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The impact of political and religious leaders on socio-economic outcomes

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Submitted for the degree of Doctor of Philosophy

University of Sussex

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Declaration

I hereby declare that this thesis has not been and will not be submitted in whole or in part to another University for the award of any other degree.

Signature:

Egidio Farina

Declaration

I hereby declare that my contribution to the chapter co-authored with Dr Vikram Pathania was substantial. I played a key role in conceiving the research question. The data used in this project were not publicly available and were only accessible from the regional headquarters of the Italian National Institute of Statistics. In order to develop our work, I needed to relocate to Italy to conduct the data analysis. All analysis was necessarily done there by me alone. Finally, I contributed substantially to the drafting of the paper.

Signature:

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The impact of political and religious leaders on socio-economic outcomes

Summary

This thesis investigates how political or religious leaders have an impact on several socio-economic outcomes in two different countries, the United States and Italy.

In the first empirical chapter I analyse how the race of a politician can have an impact on the incidence of crime. I answer this question by focusing on large US cities, where active participation in the political life of the African-American candidates has undergone a strong upsurge since 1965. In order to deal with the endogeneity of black candidates to city characteristics, a regression discontinuity is used, exploiting the multi-racial elections decided by a narrow margin of victory. The results show that the number of motor vehicles stolen increases considerably the year after the election of an African-American candidate. I investigate, as a possible channel of influence, how police employment responds to the election of a black mayor, finding a negative effect the year after the electoral race.

The second empirical chapter studies how electoral outcomes can shape individuals' migration decisions. Using the Italian mayoral elections data from 2001 to 2014, I study how foreign citizens' internal migration with a regular residency permit in North Italy can be affected by the election of a mayor affiliated to the Northern League (Lega Nord) party, a far-right political movement characterised by a strong federalist, populist and anti-immigration ideology. To deal with the endogeneity of the Northern League to city characteristics, a sharp regression discontinuity is used. Overall the results show that a mayor affiliated to the Northern League party causes an increase in the foreign out-migration rate one year after the election.

The third empirical chapter investigates the impact of papal visits to Italian provinces on abortions and live births from 1979 to 2012. Using an event study methodology, we find a strong decrease in the number of abortions following papal visits. This effect commences at about the 3^{rd} month and persists until about the 11^{th} month after the visits. However, we find no significant change in the number of live births. We argue that a fall in the incidence of unplanned pregnancies best explains our results. This fall appears to be concentrated among married women, a demographic that shows the biggest jump in religiosity when the pope visits.

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Chapter 1

Introduction

Political and religious leaders play a crucial role in shaping economic, social and political life through the set of policies adopted or by changing beliefs and perceptions of the population. Politicians have great potential to influence several aspects of everyday life, such as education, housing or the incidence of crime. Religious leaders' role, nowadays, is not only circumscribed to the diffusion of moral and spiritual values but they take a strong stance on important themes such as inclusive economic growth or climate change (The Economist, 2011).

Scholars have long debated the importance of politicians' identity. On the one hand, seminal studies conducted by Hotelling (1929) and Downs (1957) theorised that competing political leaders are forced to offer the same set of policies in order to capture the median voter and win the election. On the other, recent evidence has largely shown that specific traits of the identity of a politician, such as partisanship, race or gender exert a strong influence on the set of policies enacted.

A relatively new literature has focused on the political power or the persuasive influence exerted by religious leaders. For example, Chaney (2013) using centuries of data relative to the Nile floods shows that during floods, which are deviant to normal flood levels of the Nile river, allocations to religious structures, compared to secular structures, increased while religious authorities were less likely to be re-

placed. Stroebel and Van Benthem (2013) have offered direct evidence on the impact of local bishops on HIV transmission in Kenya.

The cultural and social values enclosed in the identity of political and religious leaders are determinant for the type of policies implemented or the choices made by people. In this thesis I investigate how two specific traits of a politician's identity, namely race and partisanship, and the exposure to the visit of the Pope, perceived as the emblem of the Catholic doctrine, affect the incidence of crime in America, the decision to migrate and the choice to undergo an abortion operation in Italy, respectively.

The relationship between race and crime in the United States is a topic of public controversy. West (2010) shows that the incarceration rate of African-Americans is disproportionately higher than their representation in the general population. From 2013, several activist movements were founded with the purpose of campaigning against violence and systemic racism towards black people. In the first empirical chapter I analyse how the election of an African-American mayor affects the incidence of crime, focusing on large US cities. Previous research in sociology or political science has mostly studied how the election of African-American mayors negatively correlates with the incidence of episodes of interracial violence or killings and events of fatal violence against police officers and civilians, due to the adoption of measures aimed at the attenuation of the perception of injustice against ethnic minorities, such as the use of special selection standards for minority applicants, the enforcement of formal departmental restrictions on the use of fatal force or the recruitment of more black officers (Jacobs and Wood, 1999; Jacobs and Carmichael, 2002; Stucky, 2003, 2012). My work complements and contributes to the aforementioned literature addressing a causal link between the election of an African-American mayor and crime in the US.

In order to overcome potential sources of endogeneity, the identification strategy

relies on a sharp regression discontinuity design (RDD), analysing the multiracial electoral races decided by a narrow margin of victory. The results show that the number of motor vehicles stolen increases considerably the year after the election of an African-American candidate. I investigate, as a possible channel of influence, how police employment responds to the election of a black mayor, finding a negative effect the year following the electoral race.

The second empirical chapter studies how electoral outcomes can influence individuals' migration decisions. In the last decade, Italy has witnessed a rise in "anti-foreigners" sentiment, instigated by the growth of far-right political parties, such as Lega Nord, exploiting the effects of the economic crisis and, more recently, the migration ermergency from North-Africa.[1] Using data relative to the mayoral elections in Italy occurred from 2001 to 2014, I investigate the causal effect of the election of a candidate affiliated to the Northern League (Lega Nord) party on the internal migration of foreign citizens with a regular residency permit, using a regression discontinuity design to isolate possible sources of endogeneity. The results indicate an increase in the internal out-migration rate in response to the election of a Northern League candidate. I provide evidence in favour of the idea of a decreased perception of social inclusion towards foreign citizens as a possible factor influencing the migration decision, contributing to the new developments in the psychological field, theorising the concept of "ideological migration".

In the third empirical chapter, joint with Dr. Pathania, we investigate the impact of the papal visits to the Italian provinces on abortions from 1979 to 2012. Italy is one of the five countries with the largest Catholic population (Pew Research Center, 2013) and the country with the highest number of papal visits. The Catholic Church has historically played a strong influence on the Italian political system and society. For example, in the 1970s and in the 1980s, important laws on themes such

[1]See, for example, Murgese (2015) or Politi (2017).

as divorce or abortion were strongly opposed by one of the major Italian parties, Democrazia Cristiana (Christian Democratic Party), backed by the Pope and the Italian Bishop's Conference (CEI)[2]. Nowadays, the Pontiff represents a compelling figure for important themes such as gay marriage or euthanasia (The Economist, 2007).

Using an event study methodology, we show a decrease in the number of abortions from the 1^{st} to the 4^{th} quarter of year after the papal visits. However, we find no significant change in the number of live births. Our findings cannot be satisfactorily explained by heightened stigma attached to abortions. Instead, we argue that a fall in the incidence of unplanned pregnancies best explains our results. This fall appears to be concentrated among married women.

The thesis is structured as follows. Chapter 2 examines the impact of African-American mayors on crime. Chapter 3 analyses how the election of a Northern League mayor in Italy affects foreign internal migration. Chapter 4 analyses how the papal visits to the Italian provinces affects the number of abortions and live births. Chapter 5, finally, concludes.

[2]See Wertman (1982).

Chapter 2

Politics and Crime in Black & White

2.1 Introduction

In 1983 the magazine *Ebony*, in an article about the incidence of crime in American cities, emphasised the fundamental role played by African-American mayors in reducing crime with respect to the cities ruled by a white mayor[1]. According to the periodical, the possible factors behind this success were to be found in the black mayors' social and cultural background, which endowed the African-American officers with a *special sensitivity* (p. 116) that allowed them to tackle these kinds of problems more effectively than a non-black mayor. This, in turn, explained how the combination of measures aimed at improving the relationship between police and the black community[2], and the development of specific crime prevention programmes, resulted in such a strong and considerable reduction of the crime rates: for example, in cities such as Atlanta or Gary the incidence of crime fell by 6% and 11.2% respectively, compared to the previous year.

Although non-scientific and aimed at targeting public opinion, this article reflected a debate started in the 1970s when, in response to an increasing number of elected

[1] *Can black mayor stop crime?* (Leavy, 1983)

[2] The author of the article listed the citizens' participation in the police-department's decision-making process or their inclusion in citizens advisory committees and civilian review boards.

African-American mayors, political scientists and sociologists began to analyse what were the main lines along which a *black city* differed from a *white city*: Poinsett (1970), Nelson and Meranto (1977), Campbell and Feagin (1975), Nelson (1978), Keller (1978), Karnig and Welch (1980), assessed, mostly through case-studies, the main factors leading the African-American candidates to succeed against a white opponent and the type of policies adopted by a black mayor in contrast to those cities where a white official was elected.[3]

My work takes a step in this direction, studying whether the race of a politician in large American cities has an impact on several categories of property and violent crimes. The motivation behind this study is twofold. On one hand, contrary to the works of Hotelling (1929) and Downs (1957), according to which the type of policies implemented by a politician merely reflect the preferences of the median voter, a recent array of studies has largely shown that the politicians' preferences play a crucial role in determining the set of economic and political measures adopted (Besley and Coate (1997); Levitt (1996)). In this case, if the politicians' preferences differ by race[4], the number of crimes in a city ruled by a black mayor might differ from a city where a white mayor is elected in response to the adoption of different policies. On the other hand, the relationship between race, crime and criminal justice in American society today attracts the interests of academics, media and public opinion and, non-ultimately, it has been the cause of social tensions, which has led to the creation of activist movements and protests across the whole of America. Understanding how and the possible mechanisms through which crime responds to the election of an African-American mayor can offer a new insight on this phenomenon. To determine how the race of a politician can affect crime, I link the data collected

[3] As acknowledged by Hopkins and McCabe (2012), due to the low number of observations, a unique consensus on the relationship between the mayor's race and the type of policies adopted was never reached. Some studies found no differences between a city ruled by a white and or a black mayor (Nelson, 1978); other works documented African-American mayors' predilection for social welfare policies coupled with a reduction in police spending (Karnig and Welch, 1980) while other research presented evidence of higher police spending but no impact on welfare spending when a black mayor was elected (Keller, 1978).

[4] According to Nelson and Meranto (1977), black mayors were more likely to be concerned with the living conditions of the black population, channelling the *"available resources toward the alleviation of poverty and hopelessness in the black community"*.

by the FBI Uniform Crime Reporting programme to the interracial election dataset constructed by Vogl (2014). This dataset provides information on the race, partisanship and votes of the two top-candidates running for mayoral elections between 1965 and 2010 in American cities whose population in 1960 was at least 50,000.

In order to overcome potential sources of endogeneity related to the election of an African-American mayor, the identification strategy relies on a sharp regression discontinuity design (RDD), analysing the multi-racial electoral races decided by a narrow margin of victory. However, if a narrowly-decided election approximates a randomised experiment, as pointed out by McCrary (2008), this might not be a sufficient condition to ensure randomness in the outcomes of competitive elections. Following Vogl (2014), I check whether the African-American mayors exhibit a systematic advantage over the non-black candidates. As the test will show, in the sample characterised by cities outside the Southern States we can consider the election of an African-American mayor in a close multi-racial contest as good as random; unfortunately this is unlikely to happen in the South, where black candidates are more likely to win an electoral race decided by a narrow-margin of victory.

My main findings show that the election of a black mayor in a close multi-racial contest has a strong and positive impact on the number of motor vehicle thefts one year after the electoral race took place. On the other hand, other types of crimes do not seem to respond to the election of an African-American mayor. I follow the study on crime rates with an assessment of the possible channels through which car theft can be affected by the election of a black mayor, implementing a regression discontinuity design where the dependent variables are the total number of police employees and the number of police officers per 1,000 inhabitants in the year following the electoral race. Coherently with the economics of crime literature, the increase in the number of car thefts might be explained by a decrease in the number of policemen the year after the election of an African-American mayor.

In order to gather further evidence in favour of my results, several robustness checks are performed: I increase the number of data points by looking at the total number

of motor vehicle thefts in the two years subsequent to the election; I adopt a different estimator to test if my results still hold when a non-parametric strategy is adopted and, finally, I isolate the "race" effect from the "ethnic minority status" effect by looking at the election of an Asian-American or Hispanic mayor against a white runner-up only. The evidence emerging from these tests corroborates my original findings, pointing to an increase in the number of motor vehicles stolen following the election of a black mayor decided by a narrow margin of victory.

This paper contributes to different literatures: firstly, several studies in the economic literature have linked some aspects of a politician's identity such as gender, party affiliation, religion or race to different economic and social outcomes. However, to the best of my knowledge, this represents the first study addressing a causal relationship between the election of an African-American mayor and the incidence of crime. Secondly, the sociological and criminological literature have mostly focused on how the election of a black mayor correlates to the number of murders or the number of interracial killings, in order to test the classic social disorganisation theory, whereas in this paper it is my intention to establish a causal nexus, differentiating between violent and property crimes.

