Immigration policy and crime

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Motivation

Stylized fact #1

- widespread concerns about immigrant crime

![Bar chart showing percentage of respondents in various countries expressing concerns about immigrant crime]

- Immigrants take jobs away from natives
- Immigration will cause taxes to be raised
- Immigration in general will increase crime in our society
Motivation

Stylized fact #2

- in most OECD countries, immigrants over-represented in prison
- very noisy measure of involvement in crime, but only one available across countries...
Motivation

stylized fact #3 (Italy)

- in Italy, stark differences between legal and illegal immigrants
- the available estimates place the illegals at 15-20% of the foreign resident population
- however, they account for the majority of those involved in criminal acts
  - 80% of the arrests for property crimes \(\Rightarrow\) 16-23 times greater probability of being arrested
  - 60-70% of the arrests for violent crimes \(\Rightarrow\) 6-13 times greater probability of being arrested
Motivation
the importance of legal status

- Potential explanation: illegal immigrants can not work in the official sector, open a firm, etc. ⇒ higher probability of committing crimes
- in this report we try to understand whether legal status has really such an effect on the behavior of immigrants
Motivation
the importance of legal status

- Potential explanation: illegal immigrants can not work in the official sector, open a firm, etc. ⇒ higher probability of committing crimes
- in this report we try to understand whether legal status has really such an effect on the behavior of immigrants
- problem: we can not just compare legal and illegal immigrants
  - illegals are typically young single males ⇒ higher risk of committing crime (independently of legal status)
  - we would be comparing apples with oranges....
Motivation

**empirical strategy

- **possible solutions**
  - ideally: compare the same individual when legal and illegal (at the same moment in time) $\Rightarrow$ impossible
  - experimental approach: distribute legal status randomly across immigrants, then compare the criminal activity of the legal and illegal ones $\Rightarrow$ unfeasible in practice
  - quasi-experiment: exploit variation in legal status that is “as-good-as-random”
Motivation

empirical strategy

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  - ideally: compare the same individual when legal and illegal (at the same moment in time) ⇒ impossible
  - experimental approach: distribute legal status randomly across immigrants, then compare the criminal activity of the legal and illegal ones ⇒ unfeasible in practice
  - quasi-experiment: exploit variation in legal status that is “as-good-as-random”

- generally hard to find good quasi-experiments, but Italian migration policy provides interesting opportunities in this respect
  1 amnesties: compare crime when many immigrants are illegals (before the amnesty) and when they become legal (after the amnesty)
  2 Click Days: compare immigrants that obtained or not legal status just for a matter of seconds in sending the application
Plan for today

1. Italian migration policy
2. Evidence on the effect of legal status in Italy
3. Lessons from the US
In 2012, Italy hosted 4.9 million documented immigrants (8 per cent of total population)
Migration Policy in Italy

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  1. a quota system
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- Roughly, one tenth of employed workers in Italy are now immigrants
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  1. a quota system
  2. amnesties
The quota system

The quota system has been adopted in 1998 (“Turco-Napolitano” law) and later confirmed in 2002 by the ”Bossi-Fini” law in order to manage the legal inflows of migrant workers.
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- The government establishes every year - through the "Flows decree" ("Decreto Flussi") - the number of immigrants which will be allowed to enter the country in the following year for working reasons (seasonal and non-seasonal workers).
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- The government establishes every year - through the "Flows decree" ("Decreto Flussi") - the number of immigrants which will be allowed to enter the country in the following year for working reasons (seasonal and non-seasonal workers).

- Each region is attributed region-specific quotas and special quotas are reserved for specific countries of origin (mainly those who have signed bilateral agreements with Italy).
The quota system

- For different reasons (see report), the system mainly serves for *ex-post* legalizing immigrants workers who are already (unlawfully) residing and working in Italy
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- Although there are authentic ”new entries”...
The quota system

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- Although there are authentic ”new entries” ...
- ...in general, foreign workers first enter the Italian labour market as undocumented immigrants (or with a tourist visa) and then, if they find a job and an employer who wants to legalize their employment relation, they wait for a ”Flows Decree” and apply for a place.
The quota system

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- Although there are authentic "new entries"...

- ...in general, foreign workers first enter the Italian labour market as undocumented immigrants (or with a tourist visa) and then, if they find a job and an employer who wants to legalize their employment relation, they wait for a "Flows Decree" and apply for a place.

- Arguably, in the Italian context, the main difference between an amnesty and the "Flows decree" is that the latter procedure establishes a cap to the number of legalized individuals while the first does not...
The quota system

![Figure 13: Flow decrees and demand for foreign born workers (1998-2012)](image-url)
Amnesties

Amnesties


- Impressive number: in 2011, Italy hosted 4.5 million documented immigrants
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Amnesties

Figure 14: Stock of documented immigrants and amnesties (Years 1986-2012)
Chapter 3 - Migration Policy and Crime in Italy

Immigrants and crime in Italy

Immigrants in the Italian judicial system

- Are immigrants in Italy more likely to commit crime than natives?
Immigrants in the Italian judicial system

- Are immigrants in Italy more likely to commit crime than natives?
- A first approximate answer can be provided by looking at whether immigrants are over- rather than under- represented among the population of "criminals".
Are immigrants in Italy more likely to commit crime than natives?

