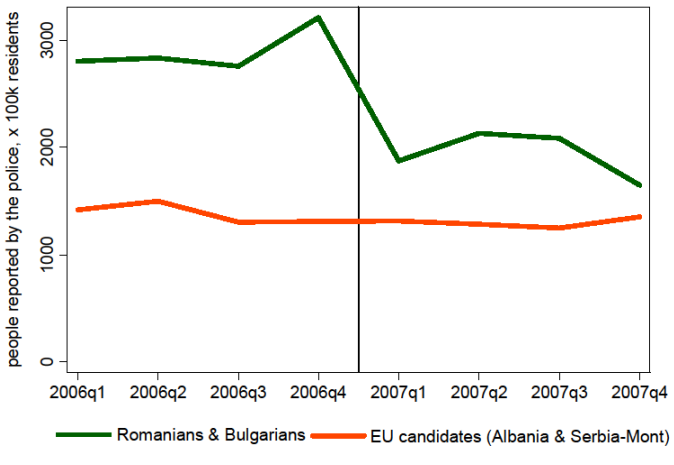
The EU enlargement (January 1st, 2007)

- New EU member countries (treatment group)
- Candidate EU countries (control group)

Foreign official residents

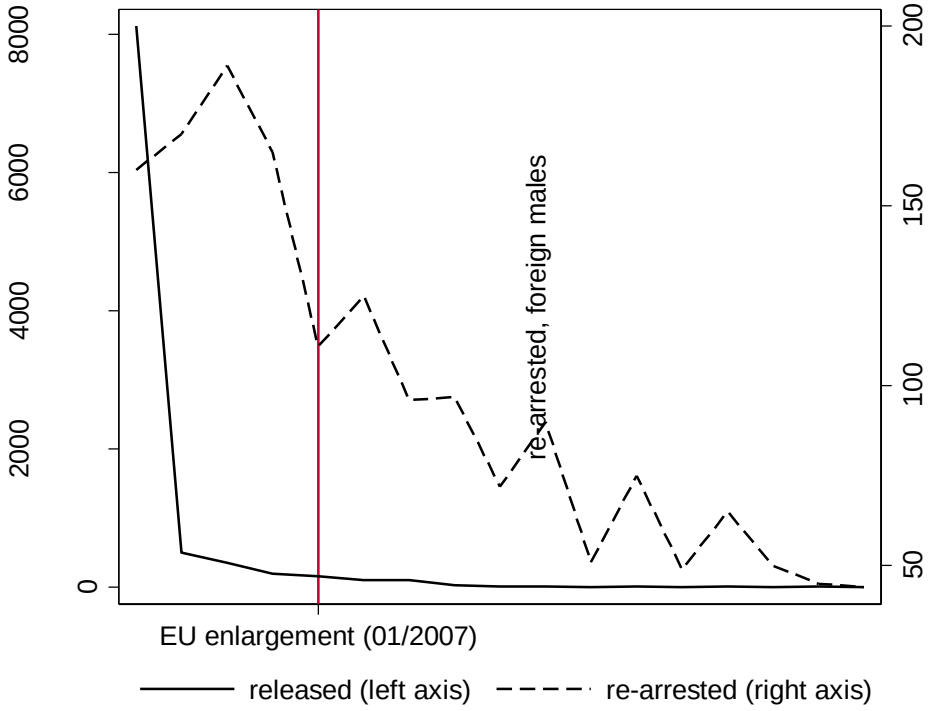


Foreigners incarcerated/residents

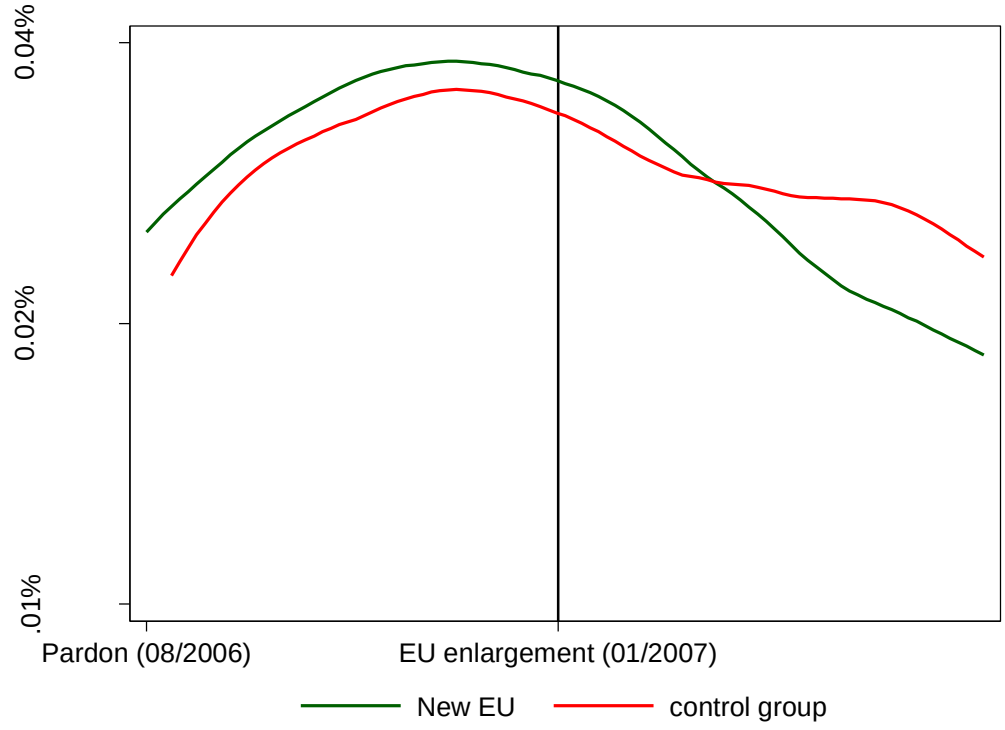