The remainder of this paper proceeds as follows: Section 2.2 offers a brief summary of the literature to which my study is linked; Section 2.3 describes the data used throughout the paper and provides some descriptive statistics; Section 2.4 explains the methodology and the econometric model adopted; Section 2.5 shows the main results, Section 2.6 discusses the channels through which a black mayor can affect the number of motor vehicle thefts, Section 2.7 tests the robustness of my results and, finally, Section 2.8 concludes.

2.2 Related Literature

This work is strictly related to that strand of research conducted in criminology and sociology that has put a strong emphasis on how the race of a mayoral candidate can affect criminal behaviour. Also, more broadly, it is related to the research in

political economy that has examined how the election of an African-American mayor can affect different outcomes.

Jacobs and Wood (1999), in their study on the incidence of interracial violence in American cities, claim i) a positive correlation between the election of a black mayor and the rates of white killings of blacks and, ii) a negative correlation between the presence of an African-American mayor and black killings of whites. On the other hand, Wadsworth and Kubrin (2004) do not find any significant relationship between interracial killings and black mayors. Jacobs and Carmichael (2002) present evidence of a lower occurrence of violent episodes against policemen in those cities where a black mayor is elected; this is because black mayors reduce the perception of injustice against minorities by increasing the number of black policemen.

Stucky (2003) explores whether the form of government (mayor vs city manager), the city council electoral systems (district-based electoral systems vs cities with at-large elections), the presence of partisanship elections and the race of local officials can affect the number of murders. The author shows that there exists a significant and negative correlation between the city council electoral system (i.e. the presence of district-based city council representation) and crime, and mixed evidence on the relationship between the race of elected officials and delinquency. The impact of black city council representation on crime is not statistically significant, whereas the presence of a black mayor is associated with a reduction of 20.6% in violent crimes when compared with a city where a non-black mayor wins the electoral race. Stucky (2012) finds a negative correlation between the share of black residents and black violent crime arrest rates in those cities where an African-American mayor is elected.

Nye et al. (2015), studying whether a black mayor rewards members from their own ethnic group, find that black employment and labour force participation rise relative to white employment as a result of the election of an African-American officer. Hopkins and McCabe (2012) show that narrow black electoral victories do not induce many policy changes with few exceptions: a city with a narrow black victory will

reduce the city's share of employees at the police department by 2.9 percentage points, while, for police pay, they find a 3.6 percentage point decline in police pay as a share of total pay. Vogl (2014) studies the nature of multi-racial elections that occurred in the US from 1965 to 2010. According to the author, close black victories were more likely to occur than close black losses in the Southern States, involved higher turnout, and were more likely to be followed by subsequent black victories. Elections contested by black and non-black candidates have also been studied at a wider political level; Washington (2006), for example, finds that black candidates running for Senate and gubernatorial elections increase voter turnout.

This paper is also linked to that branch of research in political economy studying how different aspects of a politician's identity can affect political and economic outcomes. Lee (2008), exploiting data relative to the elections to the US House of Representatives (1946-1998), presents strong evidence that incumbency has a causal positive effect on the probability of winning the subsequent elections. Dal Bó et al. (2009) find that legislators who hold power for longer become more likely to have relatives entering Congress in the future; Ferreira and Gyourko (2009) show that in large American cities there exists no significant relationship between the mayor's party and the size of city government, the allocation of public spending and crime rates. Other studies have focused on the gender of local officials rather than the party to which they belong. Beaman et al. (2009) and Beaman et al. (2012) show that exposure to a female politician reduces gender stereotypes and influences adolescent girls' career aspirations and educational attainment; Clots-Figueras (2011) studies the impact of female political representation in India on public goods, policy and expenditure. Gagliarducci and Paserman (2012) show that in municipalities headed by female mayors, the probability of early termination of the legislature is higher. Clots-Figueras (2012) finds that female political representation increases the probability of an individual attaining primary education in urban areas; Ferreira and Gyourko (2014) replicate their first work focusing on the gender of US mayors without finding any significant difference between cities ruled by women or

men. Bhalotra and Clots-Figueras (2014) show that a 10 percentage point increase in women's representation in state legislatures in India results in a 2.1 percentage point reduction in neonatal mortality. Finally, economists have recently begun to analyse how the religious identity of a politician can affect human capital accumulation: Bhalotra et al. (2014) find that increasing the political representation of Muslims has a positive effect on health and education outcomes in the district where the legislator is elected; Meyersson (2014) finds that Turkish cities exposed to an Islamic party are characterised by a higher female secular high school education.

2.3 Data and Descriptive Statistics

2.3.1 Election Data

The interracial election data provide information on the mayoral elections that occurred between 1965 and 2010 in 122 large US cities whose population in 1960 was at least 50,000. The data were generously provided by Vogl (2014), who expanded the initial data provided by Ferreira and Gyourko (2009)[5] using newspaper archives, elections bureaux, and websites to address the race of the first two mayoral candidates. For each election it is possible to establish the partisanship of the first two candidates, the incumbency status of the mayor, the turnout associated with each election, and the specific form of local government (city manager vs mayor-council system).

Table 2.1 provides descriptive statistics for the election sample. Overall, 318 out of 1,571 elections are interracial; the electoral races involving two African-American candidates are 83, denoting a disproportionate prevalence of non-African-American candidates. On average a city experienced 12.98 elections from 1965 to 2010; the average number of interracial elections is 2.63. Finally, 54% of the cities have been ruled at least once by a black mayor.

In Appendix A, Figure A.1-A.3 show different aspects related to the proportion

[5]The authors originally mailed a survey to the election office of every US city that directly elects its mayor with a population greater than 25,000.

Table 2.1: Descriptive Statistics - Election sample

# Elections	1571
# Interracial Elections	318
# Elections - same race	1085
# Black-Black elections	83
# Black mayors	277
# Non-Black mayors	1293
Average elections/city	12.98
Average Interracial Elections/city	2.63
Share cities with black winners	54%
# Cities	122

Source: Author's calculations based on data from Vogl (2014).

of elections involving the participation of African-American candidates over the period 1965-2010. Figure A.1 presents the share of elections with at least one black candidate from 1965 to 2010, denoting a positive trend from the 1970s, which became flatter in the 2000s. Figure A.2 graphs the number of elections won since 1965 by an African-American candidate over the total number of elections that occurred in a given year, whereas Figure A.3 reports the number of electoral races won by an African-American candidate as a share of the number of elections involving a black against a non-black candidate. In this case, multi-racial contests are more likely to be won by a non-black candidate as the range of black victories is always below 50%.

2.3.2 Crime Data

The data on crime, expressed per 1,000 inhabitants, are provided by the Uniform Crime Reporting (UCR) reports issued by the Federal Bureau of Investigation (FBI). The FBI records crime statistics from law enforcement agencies across the US that have voluntarily participated in the UCR programme since 1930. The UCR programme collects statistics relative to violent crimes (murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault) and property crimes

(burglary, larceny-theft, and motor vehicle theft).[6] Although on the one hand the UCR represents one of the best sources providing data at the city level on a yearly basis in the United States, on the other hand, the data collection process might be affected by measurement error. This, however, under the classical measurement error assumptions, will not bias the point estimates, resulting in inflated standard errors. Crimes are reported at US Nation and State level since 1960 and, starting from 1985, also at city level; this is why my analysis cannot exploit the elections that occurred between 1965 and 1983.

The FBI does not include data on violent and property crimes if the collection methodology followed by a police department does not comply with UCR guidelines. In order to minimise potential measurement error, I dropped two cities from my final sample, Augusta and Charlotte, as the data on crimes are provided at County level (Richmond and Mecklenburg, respectively). Finally, it is common practice for the police departments to collect and submit all the data to the FBI in December in order to take into account the total number of crimes that occurred over the entire solar year. However, for 74 observations the data recorded refer to the number of crimes that occurred in a shorter span of time; also in this case, observations were deleted. Tables A.1 and A.2 in Appendix A group the American States and the cites from the election sample into four macro-regions, according to the definition provided by the US census;[7] for each region the average and relative standard deviation from 1985 to 2010 of different types of violent and property crimes expressed per 1,000 inhabitants is computed. With the only exception being robberies in the Northeast and burglaries in the South, we do not observe much variation across the US regions over time. As expected, property crimes are more frequent than violent crimes; urban crimes, regardless of the particular category considered, are,

[6] See Appendix A for a rigorous definition of the different types of crime provided by the FBI.

[7] **Northeast**: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont New Jersey, New York, Pennsylvania; **Midwest**: Illinois, Indiana, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; **South**: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma/Indian Territory, Texas; **West**: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming, Alaska, California, Hawaii, Oregon, Washington.

on average, higher than crimes reported at State level.

2.3.3 Municipal Characteristics

Table 2.2: Sample Representativeness

	Election Sample (1)	**US Cities (2)**
Population	417824	10896
	(862196)	(88599)
% Pop < 18	26.61	27.18
	(3.92)	(6.51)
% Pop > 65	12.15	16.24
	(2.49)	(7.82)
% Black Pop.	31.19	6.85
	(20.72)	(15.85)
Median family income	42756	43489
	(10169)	(16913)
% Poor families	14.99	11.01
	(5.68)	(8.75)
% Unemployment	8.38	6.05
	(3.02)	(4.87)
% education	76.61	76.70
	(7.94)	(11.97)

Source: Author's calculations based on data from the 2000 US Census of Pop. and Housing.
Note: Each entry reports the mean and standard deviation relative to several city characteristics. Column (1) presents descriptives for the election sample while Column (2) reports descriptives for all the US cities.

The US Census of Population and Housing delivers information, collected with decennial frequency, on the municipal characteristics used as controls in the following sections: total population, share of black population, share of population younger than 18, share of population older than 65, share of population that completed at least secondary education, median family income expressed in 1999 dollars, the share of poor families living in a given city, and the unemployment rate at city level.
Table 2.2 presents summary statistics on the representativeness of the election sample. The cities in column (1) are more populous than the typical jurisdiction (column 2); the share of people younger than 18 is similar across the two different groups, while the share of inhabitants older than 65 is 4 percentage points lower in the election sample if compared to column (2). The share of African-American

inhabitants is considerably higher in the election sample; on the other hand, we do not observe a strong difference between the two groups of cities in terms of income. The election sample is characterised, on average, by a higher share of poor families and a higher unemployment rate, whereas the share of people with at least high school education is basically identical in the two samples.

2.4 Empirical Strategy

The identification strategy, as anticipated in Section 2.1, is based on a parametric sharp regression discontinuity (RDD).[8] In order to exploit the RD design, I convey my analysis on the so called *close elections*: identifying the impact of a black mayor on crime could be biased by city specific factors, but, for elections decided by a narrow margin, which candidate will win is likely to be determined by pure chance. In order to evaluate how the election of a black mayor can affect crime, the following model is adopted:

$$crime_{c,t+1} = \alpha + \beta BlackMayor_{c,t} + f(MV_{c,t}) + \gamma BlackMayor_{c,t} \times f(MV_{c,t}) + u_{c,t+1} \quad (2.1)$$

where the dependent variable $crime_{c,t+1}$ can be either property or violent crime per 1,000 inhabitants for city c in the year following the mayoral election; the treatment indicator, $BlackMayor_{c,t}$, is a dummy variable taking value 1 if the election winner in city c at time t is African-American and 0 otherwise; $f(MV_{c,t})$ is a first order polynomial function, which controls for the linear term of the margin of victory[9,10], (defined as the difference between the black candidate's votes and the non-black candidate's votes divided by their sum), while the interaction term $BlackMayor_{c,t} \times f(MV_{c,t})$ allows the running variable to adopt different slopes on

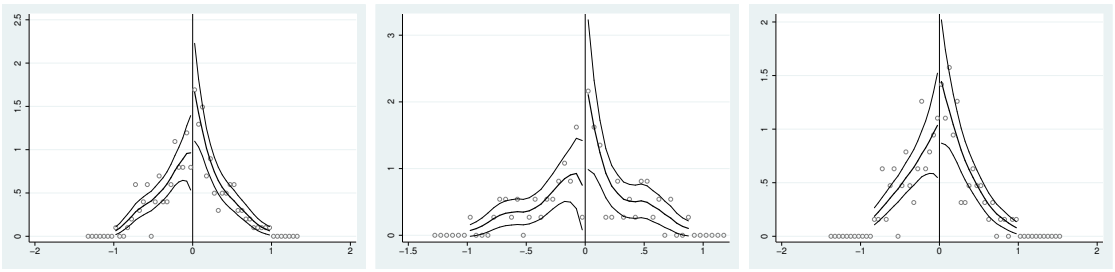
[8] See Imbens and Lemieux (2008), Van Der Klaauw (2008), or Lee and Lemieux (2010) for a comprehensive survey on RDD.

[9] The literature on RD has not yet reached a unique consensus on the choice of the functional form of the running variable. According to Imbens and Lemieux (2008) the polynomial with the lowest AIC should be used; Porter (2003) argues that odd polynomial orders have better econometric properties.

[10] For robustness purposes, in this paper I present estimates of model 2.1 using different higher order polynomial specifications.

both sides of the cut-off.