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It is an *approximate* answer because:

1. it is unconditional: immigrants differ from natives in age, gender and education
Are immigrants in Italy more likely to commit crime than natives?

A first approximate answer can be provided by looking at whether immigrants are over- rather than under-represented among the population of "criminals".

It is an approximate answer because:

1. it is unconditional: immigrants differ from natives in age, gender and education
2. any over-representation (under-representation) of immigrants can be due to both higher (lower) propensity to engage in crime or to negative (positive) discrimination by the police and the judicial system
Figure 18: Foreign born immigrants and the Italian judicial system (Years: 1991-2011)
Immigrants in the Italian judicial system

How comes that 25 percent of conviction rate for immigrants in 2006 implies that they account for 48 percent of entries in jail in the same year?
Immigrants in the Italian judicial system

- How comes that 25 percent of conviction rate for immigrants in 2006 implies that they account for 48 percent of entries in jail in the same year?
  1. Immigrants are more likely to enter jail before receiving a final conviction than Italians: 47 percent of immigrants detained in 2011 were still waiting for their final conviction (if any), versus 37 percent for Italian citizens.
Immigrants in the Italian judicial system

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   Immigrants are more likely to enter jail before receiving a final conviction than Italians: 47 percent of immigrants detained in 2011 were still waiting for their final conviction (if any), versus 37 percent for Italian citizens.

2. Immigrants enter prison for shorter sentences: in 2011, almost 40 percent of immigrants - and about 23 percent of natives - entered jail with sentences shorter than 3 years.
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2. Immigrants enter prison for shorter sentences: in 2011, almost 40 percent of immigrants - and about 23 percent of natives - entered jail with sentences shorter than 3 years.

3. Convicted immigrants are less likely to be given house arrest or to be assigned to alternative measures (i.e. outside prison) than Italians: in 2011, only 12.7 percent of immigrants - versus 30.7 percent for Italian citizens - were assigned to alternative measures.
Main criminal offences

Figure 20: Criminal charges and convictions of foreign born, by criminal offence (average 2000-2005)
The role of legal status

Share of undocumented immigrants among total criminal charges against foreign born citizens

- Violent crime
- Property crime
- Other crime

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Affray</td>
<td></td>
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<tr>
<td>Attempted murder</td>
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<tr>
<td>Exploiting prostitution</td>
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<tr>
<td>Murder</td>
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<td>Rape</td>
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<tr>
<td>Unlawful wounding</td>
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<td>Burglary</td>
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<td>Car theft</td>
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<td>Criminal damage</td>
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<td>Extortion</td>
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<td>Handling stolen goods</td>
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<tr>
<td>Robbery</td>
<td></td>
<td></td>
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<tr>
<td>Theft</td>
<td></td>
<td></td>
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<tr>
<td>Assaulting public officer; resisting arrest</td>
<td></td>
<td></td>
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<tr>
<td>Smuggling</td>
<td></td>
<td></td>
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<tr>
<td>Unlawful possession of weapon</td>
<td></td>
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</tr>
</tbody>
</table>
Evidence from Policy Experiments

Policies which exogenously granted legal status to large fractions of the undocumented population (amnesties and quota system) can be exploited in order to empirically investigate the role of legal status in determining immigrant crime.
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1. Does immigrants’ crime fall after a legalization process (e.g. after an amnesty)?
Evidence from Policy Experiments

Policies which exogenously granted legal status to large fractions of the undocumented population (amnesties and quota system) can be exploited in order to empirically investigate the role of legal status in determining immigrant crime

1. Does immigrants’ crime fall after a legalization process (e.g. after an amnesty)?

2. Does immigrant crime experience larger drops in areas where a larger number of immigrants was granted legal status?
Does immigrants’ crime fall after an amnesty?

Figure 21: Immigrants’ crime and amnesties (1992-2005)

Graphs by region
Evidence from repeated amnesty programs

Although each of the amnesties took place in the entire country at the same point in time, the *intensity* of the *legalization treatment* may have varied across different areas depending on the number of immigrants legalized during each program.
Evidence from repeated amnesty programs

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- If legal status matters for immigrants’ decisions to engage in crime, one could expect to observe immigrants’ crime to experience larger drops in areas where a larger number of immigrants was granted legal status.
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- We regress the yearly change in total immigrant crime rate in each region on the number of immigrants legalized (if any) in that region by an amnesty in the same year or in previous periods.
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Evidence from repeated amnesty programs

We estimate the following regression:

\[
\Delta \ln \left( \frac{CR_{rt}^F}{Pop_{rt}} \right) = \beta_1 \ln \left( \frac{L_{rt}}{Pop_{rt}} \right) + \Delta X'_{rt} \gamma + \Delta \mu_t + \Delta \varepsilon_{rt}
\]  