The Natural Experiment (II)

The Collective Clemency Bill (August 1st, 2006)



Re-incarceration rates (pardoned inmates)

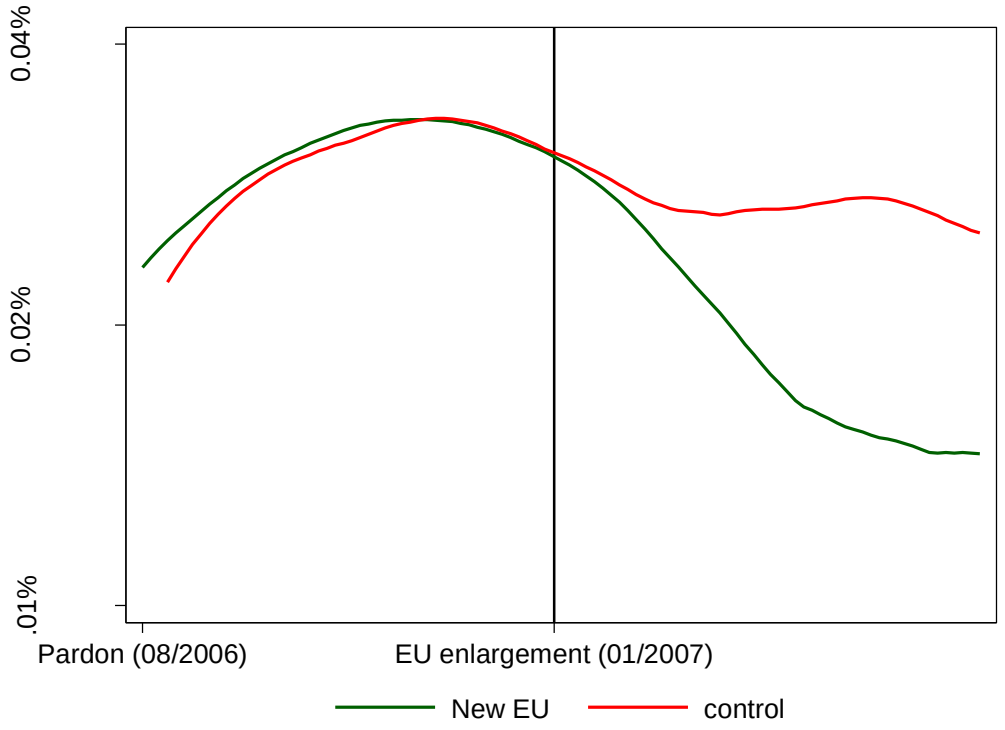


Propensity score weighting

Reference: Abadie (2005), "Semiparametric Difference-in-Differences Estimators." *Review of Economic Studies*, 72(1): 1–19.