Provided that the running variable is measured prior to the start of treatment, the cut-off point is determined independently of the running variable, and assignment to treatment is entirely based on the candidate votes and the cut-off point, the internal validity might still be threatened by the presence of vote manipulation by the winning candidate. Hence, I follow McCrary (2008) to estimate possible discontinuities in the distribution of the forcing variable: the presence of a statistically significant discontinuity in the margin of victory around the cut-off would suggest that the running variable has been subject to manipulation.



(a) All cities (b) Southern cities (c) Non-Southern cities

Figure 2.1: Continuity of the running variable.

In figure 2.1, panel (a) shows the distribution of the margin of victory of an African-American candidate against a white candidate for the entire sample; the magnitude of the estimated log difference in height (0.61) and the relative standard errors (0.33) confirm that the election of a black mayor in a close contest cannot be considered as good as random; this is due to the presence of vote manipulation. Hence, I disaggregate my sample into cities belonging to the Southern States and cities belonging to the remaining regions. The estimated discontinuity in Figure 2.1 - panel (b), with a log difference equal to 1.32 and relative standard errors equal to 0.68, reinforces Vogl (2014) main results, which state that, in US Southern cities, close black victories were more likely than close black losses, involved higher turnout than close black losses, and were more likely to be followed by subsequent black victories. As suggested by Vogl (2014), these results are "consistent with the idea that the historical exclusion of African-Americans from the political process makes them

considerably more sensitive to mobilisation efforts than whites" (p. 109).

Finally, panel (c) in Figure 2.1 allows the conclusion that the election of an African-American candidate in a close contest was not decided by vote manipulation in the cities outside the Southern States (the estimated log difference is equal to 0.35 while the relative standard errors are equal to 0.34). Therefore, for the purpose of my analysis, I will focus on the non-Southern sample only, since the estimates of the effect of a black mayor on crime would be biased in the Southern cities.

Table 2.3: Discontinuity in the Covariates.

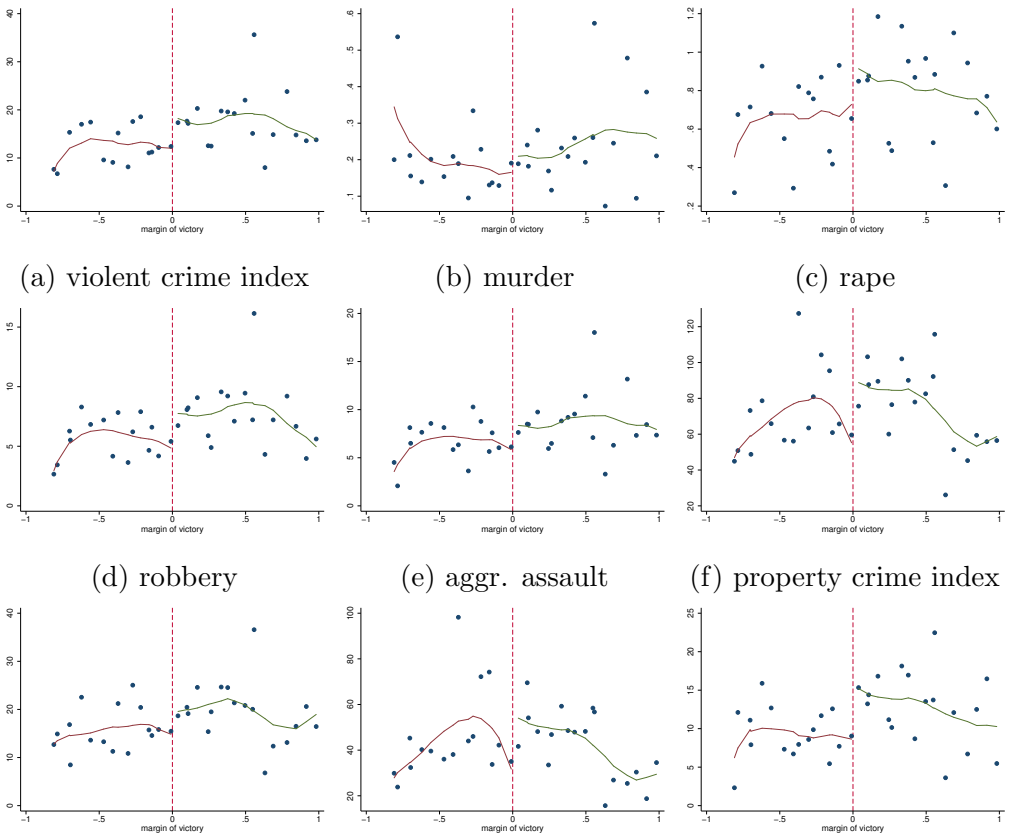
	β **s.e.**	**N**
	(1)	**(2)**
log(pop)	−0.084	127
	(0.33)	
% ≤ 18	−0.865	127
	(1.17)	
% ≥ 65	0.594	126
	(0.76)	
% black	4.39	126
	(4.36)	
log(inc.)	−0.015	126
	(0.07)	
% poor	0.463	124
	(1.95)	
% unemp.	0.702	124
	(1.01)	
education	−2.224	124
	(3.25)	

Source: Author's calculations based on data from the US Census of Pop. and Housing.
Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients, the std. errors and the number of observations relative to the election of a black mayor on different observable municipal characteristics. Std. errors are clustered at city level.

As a last test to support the internal validity of the discontinuity design, I check whether the distribution of the baseline covariates varies smoothly at the cut-off point. Table 2.3 reports the RD estimates of model (2.1) using the municipal charac-

teristics introduced in Section 2.3.3 as dependent variables[11]. Overall the municipal characteristics do not seem to be affected by the treatment indicator. In order to gather further evidence in favour of this result, I perform two more tests: I firstly estimate model (2.1) for each covariate controlling for all the remaining municipal characteristics and, following Lee and Lemieux (2010), I run a Seemingly Unrelated Regression (SUR) model followed by a test for the discontinuity gaps in all questions being zero[12] (p. 331). The results, not reported here for brevity, confirm that the municipal characteristics are not discontinuous around the cut-off.

2.5 Results



(a) violent crime index (b) murder (c) rape

(d) robbery (e) aggr. assault (f) property crime index

(g) burglary (h) larceny (i) motor vehicle theft

Figure 2.2: The impact of the election of an African-American mayor on crime.

Figure 2.2 offers a preliminary graphical inspection where different types of

[11] See Appendix A, Figure A.4 for the distribution of the covariates around the threshold.
[12] The test is robust across different polynomial specifications.

crimes are plotted against the running variable, i.e. the margin of victory of the candidates competing in an interracial mayoral election. The discontinuity observed in panel (a) for the violent crime index, defined as the sum of the violent crimes collected by the FBI, is mostly driven by rape (panel (c)), robbery (panel (d)) and, to a minor extent, assault (panel (e)). The number of murders per 1,000 inhabitants does not seem to be affected by the election of an African-American mayor. Concerning property crimes, motor vehicle theft (panel (i)) and larceny (panel (h)) drive the discontinuity observed in the property crime index (panel (f)), whereas in panel (g) we observe only a mild jump relative to burglary.

In order to establish whether the discontinuities observed in Figure 2.2 are statistically significant, Table 2.4 presents the RD estimates relative to the election of an African-American candidate in an interracial contest on several types of violent (Panel A) and property crimes (Panel B), occurring in the year subsequent to the electoral race.[13] The first column reports the average and standard deviation of each type of crime; the second column estimates model (2.1) without covariates; in column (3) I control for city characteristics, mayor's partisanship[14], mayor's incumbency status, year and state fixed effects, while in column (4) I adopt a stricter specification, adding year and city fixed effects to the set of municipal and mayoral characteristics.

The RD estimates relative to the violent crimes reported in column (2) show that the election of an African-American mayor has a positive and statistically significant effect on the violent crime index, which is mostly driven by an increase of 1.972 robberies per 1,000 inhabitants. However, these results are not robust to the inclusion of controls, year and state or city fixed effects, as shown in columns (3) and (4). The impacts on the remaining violent crimes are not statistically significant, regardless of the specification adopted.

[13]In Column (2) the number of observations is 112 for the violent crime index and rape and 127 for the remaining categories. In column (3) and (4) the number of observations is 109 for the violent crime index and rape and 124 for the remaining categories.

[14]I include a dummy indicator equal 1 if the mayor is a democrat and 0 otherwise; a dummy indicator equal 1 if the mayor is a republican and 0 otherwise and, finally, a dummy indicator equal 1 if the mayor is independent and 0 otherwise (baseline category excluded in this case).

Table 2.4: RD estimates of the impact of black mayor on crime

	Average (std)	**RD**		
	(1)	**(2)**	**(3)**	**(4)**
Panel A				
Violent crime index	11.67	**4.045***	−0.098	−1.354
	(7.14)	(**2.10**)	(2.17)	(1.54)
Murder	0.16	0.024	0.016	−0.025
	(0.15)	(0.03)	(0.03)	(0.03)
Rape	0.60	0.166	0.019	−0.077
	(0.36)	(0.13)	(0.15)	(0.10)
Robbery	4.92	**1.972***	0.224	0.133
	(3.35)	(**1.11**)	(0.87)	(0.69)
Assault	6.16	1.033	−1.599	**−1.743*****
	(4.59)	(1.02)	(1.08)	(**0.71**)
Panel B				
Property crime index	64.42	10.894	−9.478	−8.942
	(31.41)	(9.16)	(12.26)	(6.60)
Burglary	15.37	3.106	0.184	−2.201
	(7.62)	(2.85)	(2.49)	(2.46)
Larceny	39.08	1.941	−12.739	**−9.643***
	(24.02)	(5.90)	(11.18)	(**5.64**)
Motor vehicle theft	9.97	**5.847*****	**3.077****	**2.902****
	(7.18)	(**2.00**)	(**1.37**)	(**1.22**)
Controls		No	Yes	Yes
Year f.e.		No	Yes	Yes
State f.e.		No	Yes	No
City f.e.		No	No	Yes

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Column (1) presents the average and standard deviation in parentheses relative to each crime category. Each entry in columns (2)-(4) reports the RD coefficients and std. errors relative to the election of a black mayor on different categories of violent (Panel A) and property crimes (Panel B), using a flexible linear polynomial term in the margin of victory. Controls include city and mayoral characteristics. Std. errors are clustered at city level.

In Panel B, RD coefficients and standard errors relative to the impact of the election of a black mayor on property crimes are displayed. Column (2) shows that the property crime index, defined as the sum of burglaries, larcenies and motor vehicle thefts per 1,000 inhabitants, is not statistically different from a city where a non-black mayor has been elected against an African-American candidate. Passing to the single property crimes, the number of burglaries per 1,000 inhabitants is not affected by the election of a black mayor winning a close multi-racial contest. As regards the number of larcenies, in column (2) we see that the election of a black mayor in a

close multi-racial contest does not have any statistically significant effect; my results do not change when I include controls, state and year fixed effects (column 3), even though the coefficient is now negative. Finally, in column (4) we find a negative and statistically significant effect on the number of larcenies the year after the election of an African-American mayor when I add year and city fixed effects to the set of municipal and mayoral controls. Compared to column (3), the magnitude of the coefficient shrinks in absolute value from 12.739 to 9.643 per 1,000 inhabitants. Contrary to the previous cases, a strong, positive and significant impact is found on the number of motor vehicles stolen: as we can see from column (2), the election of a black officer in a close multi-racial contest increases the number of motor vehicle thefts by 5.847 per 1,000 inhabitants; this effect turns out to be statistically significant at the 1% level. The inclusion of city and mayoral characteristics, as well as year and state fixed effects in column (3), reduces the magnitude of this effect to 3.077 per 1,000 inhabitants, which is now significant at the 5% level. The inclusion of city fixed effects in column (4) reduces the coefficient slightly to 2.902 per 1,000 inhabitants and the relative standard errors; as in column (3), the coefficient is significant at the 5% level. Comparing this coefficient to column (1), we can see that the effect is quite substantial, since its size represents 29.11% of the yearly average of the car theft category per 1,000 inhabitants.

In Appendix A for each crime category I re-estimate model (2.1) using different polynomial specifications, in order to check if the results presented in Table 2.4 are sensitive to the particular functional form adopted. Murders (Table A.4) and rapes (Table A.5) per 1,000 inhabitants do not seem to be affected by the election of an African-American mayor when non-linear polynomial terms in the margin of victory are used. The same conclusions apply to the number of aggravated assaults per 1,000 inhabitants (Table A.7): the only exception is that, in column (3), the inclusion of controls, year and city fixed effects makes the coefficient significant at the 1% level. Unfortunately the statistical significance fades away when higher order polynomials in the margin of victory are adopted. The sum of violent crimes in Table A.3, and

the number of robberies per 1,000 inhabitants (Table A.6), present a positive and statistically significant effect in six out of eight different functional forms adopted when no controls are included (column 1). In columns (2) and (3), we can see that this effect disappears when I add controls, year and state (column 2), or city fixed effects (column 3).