- \( \ln \left( \frac{CR_{rt}^F}{Pop_{rt}} \right) \): log of the ratio of total number of criminal charges of foreign born individuals over total resident population in region \( r \) in year \( t \);
- \( \ln \left( \frac{L_{rt}}{Pop_{rt}} \right) \): log of the ratio of immigrants legalized in year \( t \) (if any) in region \( r \) over total resident population;
- \( X_{rt} \): time-varying regional controls;
- \( \mu_t \): year dummies
- \( \varepsilon_{rt} \): error term
Evidence from repeated amnesty programs

- The coefficient of interest ($\beta_1$) identifies the elasticity of immigrants’ crime rate to the intensity of the *legalization treatment*.
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- Finding a negative coefficient, would suggest that regions which legalized a larger number of undocumented immigrants in amnesty years, experienced an immediate drop in immigrants’ crime with respect to the previous year.
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- But, the effect does not need to be immediate: we will use different lags (and leads)
Evidence from repeated amnesty programs

Table 8: Repeated amnesties and crime rate: FD regressions (Years: 1990-2005)

<table>
<thead>
<tr>
<th></th>
<th>1 OLS</th>
<th>2 OLS</th>
<th>3 OLS</th>
<th>4 OLS</th>
<th>5 OLS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In (Total Offences / Tot Population)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>In (Immigrants Legalized / Tot Population)</strong></td>
<td>-0.003</td>
<td>-0.007*</td>
<td>-0.004</td>
<td>-0.005</td>
<td>-0.004</td>
</tr>
<tr>
<td></td>
<td>[0.003]</td>
<td>[0.003]</td>
<td>[0.004]</td>
<td>[0.005]</td>
<td>[0.005]</td>
</tr>
<tr>
<td>1st lag of In (Immigrants Legalized / Tot Population)</td>
<td>-0.025***</td>
<td>-0.021***</td>
<td>-0.022***</td>
<td>-0.025***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.004]</td>
<td>[0.005]</td>
<td>[0.006]</td>
<td>[0.006]</td>
<td></td>
</tr>
<tr>
<td>2nd lag of In (Immigrants Legalized / Tot Population)</td>
<td>0.008</td>
<td>0.006</td>
<td>0.007</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>[0.006]</td>
<td>[0.007]</td>
<td>[0.009]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st lead of In (Immigrants Legalized / Tot Population)</td>
<td>-0.003</td>
<td>-0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.007]</td>
<td>[0.006]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year dummies</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>GDP per capita &amp; Employment rate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td><strong>R-squared</strong></td>
<td>0.079</td>
<td>0.109</td>
<td>0.112</td>
<td>0.112</td>
<td>0.130</td>
</tr>
</tbody>
</table>
Evidence from repeated amnesty programs

With the amnesties, no exogenous cap to legalization was imposed in any of the regions.
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- We address this issue with:
  1. fixed regional effects.
Evidence from repeated amnesty programs

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- The number of legalized immigrants is potentially endogenous.
- We address this issue with:
  1. fixed regional effects
  2. IV strategy: predict number of legalization in each region and amnesty using the total number of legalizations in each amnesty, and allocating them according to the regional distribution recorded in the 1986 amnesty (similar idea to the supply-push component instrument; Altonji and Card, 1991)
### Evidence from repeated amnesty programs

**Table 9: Repeated amnesties and crime rate: FD and IV regressions (Years: 1990-2005)**

<table>
<thead>
<tr>
<th>In (Total Offences / Tot Population)</th>
<th>1 OLS</th>
<th>2 OLS</th>
<th>3 IV</th>
<th>4 IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st lag of In (Immigrants Legalized / Tot Population)</td>
<td>-0.024*** [0.004]</td>
<td>-0.026*** [0.005]</td>
<td>-0.027*** [0.004]</td>
<td>-0.029*** [0.006]</td>
</tr>
<tr>
<td>Year dummies</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GDP per capita &amp; Employment rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>280</td>
<td>280</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.106</td>
<td>0.125</td>
<td>0.106</td>
<td>0.125</td>
</tr>
<tr>
<td>IV: F-stat</td>
<td></td>
<td></td>
<td>802.9</td>
<td>582.8</td>
</tr>
<tr>
<td>IV: p-value</td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Evidence from the largest Italian amnesty

- We perform a similar exercise for the 2002 amnesty (650 thousand immigrants legalized; 70 percent increase in documented immigrant population)
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Evidence from the largest Italian amnesty

- We perform a similar exercise for the 2002 amnesty (650 thousand immigrants legalized; 70 percent increase in documented immigrant population)
- We use data on immigrant crime for 95 provinces and four broad categories of crime
- We run a DID regression where the *treatment* is the number of immigrants legalized in each province in 2002-2003
- We deal with the potential endogeneity of the number of immigrants legalized in each province by instrumenting this variable with a predicted number based on 1995 amnesty
Evidence from the largest Italian amnesty