	NON-WEIGHTED SAMPLE					PROPENSITY SCORE WEIGHTING				
	New EU		**control**		**diff**	**New EU**		**control**		**Diff**
	obs	*mean*	*obs*	*mean*	*mean*	*obs*	*mean*	*obs*	*mean*	*Mean*
age	725	31.083 (7.597)	1622	33.269 (8.088)	-2.187*** (0.355)	700	33.335 (8.528)	1493	32.716 (7.914)	0.619 (0.380)
schooling	334	1.802 (0.399)	966	1.778 (0.415)	0.024 (0.026)	324	1.781 (0.414)	883	1.777 (0.417)	0.004 (0.026)
married	725	0.257 (0.437)	1622	0.288 (0.453)	-0.031 (0.020)	700	0.266 (0.442)	1493	0.277 (0.448)	-0.011 (0.021)
economic crimes	725	0.840 (0.367)	1622	0.894 (0.308)	-0.054*** (0.015)	700	0.857 (0.350)	1493	0.877 (0.328)	-0.020 (0.016)
violent crimes	725	0.295 (0.456)	1622	0.242 (0.428)	0.053*** (0.020)	700	0.284 (0.451)	1493	0.262 (0.440)	0.022 (0.021)
sentence (months)	725	20.310 (20.706)	1622	39.183 (32.330)	-18.873*** (1.306)	700	32.115 (30.630)	1493	33.269 (30.593)	-1.154 (1.435)
residual sentence	725	9.305 (10.615)	1622	15.727 (14.784)	-6.423*** (0.609)	700	13.349 (12.917)	1493	13.830 (14.130)	-0.481 (0.646)

Re-incarceration rates (pardoned inmates, weighted sample)



Difference in difference, all Italy

Non parametric estimates

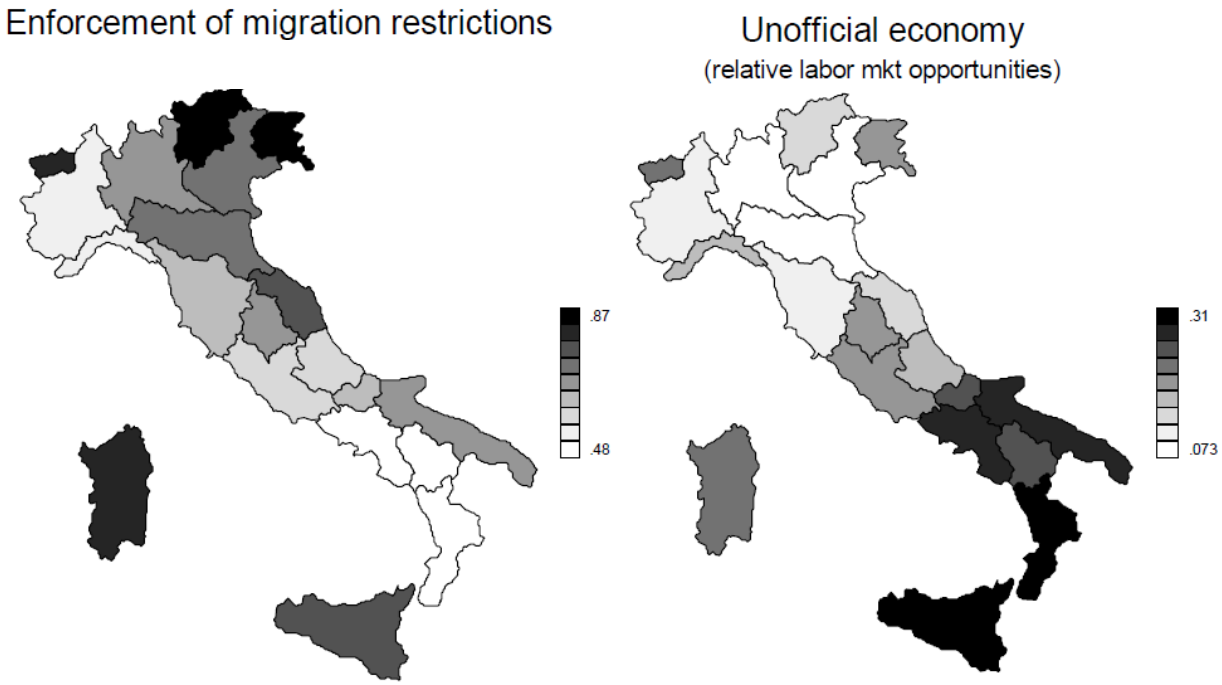
	NON-WEIGHTED SAMPLE			PROPENSITY SCORE WEIGHTING		
	new EU	**control**	**diff.**	**new EU**	**control**	**diff.**
2007	0.038	0.049	-0.011	0.023	0.054	-0.031***
	(0.191)	(0.216)	(0.011)	(0.006)	(0.008)	(0.010)
2006	0.056	0.056	0.0002	0.058	0.057	0.001
	(0.231)	(0.230)	(0.012)	(0.014)	(0.008)	(0.015)
diff.	-0.018	-0.007	-0.012	-0.035**	-0.003	-0.032*
	(0.013)	(0.009)	(0.016)	(0.014)	(0.011)	(0.017)