As regards the property crime category, using different polynomial specifications does not change the results relative to the property crime index and the number of burglaries per 1,000 inhabitants, as we can see from Tables A.8 and A.9 respectively. The impact of the election of an African-American mayor on the number of larcenies per 1,000 inhabitants, as discussed in Table 2.4, disappears when I include higher order polynomial terms in the margin of victory (Table A.10, column 3). Passing to the number of motor vehicles stolen per 1,000 inhabitants, in Table A.11 we can see that the particular choice of the functional form does not belie the evidence in favour of an increase of this crime the year after the election of a black mayor. The inclusion of controls, year and state fixed effects in column (2) reduces the magnitude of the coefficients and the relative standard errors if compared to column (1); also in this case, the election of an African-American remains statistically significant regardless of the polynomial specifications used. Finally, with the exception of two cases only, in column (3) the adoption of a more rigorous model with the inclusion of city fixed effects does not wash away the statistical significance of the relationship linking the election of a black mayor to the number of motor vehicles stolen per 1,000 inhabitants.

2.6 Discussion

In order to shed light on the channels through which the election of a black local officer can affect this particular crime, I analyse whether the election of an African-American mayor can have an impact on police employment. Following Becker (1968), a decrease in the employment of police officers might reduce the opportunity cost of crime, lowering the probability of detection and, eventually, imprisonment.

In order to study this relationship, the Historical Data Base on Individual Local Government Employment, released upon request by the US Census, was used. The database contains over 220 employment variables for State and local government, collected yearly for the period 1972-2010.[15] For the purpose of this analysis, the following model is estimated:

$$police_{c,t+1} = \alpha + \beta BlackMayor_{c,t} + f(MV_{c,t}) + \gamma BlackMayor_{c,t} \times f(MV_{c,t}) + u_{c,t+1} \quad (2.2)$$

where the dependent variable is police employment per 1,000 inhabitants in the year following the election.

Table 2.5: Impact of a black mayor police employment per 1,000 inhabitants - RD estimates

	Tot police employment **(1)**	**Police officers employed** **(2)**
Black Mayor	-1.044^{**}	-0.582^{*}
	(0.51)	(0.33)
N	105	105

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor on police total employment and police officers employed, using a flexible linear polynomial term in the margin of victory. Controls include city, mayoral characteristics, year and state fixed effects. Std. errors are clustered at city level.

In Table 2.5, the first column shows the impact of the election on an African-American mayor in non-Southern cities on the number of total police employees per 1,000 inhabitants. The coefficient in column (1) is negative and statistically significant, denoting a decrease in the number of police employees of 1.044 policemen employed per 1,000 inhabitants. Unfortunately the data provided by the Historical Data Base on Individual Local Government Employment relative to the police occupation does not distinguish the police officers according to their ranks; in this respect, it might be difficult to pinpoint the specific mechanism through which motor vehicle theft is affected.[16] However, the data do provide information on the number of police sworn officers. For this reason, in order to gather further evidence

[15] Data were not collected in 1996.

[16] For example, I am not able to establish if the increase in motor vehicle theft might be explained by a reduction in the number of police investigators.

in favour of my results, I restrict the analysis on this category as they are, in fact, *"the only police employees who carry a gun and have the power to arrest"* (Levitt, 1997). The coefficient presented in column (2) suggests that, on average, the election of a black mayor in a close contest causes a decline of 5.82 police officers per 10,000 inhabitants; this effect is significant at the 10% level.

These results are in line with Hopkins and McCabe (2012); the authors, studying how the first election of a black mayor can produce a significant impact on fiscal and employment policies between 1986 and 2006, find that out of 28 indicators analysed, the only ones significantly affected are the share of revenues devoted to policing (negative), the share of city employees at the police department (negative), and the share of black policemen employed (positive).[17]

The reduction of the number of police employees offers one of the possible channels through which motor vehicle theft increases in the year following the election of a black mayor. Past research studies into how a change in police employment affects the incidence of crime gives strength to this result: Kelly (2000) finds a significant negative correlation between police and property crime, while it remains negative but not significant for violent crimes; Di Tella and Schargrodsky (2004) focus on the terroristic attack against the Jewish centre "Asociacion Mutual Israelita Argentina" occurred in 1984 in Buenos Aires. Although the data on the number of policemen employed are not directly available, the authors exploit the government's decision to assign police protection to Jewish and Muslim buildings, finding that areas exposed to increased police coverage are characterised by a reduction in the number of car thefts. Levitt (1997) shows that an increase in the number of police in the US leads to a decrease in violent crimes but not property crimes. Levitt (2002), after re-estimating the model used in Levitt (1997) due to the presence of programming and classification errors[18], shows that the increase in police numbers is negatively correlated to three particular types of crime only, i.e. murder, robbery and motor

[17]Differently from Vogl (2014), this study does not distinguish between the elections that occurred in the Southern and the non-Southern States. The authors, however, report to tackle this issue including possible omitted variables relative to the Southern cities (p. 689).

[18] See McCrary (2002).

vehicle theft.

2.7 Robustness

The results presented in Section 2.5 confirm that the number of motor vehicle thefts per 1,000 inhabitants is the only crime category affected by the election of an African-American mayor, regardless of the particular functional term adopted. In order to check if this result is obtained by random chance, I run a series of tests aimed at establishing the robustness of my findings.

2.7.1 Crime Rates - Increasing the Number of Data Points

Table 2.6: Impact of black mayor on motor vehicle theft - two years

	m.v. theft (1)	**m.v. theft (2)**	**m.v. theft (3)**
black mayor	4.855***	3.151***	2.001**
	(1.76)	(1.02)	(0.87)
N	260	254	254
Controls	No	Yes	Yes
Year f.e.	No	Yes	Yes
State f.e.	No	Yes	No
City f.e.	No	No	Yes

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor on m.v. theft in the two years after the election, using a flexible linear polynomial term in the margin of victory. Controls include city and mayoral characteristics. Std. errors are clustered at city level.

As a first robustness check, I increase the data points by adding the number of motor vehicles stolen per 1,000 inhabitants in the first two years after an interracial mayoral election took place.[19] In Table 2.6, Column (1) shows that the number of motor vehicles stolen in the two years subsequent to the election increases by 4.855 per 1,000 inhabitants when a black mayor wins a multi-racial contest. The inclusion of controls, year and state fixed effects in column (2) reduces the coefficient to 3.151 per 1,000 inhabitants; the coefficient, as in column (1), remains significant at the

[19]In order to avoid possible strategic behaviours of mayors seeking re-election, I do not include the number of motor vehicle thefts that occurred three or four years after the election.

1% level. Finally, replacing state fixed effects with city fixed effects, we observe a decrease of the coefficient from 3.151 to 2.001 per 1,000 inhabitants. Compared to the effect estimated in columns (1) and (2), the coefficient is now significant at the 5% level.[20]

2.7.2 Non-Parametric Estimator

The results presented so far are based on a parametric estimator, which is implemented retaining all the elections in the sample where a black candidate competes against a non-black candidate, and absorbing the variation coming from the observations far away from the threshold imposing an appropriate polynomial specification of the running variable.

$$\begin{cases} crime_{c,t+1} = \alpha + \beta BlackMayor_{c,t} + \gamma MV_{c,t} + \delta BlackMayor_{c,t} \times MV_{c,t} + u_{c,t+1} \\ \\ \theta - h \leq MV_{c,t} \leq \theta + h \\ \\ \textit{Where } \theta \textit{ is the cut-off point and } h \textit{ represents the bandwidth adopted.} \end{cases} \tag{2.3}$$

In what follows, I exploit a non-parametric procedure in order to determine whether my results are sensitive to the use of a different estimator.

Following Imbens and Lemieux (2008), I choose a rectangular kernel and estimate a local linear regression within a reasonable small bandwidth h, since this amounts to estimating a common regression over a window of width h on both sides of the cut-off point, as presented in model (2.3). The optimal bandwidth is computed using the method developed by Imbens and Kalyanaraman (2012), referred to from now on as I-K.

In Table 2.7 I report the estimates of the coefficients and standard errors relative to the election of an African-American mayor in a multi-racial race decided by a

[20]For the sake of completeness, I re-estimated model (2.1) linking the election of an African-American mayor to the number of motor vehicles occurred two years after the mayoral contest. The results, available upon request, are not statistically significant at any conventional level.

Table 2.7: Impact of a black mayor on motor vehicle theft - RD non-parametric estimates.

	m.v. theft (1)	**m.v. theft (2)**	**m.v. theft (3)**
Black Mayor	4.736**	5.981*	5.615***
	(2.06)	(2.98)	(2.01)
N	98	64	126
opt. band. I-K	0.472	0.236	0.944

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients, the std. errors and the number of observations relative to the election of a black mayor on m.v. theft. Optimal bandwidths are computed using the I-K method. Std. errors are clustered at city level.

narrow margin of victory, using the nonparametric method discussed above. As can be seen, the I-K procedure computes a considerably large optimal bandwidth, i.e. 47.2%; this in turn might bias my estimates as we are considering observations that are too far away from the threshold without imposing the correct functional form. In the first column we can see that the election of a black mayor increases the number of motor vehicle thefts by 4.736 per 1,000, using the I-K method; this effect is statistically significant at the 5% level. In Columns (2) and (3), I re-estimate model (2.3) halving and doubling the window of observations around the threshold in order to check to what extent the results obtained are sensitive to the selection of different bandwidths. In column (2), the lower number of observations used to estimate the causal effect of the election of a black mayor on motor vehicle thefts inflates the standard errors and decreases the statistical significance of the coefficient; this is despite an increase in its size (5.981). On the other hand, when we double the bandwidth the coefficient decreases slightly (coeff. 5.615) if compared to column (2) while, due to the higher number of observations, we obtain a more precise estimate that is now statistically significant at the 1% level.

2.7.3 Mayor's Ethnicity vs Mayor's Race

The results obtained so far showed that the election of a black mayor against a non-black candidate determines a positive and significant effect on the number of motor vehicles stolen per 1,000 inhabitants in the year following the electoral race. In this

respect, however, it might be difficult to disentangle the ethnic minority status effect from the racial effect related to the election of an African-American mayor.

Table 2.8: RD-estimates of the impact of an ethnic minority mayor on motor vehicle thefts per 1,000 inhabitants.

	m.v. theft (1)	**m.v. theft (2)**
ethnic minority mayor	−0.349	2.521
	(3.55)	(4.00)
Controls	No	Yes
N	31	29

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an Asian-American or Hispanic/Latino candidate competing against a white candidate on m.v. thefts per 1,000 inhabitants, using a flexible linear polynomial term in the margin of victory. Controls include city and mayoral characteristics. Std. errors are clustered at city level.

In order to shed light on this aspect, I estimate a model similar to equation (2.1), where I exclude all the elections involving an African-American candidate; in this way, I focus my analysis on the close elections where an Asian-American or Hispanic/Latino candidate runs against a white candidate.[21] Therefore, the treatment indicator now takes value 1 if the mayor elected belongs to one of the two ethnic minority groups and 0 otherwise.

The estimates presented in Table 2.8 show that the number of motor vehicles stolen caused by the election of an ethnic minority mayor against a white candidate is close to 0 and not statistically significant; the inclusion of controls in column (2)[22] increases the magnitude of the coefficients, passing from -0.349 to 2.521 per 1,000 inhabitants, while it remains statistically not significant at any conventional level. This exercise corroborates the evidence in favour of the original findings since it proves that it is the election of an African-American mayor in a close contest against a non-black candidate rather than their ethnic minority status that exercises a positive impact on the number of motor vehicles stolen.

[21] In order to establish if the candidate is Hispanic/Latino, Asian-American or white, I consulted several newspaper archives and elections bureaux.

[22] Due to the reduced number of observations, I do not include year and state fixed effects.

2.8 Conclusions

This study analyses how crime responds to the election of an African-American mayor against a non-black candidate. Exploiting a parametric regression discontinuity design, I am able to isolate the endogeneity of the election of a black mayor at city level, by focusing on closely contested electoral races only. My main results show that the election of a black mayor in a close multi-racial contest determines a strong and positive impact on the number of motor vehicles stolen per 1,000 inhabitants the year after the interracial mayoral contest; this result is robust to a series of tests as well as to the adoption of different polynomial specifications. In relation to the other crime categories, I find a mild effect on the number of robberies and on the sum of all the violent crime categories, which, however, tend to disappear when different polynomial specifications are adopted. Passing to the property crimes, no evidence of an influence of the race of the mayor is found on burglaries and larcenies, or on the sum of all the property crimes categories.

The second part of this work provides an assessment of one of the possible channels that might explain why motor vehicle theft is positively affected by the election of a black mayor. Seminal research conducted in criminology and sociology in the late 1970s testified African-American mayors' preferences for social welfare policies with respect to protective services and physical facilities. In contrast, more recent works have shown that a city where a black mayor is elected is not different from a city where a non-black mayor is elected in terms of the fiscal and employment policies adopted; the only exception here is police employment, as pointed out by Hopkins and McCabe (2012).

In my study I find that the election of an African-American mayor has a negative and statistically significant impact on the number of police employees. The economics of crime literature provides a satisfactory rationalisation of this phenomenon: a reduction in police employment, by lowering the opportunity cost of committing crime, helps explain why the number of motor vehicles stolen increases considerably after the election of a black mayor.