<table>
<thead>
<tr>
<th>Table 11: 2002 Amnesty: Immigrants’ crime and legalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>In (Total Offences / Tot Population)</td>
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<tr>
<td>OLS</td>
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<tr>
<td>In (Immigrants Legalized / Tot Population)</td>
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<tr>
<td>Year dummies</td>
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<tr>
<td>Observations</td>
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<tr>
<td>R-squared</td>
</tr>
<tr>
<td>IV: F-stat</td>
</tr>
<tr>
<td>IV: p-value</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
The Click Day 2007

- first year in which applications for residence permits had to be submitted electronically
  - “privileged” nationalities: 15 December
  - “non-privileged” nationalities, A-DOM permits (Domestic work): 18 December
  - “non-privileged” nationalities, B-SUB permits (Non-domestic employees): 21 December

- apart from this, the allocation mechanism worked exactly like in previous (and following) years
  - quotas determined with the “Flows Decree”, based on demand for workers by Italian employers
  - shortage of permits, relative to the total number of applications received
### The Click Day 2007

#### Available quotas

<table>
<thead>
<tr>
<th>Country</th>
<th>Privileged nationals (A+B permits)</th>
<th>Domestic work (type A permits)</th>
<th>Firm-employed (type B permits)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privileged nationals (A+B permits)</td>
<td>44,600</td>
<td>65,000</td>
<td>60,400</td>
<td>170,000</td>
</tr>
<tr>
<td>Albania</td>
<td>4,500</td>
<td>700</td>
<td>14,200</td>
<td>26,200</td>
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<tr>
<td>Algeria</td>
<td>1,000</td>
<td>1,057</td>
<td>700</td>
<td>2,757</td>
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<tr>
<td>Bangladesh</td>
<td>3,000</td>
<td>30,193</td>
<td>14,200</td>
<td>45,413</td>
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<tr>
<td>Egypt</td>
<td>8,000</td>
<td>3,431</td>
<td>3,000</td>
<td>14,431</td>
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<tr>
<td>Ghana</td>
<td>1,000</td>
<td>11,035</td>
<td>133</td>
<td>12,168</td>
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<tr>
<td>Morocco</td>
<td>4,500</td>
<td>56,243</td>
<td>20,177</td>
<td>80,917</td>
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<td>Moldova</td>
<td>6,500</td>
<td>23,152</td>
<td>11,743</td>
<td>41,405</td>
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<td>Nigeria</td>
<td>1,500</td>
<td>15,889</td>
<td>100</td>
<td>17,489</td>
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<td>Pakistan</td>
<td>1,000</td>
<td>20,177</td>
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<td>Philippines</td>
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<td>11,743</td>
<td>100</td>
<td>16,743</td>
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<td>13,843</td>
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<td>Somalia</td>
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<td>133</td>
<td>366</td>
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<td>100</td>
<td>21,413</td>
</tr>
<tr>
<td>Tunisia</td>
<td>4,000</td>
<td>5,461</td>
<td>100</td>
<td>10,461</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>170,000</td>
<td>343,514</td>
<td>14,200</td>
<td>610,239</td>
</tr>
</tbody>
</table>

**Quotas and Applications**

- **First click day: December 15, 2007**
  - Privileged nationalities (A+B permits) 44,600 applications, 206,938 quotas.
  - Applications ratio: 0.13

- **Second click day: December 18, 2007**
  - Domestic work (type A permits) 65,000 applications, 136,576 quotas.
  - Applications ratio: 0.48

- **Third click day: December 21, 2007**
  - Firm-employed (type B permits) 60,400 applications, 120,676 quotas.
  - Applications ratio: 0.50

**Note**: The applications include both type A (privileged) and type B (firm-employed) visas, with the total number of applications exceeding the available quotas, indicating oversubscription.
The Click Day 2007

Determination of quotas
The Click Day 2007
Rationing of quotas (relative to total applications)
The Click Day 2007
Aggregate-level results

- similarly to what we did for amnesties, we can compare crime rates
  - before and after the Click Days (2006 vs. 2008)
  - in provinces with different legalization shares
- results are in line with those for amnesties
- the availability of individual-level data allows us to go deeper into the analysis
  - permits awarded on a first-come-first-served basis until the exhaustion of quotas \(\Rightarrow\) compare the last immigrants that made it into the quotas with first ones that were excluded (Regression Discontinuity Design)
The Click Day 2007
Some examples
The Click Day 2007

Some examples
Chapter 5 - Legal status and criminal behavior

The Click Day 2007

The dataset

- information on all applications that were actually processed
  - type of application (A-DOM vs. B-SUM), province and nationality
  - timing (at the millisecond!)
  - gender and age of the applicant

- these data were matched with the Sistema Di Indagine Interforze (SDI)
  - detailed information on all activities recorded by Italian police forces
  - for each individual in the sample, we know whether (s)he committed any type of (serious) crime during year 2008
The Click Day 2007