Semi-parametric and parametric estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	Cox estimates		*Logit estimates*			
			2006-III	*2006-IV*	*2007-I*	*2007-II*
new EU	0.022	0.002	0.394	-0.253	-0.751**	-1.033*
	(0.284)	(0.283)	(0.468)	(0.392)	(0.374)	(0.538)
post	-0.248	-0.277				
	(0.412)	(0.412)				
new EU X post	-0.679*	-0.668*				
	(0.360)	(0.358)				
age		0.088	0.088	0.136	0.006	-0.046
		(0.071)	(0.171)	(0.158)	(0.152)	(0.164)
age2		-0.001	-0.001	-0.001	-0.0003	0.001
		(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
married		-0.283	0.236	-0.888	-0.091	0.474
		(0.219)	(0.601)	(0.527)	(0.382)	(0.654)
residual sentence		-0.021***	-0.024	-0.038***	-0.018	0.007
		(0.006)	(0.020)	(0.013)	(0.011)	(0.014)
n. subjects	1871	1871	1668	1799	1798	1753

Differences between North and South

	North	Centre-South	North/CSouth
Total sample	1244	1103	1.1
New EU	348	377	0.9
Candidate countries	896	726	1.2
economic structure (labor mkt opportunities)			
GDP per capita	30066	20947	1.4
shadow economy (%GDP)	8.7%	17.9%	0.5
employment rate	48.0%	37.4%	1.3
illegal condition in 2002 (deterrence)			
residence permits	832	616	1.4
illegals (applications for amnesty)	366	336	1.1
illegals/permits	30.6%	35.3%	0.9



Bottom line:

1. better labor market opportunities in North for legal relative to illegal immigrants
2. similar incapacitation effect (i.e. probability of apprehension) across regions

➔ expect greater (negative) effect of legalization on crime rates in Northern regions

Differential estimates, North vs. South

Non parametric estimates, weighted sample

	NORTH			SOUTH		
	new EU	**control**	**diff.**	**new EU**	**control**	**diff.**
2007	0.014	0.061	-0.046***	0.034	0.046	-0.013
	(0.007)	(0.011)	(0.013)	(0.009)	(0.012)	(0.015)
2006	0.066	0.053	0.013	0.049	0.063	-0.014
	(0.020)	(0.010)	(0.022)	(0.019)	(0.013)	(0.023)
diff.	-0.052**	0.007	-0.059**	-0.015	-0.017	0.001
	(0.021)	(0.015)	(0.025)	(0.021)	(0.018)	(0.027)

Semi-parametric (Cox) estimates, weighted sample

	(1)	(2)	(3)	(4)
	NORTH		SOUTH	
new EU	0.214	0.234	-0.224	-0.256
	(0.396)	(0.391)	(0.490)	(0.484)
post	-0.277	-0.343	-0.142	-0.154
	(2.388)	(2.415)	(4.318)	(4.498)
new EU X post	-0.940*	-0.923*	-0.323	-0.331
	(0.544)	(0.540)	(0.603)	(0.600)
age		0.151		0.022
		(0.103)		(0.094)
age2		-0.002		-0.0001
		(0.001)		(0.001)
married		-0.599**		0.117
		(0.264)		(0.346)
residual sentence		-0.022**		-0.022*
		(0.008)		(0.013)
n. subjects	1056	1056	815	815