Chapter 3

They win, I leave: the impact of the Northern League party on foreign internal migration

3.1 Introduction

On 1 March 2016, soon after the crushing victory in seven states obtained in the first Super Tuesday by Donald Trump against his Republican rivals, the number of Google searches in the US for advice on how to leave the country and move to neighbouring Canada skyrocketed (Appendix B, Figure B.1). Quite curiously, a few months later, immediately after the referendum results on Brexit that took place on 23 June, Google trends data showed a spike in interest among Britons on how to leave the UK, moving to other countries such as Northern Ireland or France (Appendix B, Figure B.2).

These simple anecdotes pose an important question that this paper seeks to address: do electoral outcomes affect migration decisions, leading people to relocate to a different place when an electoral result or a politician dividing the public consensus obtains an unexpected victory?

A growing body of research conducted in psychology has tried to indirectly analyse this issue, studying how non-economic push or pull factors affect migration decisions. Rosenbaum (1986) develops the repulsion hypothesis, according to which the sentiment of repulsion by the dominance of dissimilar individuals exacerbates people's intention to migrate. Motyl (2014) and Motyl et al. (2014) theorise the

ideological migration hypothesis, arguing that:

> *"People with certain racial identities, personalities and ideologies may feel like their needs are not being met in one residence, so they could choose to change residences to better satisfy these needs."* (p. 1)

To shed light on how elections can affect migration decisions, I use a data set relative to the mayoral elections in Italy to study how foreign internal migration responds to the election of a candidate affiliated to the Northern League (Lega Nord) party, a far-right political movement known for its racist and xenophobic attitudes and characterised by a strong federalist, populist and anti-immigration ideology.

Contrary to the seminal works by Hotelling (1929) and Downs (1957), according to which the type of policies implemented by politicians merely reflect the preferences of the median voter, a recent array of studies has largely shown that politicians' preferences play a crucial role in determining the set of economic and political measures adopted (Besley and Coate (1997); Levitt (1996)). In the context of this paper, if politicians' preferences differ by partisanship, the adoption by a Northern League (NL from hereafter) mayor of specific policies or behaviours that favour Italian citizens over foreign citizens might push foreigners to relocate to a city with an officer affiliated to a different political party or a civic list in charge.

In order to overcome possible sources of endogeneity related to the election of an NL mayor, the identification strategy relies on a sharp regression discontinuity design (RDD). I analyse the mayoral elections in Italian cities between 2001 and 2014, exploiting the races decided by a narrow margin of victory, where the mayor or the runner-up are affiliated to the Northern League party.

To precisely estimate the effect of the Northern League on migration, I exclude the elections in which an NL candidate was supported by a coalition of two or more parties or civic lists.

My main findings confirm that the election of a Northern League mayor causes an increase in the foreign out-migration rate in the year following the electoral race. On

the other hand, foreign in-migration and net migration do not seem to be influenced.

To shed light on the possible factors driving these results, I show that, in cities ruled by an NL mayor, there is a reduction in the number of Italian citizenship acquisitions. This signals a perception by resident foreigners of an increased barrier to acquiring citizenship, a likely cause for foreign citizens to migrate. In order to provide further evidence in favour of this hypothesis, I show that Italian citizens do not migrate in response to the election of a Northern League mayor.

This paper is related to the strand of research studying how the partisanship of newly elected politicians influences different economic, political and social outcomes. Lee (2008), exploiting data relative to the elections to the US House of Representative (1946-1998), shows that an incumbent Democrat is more likely to win the subsequent elections. Pettersson-Lidbom (2008) argues that Swedish left-wing governments increase public spending and taxation if compared to right-wing parties. Ferreira and Gyourko (2009) find that in American large cities no significant relationship exists between the party of a newly elected mayor and the size of city government, the allocation of public spending and crime rates. Meyersson (2014) demonstrates that Turkish cities exposed to an Islamic party are characterised by a higher female secular high school education. Beland (2015) finds lower average individual earnings in the United States when a Democratic governor is elected. Galindo-Silva (2015) argues that the election of politicians affiliated to newly formed parties in Colombian municipalities affects the size of the government. Basile and Filoso (2016) show that there is no difference between the outcomes of the policies ratified by left and right-wing parties in Italy. Beland and Oloomi (2017) show that Democratic governors assign a larger share of their budget to health and education spending.

In this paper, it is my intention to establish a causal nexus between the election of a politician and foreign migration. The economic literature has mostly focused on the opposite direction of causality, addressing how electoral or political outcomes are influenced by migration: Pfutze (2012) finds that international migration in Mexico

improves the quality of local democratic institutions in Mexico. Chauvet and Mercier (2014) find that returning migrants in Mali have a positive effect on participation and electoral competitiveness. Otto and Steinhardt (2014) and Barone et al. (2016) show that immigration causes an increase in votes for xenophobic and anti-immigrant coalitions in Germany and Italy, respectively. Dustmann et al. (2016) estimate the causal effect of refugee migration on voting outcomes in parliamentary and municipal elections in Denmark, finding a positive effect on anti-immigration and centre-right parties in non-urban places; on the other hand, a negative effect is detected if the elections take place in urban municipalities. Becker and Fetzer (2016) focus their analysis on the UK, showing that in places with a large number of migrants from Eastern Europe there was an increase in the vote shares for the UK Independence Party (UKIP) in elections to the European Parliament, used as an indicator for anti-European sentiment after 2004. Halla et al. (2017) show that the inflow of immigrants in Austria increases voting for far-right parties. Mayda et al. (2016) argue that immigration to the US has a negative impact on the votes to the Republican party.

To the best of my knowledge, this represents the first study addressing a causal relationship between the election of a mayor affiliated to a party standing for its racist positions[1] and foreign internal migration.[2]

The article is organised as follows: Section 3.2 presents the institutional setting; Section 3.3 describes the data used and provides some descriptive statistics; Section 3.4 explains the methodology and the econometric model adopted; Section

[1] A sentence passed by a judge in Italy on 13 January 2017 established that defining the Northern League party as racist is not a defamatory statement but a political criticism (Il Fatto Quotidiano, 2017).

[2] At the time of writing up this paper, a new working paper exploring how immigrants' location choices in Italy are affected by a mayor affiliated or supported by a Lega Nord candidate was issued (Bracco et al., 2017) My work crucially differs from Bracco et al. (2017) in the more rigorous way in which I define the treatment indicator. I focus on a narrower set of elections, with only NL candidates running for the mayoral office, and exclude polls with candidates affiliated to other parties for which the Northern League party only provided external support. I believe that the focus of this paper necessitates an indicator of political preferences as clean and as unambiguous as possible, for which I assume it is appropriate to consider only mayoral offices where Lega Nord could fully exert its political influence. The difference in the treatment indicator and the sample of analysis determines completely different results compared to Bracco et al. (2017).

3.5 presents the main results; in Section 3.6, I show the impact of an NL mayor on the neighbouring cities and on foreign international migration. In Section 3.7, I discuss how Northern League mayors might reduce the perception of integration towards non-Italian residents, while in Section 3.8, I perform some robustness checks. Section 3.9, finally, concludes the paper.

3.2 Institutional Setting

3.2.1 Electoral Law for Italian Municipalities

Approximately 91% of the municipalities in Italy has less than 15,000 inhabitants.[3] City and towns are governed by mayors, who manage and coordinate important services at the municipal level, such as infrastructures, public utilities, municipal police, environmental services, transports, welfare and housing. Mayors are elected every five years by the inhabitants of the municipalities, but they cannot be re-elected after two terms.[4]

As discussed by Bordignon et al. (2016), the electoral law for Italian municipalities passed in 1993[5] poses different rules for the election of the mayor, differentiated by the size of cities or towns. For municipalities below 15,000 inhabitants, the mayor is elected with a single ballot system. Parties or coalitions propose their preferred candidate for mayor and the list of candidates for the city council. The mayoral candidate with more votes becomes mayor whilst her party or list is awarded with 2/3 of the seats in the council. The remaining 1/3 is divided among the losing lists proportionally to their share of votes.

For municipalities above 15,000 inhabitants, the elections for the mayoral office are structured according to a dual ballot scheme, in which parties or coalitions decide the mayoral candidate to support and present lists of candidates for the council. Each candidate can be supported by more than one list. The candidate

[3] In April 2017, the total number of municipalities amounted to 7,982.

[4] Mayors are allowed to run for a third non-consecutive mandate. This principle of contiguity is not required for small towns (below 3000 inhabitants).

[5] Law 81/1993.

becomes the new mayor if she gets more than 50% of the votes in the first round.[6] Otherwise, the two best contenders compete in a second round where who gets more votes becomes mayor.

3.2.2 The Northern League Party

The Northern League party (Lega Nord) was established in 1991 by Umberto Bossi as a partnership of pre-existing regional parties of northern and central Italy.[7] The party's political agenda promotes the conversion of Italy into a federal state and the secession of the North, allowing the Northern regions, called by party members *Padania*, to keep more tax revenues collected under a regime of fiscal federalism.

The Northern League party endorses a socially conservative position on issues such as abortion, euthanasia, and same-sex marriage. On the contrary, it adopts a strong position against crime (for which the party has advocated the promotion of citizens' defence groups), and illegal immigration, especially from Muslim countries. Officially the NL party favours immigration from non-Muslim countries to protect the "Christian identity" of Italy and Europe; de facto it nurtures a solid resentment against non-Muslim populations too, especially against Central-Eastern European immigrants.[8] In 2002 the Northern League, together with other Italian parties, was denounced by the European Commission against Racism and Intolerance (ECRI) for the extreme use of racist and xenophobic propaganda.[9] In 2006, ECRI reported an intensification of the use of racist and xenophobic political talks, both at the local and at the national level.

Since 2012, the party has undergone a restructuring of its political leadership with the election of Roberto Maroni as the new secretary of the party; from December 2013, Maroni was succeeded by the new Northern League head, Matteo Salvini.

[6] Voters express two preferences, one for a mayoral candidate and one for a party list. The two votes may be disjoint.

[7] The most important ones are Lega Lombarda, Liga Veneta, Piemonte Autonomista, Unione Ligure, Lega Emiliano-Romagnola, and Alleanza Toscana.

[8] For example, in 2007 the Northern League was strongly against the inclusion of Romania and Bulgaria into the Schengen area.

[9] See, for example, European Commission against Racism and Intolerance (2002).

Despite changes to the leadership that occurred in recent years, the episodes of racisms did not stop: for example, in 2013 the first Italian black minister, Cécile Kyenge, was compared to an orangutan by a Northern-League Senator (Kington, 2013), causing considerable public indignation.

3.2.3 Foreign Population in Italy

Data collected by the Italian National Institute of Statistics in the last 15 years document a steady increase in the foreign population legally residing in Italy. In 2002, foreign residents represented the 2.7% of the total population; 13 years later, in 2015, the share of foreign residents increased to 8.3%, in part due to the enlargement of the European Union on 1 January 2007, with the inclusion of Romania and Bulgaria.

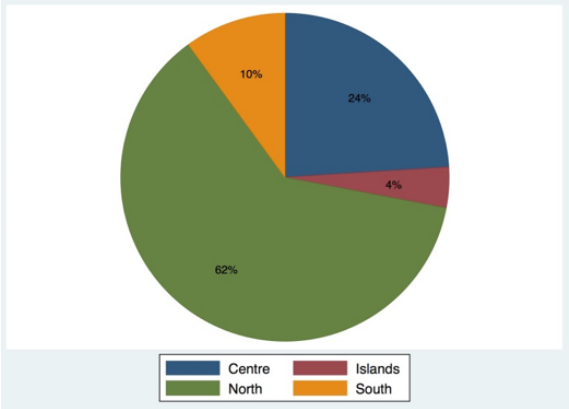


Figure 3.1: Distribution of foreign population in Italy - 2012

Concerning the spatial distribution of foreign citizens in Italy, immigration has affected the Italian regions differently. As documented by Bettin and Cela (2014) "the Southern regions represent for many migrants the gateway to Italy and the first step towards the Northern and Central regions" (p. 54). Southern Italy is characterised mostly by illegal migration, while legal migrants cluster in the Northern cities, where there is a higher labour demand and better services. The data collected by the Italian National Institute of Statistics relative to the year 2012 (see Figure 3.1) indicate that 86% of foreign citizens are concentrated in the North (62%) and in the

Centre (24%), with only the remaining 14% living in the South (10%) and in the Islands (4%).

3.3 Data

The surveys *"Migration and calculation of foreign resident population and structure by citizenship"* and *"Migration and calculation of yearly resident population"*, collected by the Italian National Institute of Statistics, provide since 2001[10] information on a yearly basis on foreign and total migration at the municipal level respectively.

The survey *"Migration and calculation of foreign resident population and structure by citizenship"* defines the foreign resident population as individuals without Italian citizenship who register in the Italian city where they normally reside. It is calculated for each municipality on 31 December of each year, adjusting the foreign population in each municipality with the foreign population inflows and outflows recorded during each calendar year. The registration represents the first prerequisite for foreign citizens to obtain Italian citizenship, and gives access to a set of public services, such as schools, public health provision and social benefits. For each municipality, the data allow the identification of the non-Italian people having their usual residence in a specific city, the number of Italian citizenships acquisitions, the number of foreign migrants moving to a municipality from abroad or from other Italian cities, as well as the number of foreign residents living in Italy who relocate abroad or to a different city.[11]

The survey *"Migration and calculation of yearly resident population"* provides information relative to the total population and the Italian population, on the number of live births, deaths, internal and international migration flows for each Italian municipality, and the number of resident inhabitants at the end of the year.