The dataset

<table>
<thead>
<tr>
<th></th>
<th>all applicants</th>
<th>reported by the police</th>
<th>percentage reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>total</td>
<td>403,741</td>
<td>2,281</td>
<td>0.56%</td>
</tr>
<tr>
<td>males</td>
<td>256,703</td>
<td>2,186</td>
<td>0.85%</td>
</tr>
<tr>
<td>females</td>
<td>147,038</td>
<td>95</td>
<td>0.06%</td>
</tr>
<tr>
<td>type A permits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>226,755</td>
<td>989</td>
<td>0.44%</td>
</tr>
<tr>
<td>males</td>
<td>104,900</td>
<td>921</td>
<td>0.88%</td>
</tr>
<tr>
<td>females</td>
<td>121,855</td>
<td>68</td>
<td>0.06%</td>
</tr>
<tr>
<td>type B permits:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>176,986</td>
<td>1,292</td>
<td>0.73%</td>
</tr>
<tr>
<td>males</td>
<td>151,803</td>
<td>1,265</td>
<td>0.83%</td>
</tr>
<tr>
<td>females</td>
<td>25,183</td>
<td>27</td>
<td>0.11%</td>
</tr>
</tbody>
</table>

- focus on males!
The Click Day 2007
Change in the probability of obtaining a permit, all lotteries
The Click Day 2007

Main results

- late application $\Rightarrow$ 1 percentage point increase in probability of committing crime
- such change is due only to those among the early applicants that actually obtain legal status (about 60%) $\Rightarrow$ the average effect on the prob. of committing crime for these people equals $1/0.6 \approx 1.7$
The Click Day 2007

Differences in other characteristics (only type A applicants)

- no other differences $\Rightarrow$ assignment into legal status is really “as-good-as-randomized”!
The Click Day 2007
Extensions and robustness

- extensions:
  - overall effect is driven just by economically-motivated (as opposed to violent) crimes
  - greater in Northern regions
  - greater for “non-privileged” nationalities (no bilateral enforcement)
  - excluding immigrants that were also reported for violations of migration law

- robustness
  - different specifications
  - different estimation methods
The Click Day 2007
Discussion of the results

- being refused legal status (just for a matter of seconds in submitting the application)
  - increases the probability of committing crime for domestic workers (type A applicants)
  - has no effect on employees (type B applicants)

- at first sight counter-intuitive results
  - used to think about domestic workers as to housekeepers, baby-sitters, etc.
  - however, remember that we are looking at male applicants

- moreover, who are really these type A applicants?
The Click Day 2007
Discussion of the results

- Press review:
  - **The strange case of the Chinese housekeepers.** “Where do they work, who hired them, who ever saw them in Italy? Yet, the final data on the Click Day uncover 33,000 domestic workers from the People’s Republic (...) An anomalous figure indeed: twice as much the number of Ukrainians, who usually work in this occupation (...) A contract as housekeeper is the only way [to enter in Italy], it is easier to obtain through family and friends” *Corriere della Sera*, 5 March 2011
  - **First Click Day: Less applications and many suspect ones** (1 February 2011). “One aspect is puzzling: about 75% of the applications [for housekeepers] were presented by

- these anomalies are confirmed when comparing data on the Click Day applicants with a representative survey of immigrants in Lombardy (ISMU, 2003-2009)
The Click Day 2007
Discussion of the results

<table>
<thead>
<tr>
<th>Probability of being employed as a domestic worker</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISMU, only employed individuals</td>
<td>0.181</td>
<td>0.025</td>
<td>0.431</td>
</tr>
<tr>
<td>Click Day, all applicants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All regions</td>
<td>0.562</td>
<td>0.409</td>
<td>0.829</td>
</tr>
<tr>
<td>Only Lombardy</td>
<td>0.589</td>
<td>0.461</td>
<td>0.844</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probability that sponsor at the Click Day has the same nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>all types of permit</td>
</tr>
<tr>
<td>only type A permits</td>
</tr>
<tr>
<td>only type B permits</td>
</tr>
</tbody>
</table>
The Click Day 2007
Discussion of the results

- anomalous incidence of domestic workers (both males and females)
- among males, anomalous distribution by nationality
The Click Day 2007
Discussion of the results

- among males, anomalous incidence of young individuals
The Click Day 2007

Some tentative conclusions

- potential explanation for the different effects observed for type A and type B applicants
  - part of the type A applicants are actually unemployed ⇒ low opportunity cost of crime (in the absence of legal status)
  - type B applicants are employed in sponsor firms (although unofficially) ⇒ higher opportunity cost of crime (even in the absence of legal status)

- more general lesson from the Italian case: pockets of illegality raise crime risks

- two alternatives
  1. close the gap between quotas and the number of perspective applications
  2. increase enforcement of the existing (restrictive) quotas
Appendix