Italian and foreign residents relocating to a different city are required to act-

[10] In my analysis, I exclude the year 2001, since the data refer to the period October-December only.

[11] Unfortunately, the data do not allow to identify internal and international in/out migrants by their nationality.

ively register in the municipality of destination. Since 2012 the (de)registration procedures take place with immediate effect. Prior to 2012, the record of internal migratory movements took place in two steps: 1) the new municipality of residence was required to communicate the change of residence to the city of origin; 2) in turn, the municipality of origin proceeded with the cancellation of the migrant from the population register. The Italian National Institute of Statistics did not report any issues on the presence of lags or delays in the (de)registration process. For citizens moving or living abroad the (de)registration procedure has never required the aforementioned two step process.[12]

The Historical Election Archive, made available by the Italian Ministry of Interior, provides results relative to the Popular and Constitutional Referenda (from 1946), the European Parliament elections (from 1979), and the general (from 1948), regional (from 1970), provincial (from 2004) and municipal elections[13] (from 1993) that occurred in Italy up to 2014.

I complement this dataset with the Census of Local and Regional Administrators, containing information on observable characteristics, such as party affiliation, education, age and gender of the elected mayor, the losing mayoral candidates, the members of the council and the executive committee. Given the local dimension of the Northern League party, I excluded all the municipalities from the Central and Southern regions, focusing on the cities and towns belonging to Piedmont, Lombardy, Liguria, Veneto and Emilia-Romagna (See Appendix B, Figure B.3).

Table 3.1 presents the descriptive statistics relative to the NL elections. Overall, 398 out of 9,886 elections involved the participation of an NL mayor or runner-up in 294 cities. I exclude those elections where an NL candidate participated in an electoral contest in a coalition of two or more parties or civic lists. In 339 electoral

[12]A possible concern could be the existence of underreporting, which could bias the standard errors if Italian and foreign citizens forgot to change the residence from the city of origin to the city of destination. However, I believe this does not represent a strong problem, since it is in someone's best interest to register in the new city, in order to benefit from different services, such as housing or welfare.

[13]The data are not provided for the mayoral elections relative to three Northern regions, i.e. Valle d'Aosta, Trentino-Alto Adige and Friuli-Venezia Giulia.

races, a Northern League candidate ran against a contender affiliated to independent local organisations, i.e. civic lists, while in the remaining mayoral designations an NL politician was confronting either a centre-right candidate (28 times) or a centre-left candidate (16 times). Finally, in 15 cases, a candidate confronting an NL politician was running independently or in affiliation to a newly created party. On 190 occasions, an NL candidate won an electoral contest, denoting a higher number of NL runners-up in the election sample.

Table 3.1: Descriptive Statistics - Election Data

# Elections	9886
# NL elections	398
# NL vs Civic List	339
# NL vs Centre-Right	28
# NL vs Centre-Left	16
# NL vs Other	15
# NL Mayors	190
# Cities - NL election sample	294
Average NL Elections/city	1.33

Source: Author's calculations based on data from the Historical Election Archive and the Census of Local and Regional Administrators.

To assess the external validity of this study, in Table 3.2 I compare the municipal and mayoral characteristics of the elections involving the participation of a Northern League candidate[14] as a mayor or runner-up (referred to as the NL sample) against the remaining elections (referred to as the Non-NL sample).

The list of city observable characteristics includes the number of inhabitants, the number of Italian and foreign citizens living in a city, geographic indicators such as altitude expressed in meters and the area of a municipality expressed in km^2, the number of firms in each municipality in 2012, and the yearly average municipal income per capita expressed in 2010 euros. Among the mayoral characteristics, I include age, gender, education and the incumbency status of the mayor.

[14]As previously anticipated, I am excluding from this category the elections involving the participation of an NL candidate in a coalition with two or more parties or a civic list.

Table 3.2: Descriptive Statistics - Municipal and Mayoral Characteristics

	NL Sample (1)	**Non-NL Sample (2)**	**p-value (3)**
Tot Pop.	5949.49	6702.74	[0.631]
Foreign Pop.	436.98	528.52	[0.577]
Italian Pop.	5512.51	6174.22	[0.640]
Income pc in 2010€	19514.93	20114.5	[0.007]
Firms in 2012	663.91	994.04	[0.431]
Area (km^2)	17.19	25.60	[0.000]
Altitude	240.29	291.13	[0.000]
Mayor gender (male =1)	0.879	0.847	[0.077]
Mayor age	48.52	50.03	[0.005]
Mayor education	0.306	0.363	[0.020]
Mayor incumbent	0.236	0.226	[0.655]

Source: Author's calculations based on data from the ISTAT, the Historical Election Archive and the Census of Local and Regional Administrators.
Note. Each entry represents the average of the specified variable. Column (1) presents the average for the NL election sample. Column (2) reports descriptive statistics for the remaining elections. Column (3) reports the p-values relative to the test for equality of means in the two samples.

On average, NL elections take place in slightly smaller cities (however, the difference is not statistically significant at any conventional level); the number of foreign citizens and the total population are not statistically different when I compare the elections involving a Northern League candidate against the remaining contests. NL elections occur in cities with a lower income per capita, whereas no difference is registered on the number of firms in 2012 per municipality.

With reference to the mayoral characteristics, in the NL election sample mayors are more likely to be male, younger and less educated[15] if compared to the remaining

[15]The education variable takes value 1 if the mayor has a university degree, and 0 otherwise.

sample.

3.4 Empirical Strategy

The election of a mayor affiliated to the Northern League party is likely to be determined by municipal local attributes that are unobserved by the econometrician, and this will bias the estimates on migration outcomes. To deal with this source of endogeneity, I convey my analysis on close elections, comparing cities where NL candidates barely won an election with cities where NL contenders barely lost: for elections decided by a narrow margin, which aspirant will win is likely to be determined by pure chance.

The identification strategy is based on a nonparametric sharp regression discontinuity design (RDD)[16], which implements a local linear regression within the optimal bandwidth determined by the method developed by Calonico et al. (2014) - CCT from hereafter.[17]

In order to evaluate how the election of a mayor affiliated to the Northern League party can affect migration, I restrict the sample to municipalities in the interval $MV_{m,t} \in [-h, +h]$ and estimate the following model:

$$migration_{m,t+1} = \beta_0 + \beta_1 NL_{m,t} + \beta_2 MV_{m,t} + u_{m,t+1} \tag{3.1}$$

where the dependent variable $migration_{m,t+1}$ represents three possible outcomes: the number of foreign in-migrants per 1,000 inhabitants, the number of foreign out-migrants per 1,000 inhabitants, and the foreign net migration rate, defined as the difference between the first two variables, expressed per 1,000 inhabitants for municipality m in the year following the mayoral election. $NL_{m,t}$, the treatment indicator, is a dummy variable taking value 1 if the candidate affiliated to the

[16]See Imbens and Lemieux (2008), Van Der Klaauw (2008), or Lee and Lemieux (2010) for a comprehensive survey on RDD.

[17]Contrary to the pre-existing nonparametric estimators, which compute relatively wide bandwidths, Calonico et al. (2014) determine the optimal bandwidth constructing confidence intervals that are robust to large bandwidths.

Northern League party wins the election and 0 otherwise; the running variable, $MV_{m,t}$, is the margin of victory, defined as the difference between the first two candidates' votes divided by the sum of votes of all the candidates participating in the mayoral elections in which a Northern League candidate ranked first or second.

In the most rigorous specification, I augment model (1) by controlling for city and mayoral characteristics as well as year and region fixed effects.

To precisely estimate the effect of the Northern League partisanship, I exclude all the elections where an NL candidate took part in a coalition with two or more parties or civic lists. If on the one hand this reduces my sample size considerably, on the other I am able to isolate the "Northern League effect" from the role that other parties could play on foreigners' decision to migrate.[18]

Provided that 1) the running variable is measured prior to the start of treatment, 2) the cut-off point is determined independently of the running variable, and 3) assignment to treatment is entirely based on the candidate votes and the cut-off point, for the identification strategy to be internally valid, I need to test whether the probability of winning a close election is the same for all candidates, regardless of their partisanship.

Following McCrary (2008), I estimate possible discontinuities in the distribution of the running variable, as the presence of a statistically significant discontinuity in the margin of victory around the cut-off would suggest that the running variable has been subject to manipulation. Figure B.4, in Appendix B, presents the distribution of the margin of victory of a Northern League candidate against a mayor or runner-up associated to a different party, civic list or coalition. The null hypothesis of no discontinuity is not rejected (the estimated log difference is equal to -0.201 and the standard error is equal to 0.23), allowing the conclusion that the election of a mayor affiliated to the Northern League decided by a narrow margin of victory can be considered as good as random.

[18]For example, the presence of moderate or centre-wing parties in a coalition with the Northern League could mitigate foreign citizens' decisions to emigrate if they trust the other parties' ability to keep Northern League's racist pressure under control.

Table 3.3: Internal validity test - Discontinuity in the covariates

	$\boldsymbol{\beta}$ **(se)**	**N**	$\boldsymbol{h}$
Tot Pop.	−1235.8	157	0.140
	(1526.8)		
Foreign Pop.	191.4	175	0.164
	(165.62)		
Italian Pop.	−1444.7	155	0.138
	(1422.60)		
ln(Income pc in 2010€)	0.053	171	0.160
	(0.06)		
ln(Firms in 2012)	−0.421	152	0.136
	(0.35)		
Area (km^2)	−0.426	191	0.185
	(5.07)		
Altitude	50.519	226	0.221
	(56.09)		
Mayor gender (male =1)	−0.208	167	0.152
	(0.151)		
Mayor age	−4.805	178	0.168
	(3.19)		
Mayor education	−0.106	215	0.211
	(0.16)		
Mayor incumbent	0.054	178	0.170
	(0.07)		

Source: Author's calculations based on data from the ISTAT and the Historical Election Archive.
Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014). Standard errors are clustered at the municipal level.

As a second and final test, I check whether the baseline covariates vary smoothly at the cut-off since a violation of this condition would discard the internal validity of my RDD exercise. Figure B.5, in Appendix B, offers a preliminary visual inspection of how mayoral and city characteristics differ between the group of cities ruled by an NL mayor and the remaining municipalities. Concerning the municipal characteristics, I observe a jump in the number of foreign residents (panel (b)) and in the yearly average income per capita expressed in log base (panel (d)) when an NL mayor is elected; the remaining observables do not present any discontinuity in

correspondence of the cut-off. Passing to the mayoral covariates, the variables of interest present a downward jump in the Italian municipalities governed by Northern League mayors. Unlike the other mayoral characteristics, the incumbency status (panel (k)) is not discontinuous in correspondence of the cut-off.

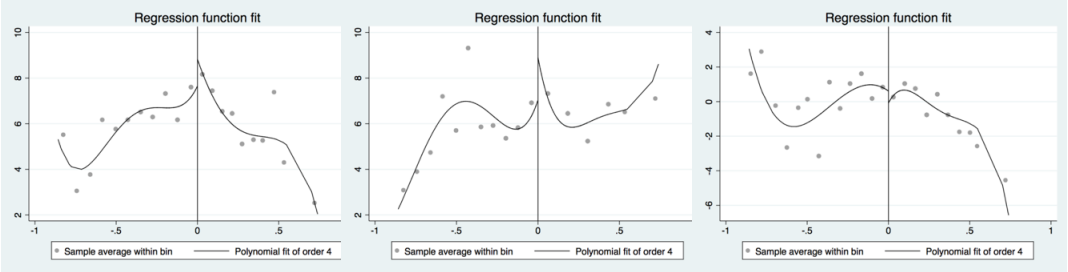
Table 3.3 reports the RD estimates of model (1) using the municipal and mayoral characteristics as dependent variables in order to establish if the discontinuities observed in Figure B.5 are statistically significant. The cities where a Northern League mayor won a close election do not seem to be systematically different from those cities where an NL candidate barely lost the race for the mayoral office. Since the estimates obtained could be sensitive to the choice of the specific bandwidth computed by CCT, in Appendix B I check if the results presented in Table 3.3 change when a different window of observations is adopted. Halving (Table B.1) or doubling the bandwidth (Table B.2) leaves my main conclusions unchanged, i.e. municipal and mayoral characteristics are not discontinuous around the cut-off.

3.5 Effect on Foreign Internal Migration

Figure 3.2 offers a graphical assessment of the impact of Northern League mayors on migration, where different measures of foreign migration are plotted against the running variable, i.e. the margin of victory of a candidate affiliated to the NL party who ranked first or second in a mayoral contest competing against a politician of a different party or civic list.

In panel (a) I observe a mild jump, indicating an increase in the number of foreign in-migrants per 1,000 inhabitants in response to the election of a mayor affiliated to the Northern League party. The discontinuity seems to be stronger when I look at the foreign out-migration rate (centre-panel), while in panel (c) I do not find a strong effect on the foreign net migration rate, defined as the difference between the in-migration and the out-migration rate.