Non-parametric estimates: main results

<table>
<thead>
<tr>
<th>Bandwidth: multiples of optimal b. value</th>
<th>Dependent variable: Y=1 if committed a felony in year 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>type A applicants</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>01:20</td>
<td>-0.010**</td>
</tr>
<tr>
<td>(0.005)</td>
<td></td>
</tr>
<tr>
<td>02:40</td>
<td>0.610***</td>
</tr>
<tr>
<td>(0.032)</td>
<td></td>
</tr>
<tr>
<td>04:00</td>
<td>-0.017**</td>
</tr>
<tr>
<td>(0.008)</td>
<td></td>
</tr>
</tbody>
</table>

Obs. inside the BW

<table>
<thead>
<tr>
<th>type A applicants</th>
<th>2,393</th>
<th>4,557</th>
<th>6,779</th>
</tr>
</thead>
<tbody>
<tr>
<td>type B applicants</td>
<td>3,572</td>
<td>6,638</td>
<td>9,850</td>
</tr>
</tbody>
</table>
## Appendix

Non-parametric estimates: economic vs. violent crimes

<table>
<thead>
<tr>
<th>Bandwidth: multiples of optimal b. value</th>
<th>Dependent variable: ( Y=1 ) if committed a felony in year 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>economic crimes</td>
</tr>
<tr>
<td>1</td>
<td>01:12 02:24 03:36</td>
</tr>
<tr>
<td>2</td>
<td>01:12 02:24 03:36</td>
</tr>
<tr>
<td>3</td>
<td>01:12 02:24 03:36</td>
</tr>
</tbody>
</table>

**Estimated coefficients:**

<table>
<thead>
<tr>
<th></th>
<th>economic crimes</th>
<th>violent crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>reduced form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.007*</td>
<td>-0.010***</td>
<td>-0.008**</td>
</tr>
<tr>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>first stage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.608***</td>
<td>0.603***</td>
<td>0.606***</td>
</tr>
<tr>
<td>(0.034)</td>
<td>(0.026)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>2SLS estimate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.012*</td>
<td>-0.017***</td>
<td>-0.013**</td>
</tr>
<tr>
<td>(0.006)</td>
<td>(0.006)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Obs. inside the BW</td>
<td>2,159 4,144 6,098</td>
<td>2,205 4,226 6,222</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Non-parametric estimates: North vs. Centre-South

<table>
<thead>
<tr>
<th>Bandwidth: multiples of optimal b. value</th>
<th>Dependent variable: Y=1 if committed a felony in year 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>northern regions</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>01:23</td>
<td>02:46</td>
</tr>
<tr>
<td>Estimated coefficients:</td>
<td></td>
</tr>
<tr>
<td>reduced form</td>
<td>-0.014**</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
</tr>
<tr>
<td>first stage</td>
<td>0.672***</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
</tr>
<tr>
<td>2SLS estimate</td>
<td>-0.021**</td>
</tr>
<tr>
<td></td>
<td>(0.010)</td>
</tr>
<tr>
<td>Obs. inside the BW</td>
<td>1,778</td>
</tr>
<tr>
<td></td>
<td>5,146</td>
</tr>
<tr>
<td></td>
<td>2,086</td>
</tr>
</tbody>
</table>
Appendix
Non-parametric estimates: privileged vs. non-privileged nationalities

<table>
<thead>
<tr>
<th>Bandwidth: multiples of optimal b. value</th>
<th>Dependent variable: Y=1 if committed a felony in year 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bilateral enforcement</td>
</tr>
<tr>
<td></td>
<td>1  2  3</td>
</tr>
<tr>
<td>value</td>
<td>00:49 01:38 02:27</td>
</tr>
<tr>
<td>Estimated coefficients:</td>
<td></td>
</tr>
<tr>
<td>reduced form</td>
<td>-0.001  -0.004  -0.005*</td>
</tr>
<tr>
<td></td>
<td>(0.002)  (0.003)  (0.003)</td>
</tr>
<tr>
<td>first stage</td>
<td>0.611***  0.623***  0.617***</td>
</tr>
<tr>
<td></td>
<td>(0.058)  (0.047)  (0.040)</td>
</tr>
<tr>
<td>2SLS estimate</td>
<td>-0.001  -0.007  -0.008*</td>
</tr>
<tr>
<td></td>
<td>(0.003)  (0.004)  (0.005)</td>
</tr>
<tr>
<td>Obs. inside the BW</td>
<td>622  1,066  1,514</td>
</tr>
</tbody>
</table>

| no bilateral enforcement              |                                                           |
|                                       | 1  2  3                                                   |
|                                       | 01:35 03:10 04:45                                       |
| Estimated coefficients:                |                                                           |
| reduced form                           | -0.019*  -0.016**  -0.011*                               |
|                                       | (0.010)  (0.007)  (0.006)                                 |
| first stage                            | 0.662***  0.626***  0.622***                              |
|                                       | (0.037)  (0.027)  (0.023)                                 |
| 2SLS estimate                         | -0.028*  -0.026**  -0.018*                               |
|                                       | (0.015)  (0.012)  (0.010)                                 |
| Obs. inside the BW                     | 1,761  3,437  5,203                                      |
Appendix

Non-parametric estimates: excluding people reported also for violations of migration law