In order to establish whether these discontinuities are statistically significant, Table 3.4 presents the estimates relative to the election of a candidate running for



(a) Foreign in-migration (b) Foreign out-migration (c) Foreign net-migration

Figure 3.2: The impact of an NL mayor on foreign migration

mayoral office with the Northern League party on the three measures of migration presented above, occurring one year after the electoral race. Two important points are worth stressing: first, the CCT method computes different optimal bandwidths for different dependent variables. This, in turn, determines a strong variation in the sample size, making the results hardly comparable. In order to overcome this problem, throughout the paper I adopt a unique optimal bandwidth (0.135), computed by the CCT method for the set of regressions adopting the foreign out-migration rate as dependent variable.[19] Second, the choice of non-contemporaneity between the election and the year of migration is motivated by the fact that the majority of municipal elections in Italy take place in May/June. Linking the impact of a Northern League mayor to the same year's foreign migratory movements would introduce a measurement error, since I would link the victory or the loss of an NL candidate to the migration flows that occurred prior to the electoral race.

The RD estimate in column (1) shows that the impact of the election of a mayor affiliated to the Northern League party on the foreign in-migration rate is positive but not statistically significant at any conventional level. The inclusion of controls at the municipal and mayoral level, as well as year and region fixed effects, decreases the size of the coefficient; however, it remains statistically not significant (column 2). Unlike the previous case, the coefficient relative to the foreign out-migration rate is positive and statistically significant at the 1% level. The result in column

[19]For the sake of completeness, I have re-estimated all the models without imposing a unique bandwidth. The results, available upon request, confirm all the findings discussed in this paper.

(3) shows that one year after the close election of a Northern League mayor, 3.2 foreign citizens per 1,000 inhabitants migrate to a different city. The effect is quite substantial, since its size represents 51% of the yearly average of the number of foreign out-migrants per 1,000 inhabitants. The addition of controls decreases the coefficient to 2.363, which is now statistically significant at the 5% level. Finally, in columns (5) and (6) I look at the foreign net migration rate. Regardless of the specification adopted, the impact of a mayor affiliated to the Northern League party has no effect on the difference between the in-migration rate and the out-migration rate.

Table 3.4: RD estimates - The impact of NL mayors on foreign internal migration - unique bandwidth

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	1.082	0.523	**3.247*****	**2.363****	−2.165	−1.839
	(2.780)	(2.085)	(**1.213**)	(**0.972**)	(2.484)	(1.979)
N	153	151	153	151	153	151
Controls	No	Yes	No	Yes	No	Yes
mean dep var.	6.530		6.359		0.170	
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

The results presented in Table 3.4 might be determined by the specific bandwidth computed by the CCT method, *viz.* 0.135. In order to dissipate this concern, I test whether the selection of different bandwidths causes a drastic change in the effects discussed above.

Table 3.5 - Panel A - presents the results obtained halving the optimal bandwidth estimated by the CCT estimator. The smaller window of observations (0.0675) produces more imprecise estimates, due to the reduced sample size. Nonetheless,

the results confirm the main findings displayed in Table 3.4. In particular, from column (3) it is possible to notice that the size of effect on the foreign out-migration rate is stronger (5.181) whilst it remains statistically significant at the 1% level. The inclusions of controls reduces the coefficient to 3.277, now significant at the 10% level. The impact on the remaining two indicators is not statically significant.

Passing to Panel B - the adoption of a large bandwidth (0.270) does not affect the impact on foreign out-migration (column 3 and 4): regardless of the specification used, the effect is statistically significant at the 1% and the 5% level and only marginally different from the corresponding coefficients displayed in Table 3.4. Also in this case, no effect is detected on foreign in-migration (columns 1 and 2) and net-migration (columns 5 and 6).

Table 3.5: RD estimates - The impact of NL mayors on foreign internal migration - unique bandwidth

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A						
NL Mayor	1.883	2.582	**5.180*****	**3.277***	−3.297	−0.695
	(3.717)	(3.790)	(**1.441**)	(**1.869**)	(3.443)	(3.622)
N	84	82	84	82	84	82
Controls	No	Yes	No	Yes	No	Yes
h	0.0675		0.0675		0.0675	
Panel B						
NL Mayor	1.168	0.005	**3.396*****	**2.138****	−2.228	−2.132
	(2.629)	(2.125)	(**1.166**)	(**0.996**)	(2.379)	(2.088)
N	266	263	266	263	266	263
Controls	No	Yes	No	Yes	No	Yes
h	0.270		0.270		0.270	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.0675 (Panel A) and to 0.270 (Panel B). Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

3.6 Further Analysis on Foreign Migration

3.6.1 Effect on Neighbouring Cities

The data on migration collected by the Italian National Institute of Statistics do not allow the identification of the city of origin or the city of destination of foreign and Italian migrants. Nonetheless, in this section I re-estimate model (3.1) focusing on the number of foreign in-migrants per 1,000 inhabitants in the cities that border a municipality where an NL mayor was elected one year before.[20]

Table 3.6: RD estimates - The impact of NL mayors on foreign internal immigration - Neighbouring cities

	in-migration	
	(1)	**(2)**
NL Mayor	−0.712	−0.215
	(0.741)	(0.606)
N	953	914
Controls	No	Yes
h	0.135	0.135

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

From Table 3.6 it is possible to see that cities neighbouring a municipality where an NL mayor was elected one year before do not attract more foreign citizens. In column (1) the coefficient is negative, denoting a decrease in the number of foreign in-migrants per 1,000 inhabitants, and not statistically significant at any conventional level. In column (2) the inclusion of controls, year and region fixed effects, reduces the coefficient's size in absolute value; also in this case, the effect is not statistically significant.

[20] I excluded those cities in which the mayor in charge was affiliated to the Northern League party.

These results indicate that the election of a mayor affiliated to the Northern League party does not lead foreign citizens to migrate to neighbouring cities.

3.6.2 Effect on Foreign International Migration

To get a better understanding of how foreign citizens shape their migration decisions in response to the election of a Northern League candidate, I re-estimate model (3.1) by looking at the impact of an NL mayor on foreign international migration. Table 3.7 presents the results.

The election of an NL politician does not have any effect on foreign international in-migration in the year after the electoral contest. Passing to the out-migration indicators, columns (3) and (4) confirm that foreign citizens do not relocate abroad when an NL mayor is elected. Likewise, the results presented in the last two columns corroborate the absence of any statistically significant effect on the foreign international net migration rate.

Table 3.7: RD estimates - The impact of NL mayors on foreign international migration

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	2.093	0.787	0.391	0.002	1.702	0.785
	(1.703)	(1.055)	(0.371)	(0.286)	(1.545)	(0.978)
N	153	151	153	151	153	151
Controls	No	Yes	No	Yes	No	Yes
mean dep var.	6.569		0.829		5.739	
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

3.7 Discussion

The results analysed so far confirm the existence of a strong and statistically significant impact on the number of foreign citizens moving to different municipalities in response to the election of an NL mayor decided by a narrow margin of victory. There may be several motivations explaining why a Northern League mayor causes an increase in foreign emigration; in this chapter I adduce reinforcing evidence in favour of the idea according to which NL mayors decrease the perception of social inclusion towards non-Italian citizens. In section 3.7.1 I look at the number of Italian citizenships acquired by foreign residents, whilst in section 3.7.2 I study how the Italian internal migratory flows respond to the election of an NL mayor.

3.7.1 Italian Citizenship Acquisitions

Foreign residents awarded with Italian citizenship are required to swear allegiance to the Constitution and laws of the Republic in front of the mayor of the municipality where the foreign applicant legally resides. Despite its purely symbolic function, if the oath of allegiance does not take place within six months of notification of the award decree, it will lose its validity, requiring foreign applicants to reproduce the whole documentation and start a new application process.

According to the Law of 5 February 1992 n. 91, and the implementing regulation (Decree of the President Republic 12 October 1993 n. 572), Italian citizenship can be attributed for different reasons: automatically (principle of *jus sanguinis*), through marriage (after two years of legal residence in Italy, or three years abroad[21]) or through naturalisation (if a foreign born person has been legally resident in Italy for at least ten years[22], provided that they do not have a criminal record and have sufficient financial resources).

Notwithstanding the absence of any test on the Italian language or culture, as

[21]For children, the time requirement will be halved; Italian citizenship acquisition is granted automatically to foreign women if they married an Italian citizen before 27 April 1983.

[22]This requirement is reduced to three years for descendants of Italian citizen grandparents and for foreigners born in Italy, four years for nationals of EU member states, five years for refugees and seven years for those adopted as children by an Italian citizen.

required in countries such as the US or the UK, several mayors affiliated to the Northern League party in the past hit the headlines for having refused to confer citizenship to foreign born applicants who were not able to swear the oath of allegiance in Italian[23], leading the Minister of the Interior Angelino Alfano to claim the unconstitutionality of these actions during his Question Time on 10 February 2016 (Ministero dell'Interno, 2016).

In order to give strength to such anecdotal evidence, I re-estimate model (3.1) adopting the number of Italian citizenships acquisitions per 1,000 foreign residents granted one year after the close election of a Northern League mayor as a new dependent variable. Importantly, I add foreign in-migration and out-migration to the set of controls, to make sure these results are not driven by foreign migratory flows.

Table 3.8: RD estimates - The impact of NL mayors on the rate of Italian citizenship acquisitions

	Italian Citizenship Rate
	(1)
NL Mayor	-12.435^{**}
	(5.619)
N	151
Controls	Yes
mean dependent variable	17.859
h	0.135

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (total population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€, foreign internal in-migration, foreign internal out-migration, foreign international in-migration and foreign international out-migration), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

As we can see from Table 3.8, the coefficient is negative and statistically significant at the 5% level; the close election of a Northern League mayor decreases

[23]See for example the article reported by FirstPost (2015).

the number of Italian citizenship acquisitions by 12.43 per 1,000 foreign inhabitants, one year after the electoral competition. Unfortunately, the data do not allow the establishment of how many applications were denied; likewise, I cannot exclude that a reduction in citizenship acquisitions could be driven by a decrease in foreign citizens' demand for Italian nationality status.

Nonetheless, this simple exercise corroborates the idea of a decreased perception of social inclusion towards foreign citizens, which could represent one of the possible reasons pushing foreign residents to move to a different city in response to the election of a mayor affiliated to the Northern League party.

3.7.2 Falsification Test - Italian Citizens Internal Migration

In this section, as a falsification test, I explore whether Italian citizens' migration can be influenced by the election of a far-right political party. If the Italian residents' decision to migrate was affected by the election of a Northern League candidate I should conclude that features other than the strong anti-immigration, racist and xenophobic stance adopted by the Northern League party are playing a role in determining foreign citizens' choice to migrate.[24]

In Table 3.9, I present evidence of the election of an NL mayor in a close contest on Italian residents' migration responses. In columns (1) and (2) it is possible to see that Italian citizens are less attracted by the election of an NL mayor one year after a close electoral race; the coefficient, however, is not statistically significant, regardless of the specification adopted. Passing to the out-migration variables, Italians do not move to a different city in response to the election of an NL mayor (column 3); the inclusion of controls, in column (4), does not change my conclusions. Finally, the coefficient on Italians' net migration is statistically significant at the 10% level (column 5), denoting a decrease in the difference between non-foreign in-migrants

[24]Considering that in 1990s the Northern League rhetoric was strong against Southern Italians, it would be reasonable to expect a reduction in the number of Southern Italian citizens moving to a city where an NL mayor was elected. However, this is unlikely to occur since, starting from the 2000s, the Northern League has adopted a new communication strategy, also seeking votes, directly or indirectly, in the Southern regions.

Table 3.9: The Impact of NL mayors on internal migration - Italian citizens

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	−7.068	−2.649	−1.491	2.719	**−5.577***	−2.439
	(4.306)	(3.253)	(2.452)	(2.048)	(**3.227**)	(2.389)
N	153	151	153	151	153	151
Controls	No	Yes	No	Yes	No	Yes
mean dep var.	26.011		22.841		3.170	
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

and out-migrants of 5.57 per 1,000 inhabitants. However, this result is not robust to the inclusion of municipal and mayoral characteristics as well as year and region fixed effects, as shown in column (6).

Overall these results reinforce the idea that the election by a narrow margin of victory of a mayor affiliated to a party characterised by a strong xenophobic stance will affect the migration decision of foreign citizens only. Italians' choice to migrate, on the contrary, does not respond to the election of a Northern League officer.

3.8 Robustness

The results presented so far confirm that foreign citizens living in Italy decide to relocate to a different city in response to the election of a Northern League candidate. On the contrary, the impact on foreign in-migrants and on the net migration rate is not statistically significant at any conventional level. In what follows, I run a series of tests aimed at establishing the strength of my findings.

3.8.1 Increasing the Data Points

As a first robustness check, I increase the data points by looking at migration flows of foreign citizens in the first two years after a close mayoral election involving the participation of an NL candidate.

In Table 3.10, Columns (1) and (2) confirm that the impact of the election of a Northern League mayor on the number of foreign in-migrants is not statistically significant. Passing to the out-migration indicators, the close election of an NL mayor increases the number of foreign out-migrants by 2.691 per 1,000 inhabitants (column 3). The coefficient is significant at the 5% level. The inclusion of controls, year and region fixed effects in column (4) decreases the size of the coefficient to 1.568 foreign citizens per 1,000 inhabitants moving to a different city; however, the effect in this case is not statistically significant. Finally, in the last two columns, it is possible to see a decrease in the foreign net migration rates in response to the election of an NL mayor. Also in this case, the effect is not statistically significant at any conventional level.