<table>
<thead>
<tr>
<th>Bandwidth:</th>
<th>Dependent variable: Y=1 if committed a felony in year 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all felonies</td>
</tr>
<tr>
<td>multiples of optimal b. value</td>
<td>1</td>
</tr>
<tr>
<td>value</td>
<td>01:18</td>
</tr>
<tr>
<td>Estimated coefficients:</td>
<td></td>
</tr>
<tr>
<td>reduced form</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.010**</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
</tr>
<tr>
<td>first stage</td>
<td>0.610***</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
</tr>
<tr>
<td>2SLS estimate</td>
<td>-0.016**</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
</tr>
<tr>
<td>Obs. inside the BW</td>
<td>2,358</td>
</tr>
</tbody>
</table>
### Appendix

#### Parametric estimates

| Second stage. Dependent variable: Y=1 if committed a felony in year 2008 |
|-------------------------------+----------------+----------------+----------------+----------------+----------------+----------------|
|                               | type A applicants |               |               | type B applicants |               |               |
|                               | 10 min.          | 20 min.        | 30 min.        | 10 min.          | 20 min.        | 30 min.        |
| Legal status                  |                 |                 |                 |                 |                 |                 |
| -0.022**                     | -0.020**        | -0.017***      |                 | 0.004           | -0.011         | -0.003         |
| (0.009)                      | (0.009)         | (0.006)        |                 | (0.014)         | (0.010)        | (0.008)        |

| First stage. Dependent variable: L=1 if obtained a residence permit at the click day 2007 |
|-------------------------------------------------+----------------+----------------+----------------+----------------+----------------+----------------|
|                                               |                 |                 |                 |                 |                 |                 |
| Z                                              | 0.657***        | 0.650***        | 0.631***        | 0.366***        | 0.356***        | 0.353***        |
|                                               | (0.038)         | (0.033)         | (0.032)         | (0.044)         | (0.044)         | (0.039)         |

| Observations | 16,131 | 29,737 | 40,451 | 27,995 | 51,212 | 69,886 |
Appendix

Non-parametric estimates: sensitivity analysis
Appendix

Non-parametric estimates: sensitivity analysis
Appendix

Effect at different quantiles of the cutoff point

![Graph showing estimated treatment effect across different subsamples defined by the deciles of the distribution of cutoffs' timing.](image)
Chapter 6
Immigration and Crime in the US: Lessons from the Mariel Boatlift
This Section

- Mariel Boatlift: in 1980 125,000 Cubans land in Miami.

- Research Question: effect of such a wave of immigration on crime, as opposed to the norm of US immigration legislation.

- Card (1990) had inconclusive evidence on labor market outcomes $\rightarrow$ new methodology.
Outline

- Introduction
- Institutional Background
- Case Study
  - Setting
  - Estimation Strategy
  - Data
  - Results
  - Discussion
Introduction

Institutional Background

Case-Study

Conclusions
Motivation

Policy relevance:

- Current immigration reform debate. Focus on:
  - Path to citizenship;
  - Selection of immigrants (skilled vs unskilled or family-sponsored);
  - Enforcement.
- Mariel Boatlift as example of disaster evacuation policy:
  - Katrina: huge increase in crime (Hussey et al., 2011, instrument with distance from New Orleans).
- Refugees’ clusters in Europe.

Note: Immigrants underrepresented in US prisons;
But the political debate is affected by episodic violence:
  - Boston Bombings: might stop immigration reform effort.
Despite large literature on immigration, effects on crime are still an open question:

- Spenkuch (2011):
  - Panel of U.S. counties, instruments current immigration with past immigration patterns;
  - Strong effects on crimes motivated by financial gain (motor vehicle theft, robbery) for immigrants with poor labor market outcomes.

- Borjas et al. (2010):
  - Increase in black crime (substitution).
Preview of Results

- Large increase in some violent crimes (murders and robberies) and in motor vehicle thefts;
- Marginally significant increase in black crime.

⇒ different results from the literature.

Plausible explanation: heterogeneous effects of immigration on crime. High concentration and (possible) negative selection makes it much worse.
The Current Immigration Legislation

- **Quotas for legal immigration:**
  - 20,020 green cards for unskilled immigrants per year;
  - 226,000 family sponsored green cards.
  - 66,000 Temporary Non-Agricultural Visa.

- **Pro-cyclicality of illegal immigration vs lack of flexibility of quotas (Hanson, 2009):**
  - many illegals in legal jobs: good labor market prospects $\Rightarrow$ less crime.

- **Deterrence by lowering value of illegal immigration:**
  - Rare amnesties;
  - Enforcement (E-verification) and removal of criminal aliens.
Introduction

Institutional Background

Case-Study

Conclusions
The Setting

- April 1980 - October 1980;
- Unexpected $\Rightarrow$ Good for identification;
- 125,000 Cubans land in Miami (4% of Miami population, 7% of Miami workforce): High concentration;
- Ad-hoc immigration status (Cuban-Haitian-Special-Entrants):
  - No path to citizenship until 1984;
  - As if on parole until naturalization: if found guilty of a crime in the US or in Cuba $\Rightarrow$ removal.
Negative Selection?

Card (1990) documents that the Marielitos were:

- Less skilled and less educated than other Cubans and other immigrants $\Rightarrow$ earn less;
- Younger and more likely to be male;
- The Castro regime allegedly sent 10,000 convicted criminals and individuals with mental issues, of which
  - around 2,500 supposed to be sent back to Cuba, but many of them still jailed in the US as of 1990;
  - around 1,000 in prison for crimes committed in the US.

Summing up:
Unusual immigration: Large, concentrated, (negatively selected). $\Rightarrow$ We estimate upper bounds on the effect of immigration on crime.
Estimation Strategy
Estimation Strategy

**Synthetic Control:**

- Artificial control unit is a weighted average of controls;
- Weights chosen to minimize Mean Square Prediction Error for pre-treatment period:
  - Weights s.t. the synthetic control matches the treatment unit’s pre-trend of the outcome variable,
  - Pre-trend of outcome variable predicted using regressors: 2-Step minimization;
- Generalizes DD by relaxing parallel trends assumption;
- Inference: Randomization inference on post-treatment/pre-treatment MSPE ratios. Solves issue of inference in DD.
- Developed in Abadie and Gardeazabal (2003) and Abadie et al. (2010).
Data

- Analysis at Metropolitan Statistical Area (MSA) level;
- Uniform Crime Report (FBI) monthly data, aggregated at quarterly level:
  - Offenses Known (OK): homicides, rapes, robberies, burglaries, larcenies, motor vehicle thefts;
  - Supplementary Homicide Report (SHR): Homicides by race of the offender
- Public Use Microdata Sample of Current Population Survey (at iPUMS-CPS website):
  - Minorities’ shares, dropouts’ shares, unemployment rates.
- St. Louis FED: GDP per capita
- Real Estate Center at Texas A&M University: population density
Descriptives: Row trends, OK
Results: OK
Results: SHR
Results: Black crime
Homicide rates increase by around 66% (significant at the 5% level), and the effect persists for more than two years;

Robberies increase by around 75% (significant at the 10% level);

Motor vehicle thefts increase by around 20% (significant at the 5% level);

No effects on larcenies, burglaries or rapes;

Inconclusive evidence on crime rates among African-Americans in Miami.
Discussion

- Increase in violent crime (murders, robberies), no effects on non-violent crime (only motor vehicle thefts).
- Results partially consistent with economic model of crime;
- Novel results: Spenkuch (2011) and Bianchi et al. (2012) find increases in thefts and robberies.
- Possible explanations:
  - Punishment not a function of crime, removed if caught in any case;
  - Heterogeneous effects on crime: high concentration (and negative selection).
Limitations-Next Steps

- External Validity: we draw policy lessons for large disaster relief interventions (evacuations) and for policies leading to concentration and segregation of refugees;
- We cannot disentangle the effect of negating the path to citizenship from the negative selection of the immigrants, although negative selection unlikely to play a large role;
- Why only certain types of crime? Further investigate the mechanisms and the market for crime;
- Econometrics: Robustness to alternative outcomes.
Introduction

Institutional Background

Case-Study

Conclusions
Conclusions

- Mariel Boatlift was an exceptional case in U.S. immigration history:
  - many, concentrated and negatively selected immigrants, without path to citizenship
    ⇒ increase in violent crime.

- In general: U.S. immigration legislation displays
  - tough enforcement
  - few amnesties
    ⇒ Immigration and crime not correlated.
The Math of Synthetic Control

- Rubin’s (1976) potential outcome model:
  \[ \beta = Y_i^1 - Y_i^0 \]

- The synthetic control approach estimates \( \beta \) with:
  \[ \hat{\beta} = Y_i^1 - \sum_{j \neq i} w_j Y_j^0. \]

- \( X_j \): \( K \times 1 \) vectors of predictors for each \( j \)-th region;
  \( V \): \( K \times K \) diagonal matrix of weights on predictors.

Conditional on \( V \), \( W^*(V) \) solves:

\[
\min_w \left( X_i - \sum_{j \neq i} w_j X_j \right)' V \left( X_i - \sum_{j \neq i} w_j X_j \right) \quad s.t. \ w_j \geq 0, \ \sum_{j \neq i} w_j = 1
\]

- Optimal \( V \) minimizes the MSE of pre-treatment outcomes:
  \[
  \frac{1}{t} \sum_{s<t} \left( Y_{is} - \sum_{j \neq i} w_j Y_{js} \right)^2
  \]

  where \( t \) is the treatment period.
OK Randomization Inference

![Graphs showing frequency distributions for different crimes (Murder, Rape, Motor Vehicle Theft, Burglary, Larceny, Robbery).]
SHR Randomization Inference

- Homicides
- Using Firearms
- By Strangers
- Drug-Related
Black Homicides Randomization Inference