Table 3.10: RD estimates - The Impact of NL mayors on foreign migration - first two years

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	0.551	0.436	**2.691****	1.568	−2.141	−1.132
	(2.319)	(1.525)	**1.267**	0.983	(1.616)	(1.234)
N	298	294	298	294	298	294
Controls	No	Yes	No	Yes	No	Yes
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

The inclusion of migratory movements recorded in the second year after the close election of an NL mayor seems to dampen the strong effect presented in Table 3.4.

In Table 3.11 I link the election of an NL mayor to the foreign migration rates recorded in the second year after the mayoral contest. The results confirm the existence of a short-run effect only, which fades away two years after the election of an NL mayor.

Table 3.11: RD estimates - The Impact of NL mayors on foreign migration - t+2

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	−0.019	−0.597	2.098	1.164	−2.117	−1.760
	(2.151)	(1.332)	1.711	1.235	(1.303)	(1.089)
N	145	143	145	143	145	143
Controls	No	Yes	No	Yes	No	Yes
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

3.8.2 Breakthrough Elections

In this section I explore whether the impact of the election of a Northern League mayor on foreign migration is stronger when a Northern League candidate is elected for the first time in Italian municipalities.

Table 3.12 reports the estimates relative to breakthrough elections using the same bandwidth computed by Calonico et al. (2014) adopted in Table 3.4, to facilitate the comparability with the results presented in Section 3.5. From the first two columns, the impact on foreign in-migration is not statistically significant at any conventional level.

Passing to the foreign out-migration indicators, a positive and statistically significant effect is found one year after the close election in a city of a Northern League

Table 3.12: RD estimates - The Impact of NL mayors on foreign migration - breakthrough elections

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	1.366	−0.450	**4.059****	**2.665***	−2.692	−3.116
	(5.073)	(4.385)	(**1.795**)	(**1.612**)	(4.591)	(4.191)
N	110	108	110	108	110	108
Controls	No	Yes	No	Yes	No	Yes
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

candidate for the first time. The magnitude of the coefficient, 4.05 foreign out-migrants per 1,000 inhabitants, presented in column (3), is bigger than the estimate obtained using all the observations within the optimal-bandwidth. In column (4), the inclusion of controls, year and region fixed effects, reduces the size of the coefficient. Overall, the reduced sample size decreases the precision of these estimates, as reflected in relatively larger standard errors, making them significant at the 5% and the 10% level, respectively. Finally, no significant effect is detected on the impact of a Northern League mayor on foreign net migration.

3.8.3 Municipal Electoral Law

The different rules established by the municipal electoral law for towns/cities below or above 15,000 inhabitants can directly influence the behaviour of political parties and civic lists running for the mayoral office. If on one hand in small municipalities mayors are supported by a single list, on the other hand, in larger municipalities mayors may be supported by a coalition of lists (or parties) in order to maximise the probability of winning the election. In the second case, in municipality where the Northern League is strong, the party might decide to run alone or it might impose

its own candidate to the coalition partners.

In order to shed light on this aspect I exclude the municipalities with more than 15,000 inhabitants and re-estimate model (3.1).

Table 3.13 displays the results adopting the same bandwidths presented in Table 3.4, to favour the comparability across the two sets of estimates. The sample size does not present significant differences if compared to Table 3.4.[25] The estimates relative to the foreign internal in-migration indicators are not significant at any conventional level. The effect on foreign out-migration is positive and statistically significant at the 5% level, whilst the inclusion of controls decreases the size of the coefficient from 2.859 to 2.077, which remains significant at the 5% level.

Table 3.13: RD estimates - The impact of NL mayors on foreign internal migration - small municipalities

	in-migration		**out-migration**		**net-migration**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
NL Mayor	0.878	0.467	**2.859****	**2.077****	−1.981	−1.610
	(2.916)	(2.178)	(**1.240**)	(**0.987**)	(2.612)	(2.091)
N	148	146	148	146	148	146
Controls	No	Yes	No	Yes	No	Yes
h	0.135		0.135		0.135	

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico et al. (2014), using a bandwidth equal to 0.135. Controls include city (foreign population, Italian population, area, altitude, (log) number of firms and (log) average income per capita expressed in 2010€), mayoral characteristics (gender, education, incumbency status and age), year and region fixed effects. Standard errors are clustered at the municipal level.

3.8.4 Parametric Estimator

The results presented so far are based on a nonparametric estimator. In what follows, to determine whether my results are sensitive to the use of different estimators, I exploit a parametric procedure. This is implemented retaining all the elections in the

[25] This is not surprising, given that the Italian cities and towns above 15,000 inhabitants are just the 9% of all municipalities.

sample where a Northern League candidate competes against a nominee affiliated to a different party or civic list. The variation coming from the observations far away from the cut-off point is absorbed by the polynomial specification of the running variable. The proper order of the polynomial regression is still open to debate in the RDD literature. In this case, I follow Porter (2003) and Ferreira and Gyourko (2009), according to which odd polynomial orders present better econometric properties.

$$migration_{m,t+1} = \beta_0 + \beta_1 NL_{m,t} + \beta_2 f(MV_{m,t}) + \beta_3 f(MV_{m,t}) \times NL_{m,t} + u_{m,t+1} \quad (3.2)$$

In Table 3.14, for each migration indicator I present the estimates relative to the election of a Northern League mayor using a cubic polynomial term, allowing for different slopes on both sides of the cut-off, as indicated by model (3.2).

Table 3.14: RD estimates - The impact of NL mayors on foreign migration - parametric estimator

	in-migration	**out-migration**	**net-migration**
	(1)	**(2)**	**(3)**
NL Mayor	1.712	**1.802***	−0.0905
	(1.689)	(**0.973**)	(1.553)
N	398	398	398
Polyn. Spec	Flex. Cubic	Flex. Cubic	Flex. Cubic

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using a parametric estimator. Standard errors are clustered at the municipal level.

The absence of a statistically significant effect on the foreign in-migration indicator (columns 1 and 2) estimated using a parametric estimator confirms the results obtained using the CCT nonparametric method. Passing to foreign out-migration, the election of an NL mayor causes an increase of 1.802 foreign citizens per 1,000 inhabitants moving to a different city one year after the electoral race; the effect is statistically significant at the 10% level. Compared to Table 3.4, the adoption of a parametric estimator approximately halves the size of the coefficient of the out-migration indicator. Finally, the last columns in Table 3.14 confirm the absence of

a statistically significant result relative to the net migration variable.

3.9 Conclusions

This study analyses how foreign migration responds to the partisanship of local politicians, by looking at the election of a Northern League mayor against a candidate affiliated to a civic list, or to a different political party or coalition. Exploiting a nonparametric regression discontinuity design, I am able to isolate the endogeneity of the election of an NL mayor at city level, by focusing on closely contested electoral races only.

Overall, I find that foreign citizens move to a different city in response to the election of a mayor affiliated to the Northern League party; on the other hand, the effect on in-migration from different Italian cities is not statistically significant at any conventional level. Foreign international in- and out-migration is not affected by the election of a Northern League mayor.

The second part of this work provides an assessment of one of the possible motives that might explain why foreign internal emigration is positively affected by the election of a Northern League mayor, namely a decreased perception of integration towards non-Italian residents.

As a first test, in this paper I show that one year after the close election of a Northern League candidate, the number of Italian citizenship acquisitions decreases considerably.

Anecdotal evidence has largely documented Northern League mayors' propensity to deny Italian nationality status to foreign citizens unable to swear the oath of allegiance in Italian. This, in turn, could signal a diminished perception of social inclusion towards non-Italian residents, leading foreign citizens to migrate to different cities. As a second test, I show that Italian inhabitants do not move to different cities one year after the election of a candidate affiliated to a xenophobic party. In order to establish whether such findings are robust, I increase the number of data points, look at breakthrough elections and adopt a parametric estimator: in

all cases foreign out-migration increases in response to the election of a Northern League mayor.

Chapter 4

Papal Visits and Abortions - Evidence from Italy

4.1 Introduction

Each day approximately 153,000 pregnancies are terminated around the world (Sedgh et al., 2016). The decision to undergo an abortion is often associated with considerable stress and anxiety. For example, Coleman et al. (2009) show that women who abort are at a higher risk of a variety of mental health problems including anxiety, mood and substance abuse disorders when compared to women without a history of abortion. While access to abortion has become more widely available in an increasing number of countries, abortion remains a controversial procedure, facing legal restrictions and hostile social norms Norris et al. (2011). As documented by Yegon et al. (2016) in their study on Kenya, women who chose abortions are labeled as killers and are perceived to exert a bad influence on young women.

In this paper, we investigate the impact of papal visits to Italian provinces between 1979 to 2012 on the number of abortions. The Pope is the emblem of Catholic doctrine. Papal visits to Italian provinces generate intense local media coverage and considerable excitement among the local clergy and population alike. The heightened saliency of Catholic Church doctrine during papal visits can impact the number of abortions through a number of plausible channels. The Catholic Church strongly condemns deliberate termination of pregnancy. The stigma attached to abortions may become more salient during and in the aftermath of papal

visits, which can directly affect the demand for, and the supply of abortions. Women facing unplanned pregnancies may be less likely to abort. Abortion providers may also become more reluctant to do the procedure unless medically necessary. The number of abortions may be indirectly affected by a change in the number of unplanned pregnancies. Such pregnancies could go up in number if there is a decrease in contraceptive usage. The Catholic Church has traditionally opposed contraception. Alternatively, the number of unplanned pregnancies could decrease if there is a decrease in the frequency of non-procreational sexual intercourse. Women (or couples)[1] may reduce the frequency of non-procreational sexual intercourse as the Catholic Church frowns upon sexual relations unless in the context of procreation. Another reason to reduce the frequency of non-procreational sexual intercourse would be to avoid the risk of an unplanned pregnancy and the associated dilemma of whether to abort or not.

Our choice to focus on Italy is motivated by three factors. First, Italy is predominantly Catholic and one of the five countries with the highest number of Catholics (Pew Research Center, 2013). Second, due to the geographical proximity to the Vatican, Italy is the country with the highest number of papal visits *viz.* 125 in our sample period, increasing the statistical power of our research design. While one could argue that Italians may be "accustomed" to the papal presence, as he lives in Rome and often visits Italian cities and towns, we document that Papal visits within Italy dominate local media coverage and generate considerable excitement. Finally, since 1979 the Italian National Institute of Statistics has collected information on all the abortion events occurred in Italy with a high detail of geographical identification, allowing us to construct a quarterly and monthly panel of abortion counts at the provincial level. We employ an event study methodology to map out the response in the count of abortions during and immediately after papal visits.

Our main result is a large and statistically significant drop in the number of

[1]Henceforth, when we mention women, we imply women or couples as the relevant decisions on engaging in sexual intercourse, using contraception, or deciding to abort are likely to involve not just the woman but also her partner.

abortions starting the first quarter after the papal visit and persisting until the fourth quarter. Specifically, we measure a decline in abortions ranging approximately from 9% to 19%.

The observed decrease in the number of pregnancy terminations is consistent with reduced demand and/or supply of abortion due to the heightened perception of the stigma attached to the abortions under Catholic doctrine. Alternatively, women could opt for "back-street" abortions to keep the procedure secret, causing a problem of under-reporting. However, there are two reasons why heightened stigma attached to abortions does not appear to be the main explanation for the observed decline. First, in this case one would predict that the decline in abortions would commence contemporaneously with the papal visit. There is no such contemporaneous drop - the number of abortions only start to decrease 2-3 months after the visit. Second, we find no significant increase in births after the papal visit. During the study period, Italy had a non-trivial abortion rate of about 20%. A back of the envelope calculation would predict that, ceteris paribus, live births should increase by about 3.7% nine months after the decline in abortions.[2] It is worth noting that, independently of the effect on abortions, papal visits would be expected to boost fertility in the short run through an increase in desired fertility or reduced contraceptive usage.

We argue that the empirical findings are most consistent with a reduction in the frequency of unplanned pregnancies that commences around the time of the papal visit and persists for several months. Since pregnancies are typically detected 6-8 weeks after conception, one would expect to find a reduction in abortions 2-3 months after the papal visit. Further, a reduced incidence of unplanned pregnancies would not only reduce abortions but also the number of live births 9 months later since not all unplanned pregnancies end in abortion. While we do not observe any decrease in births, that could be due to the countervailing effect of any boost in desired fertility due to the papal visit.

[2]Assuming a 15% decline in abortions and using an abortion rate of 20%, for every 100 pregnancies an additional $0.15 \times 20 = 3$ babies would be carried to term. That in turn maps to approximately 3.7% more births.

What could be causing the reduction in unplanned pregnancies? Women might reduce the frequency of non-procreational sexual intercourse. Less plausibly, they may increase contraceptive usage during non-procreational sexual intercourse. We do not have data on contraceptive usage to test the latter hypothesis. However, given the stance of the Catholic Church on contraception, it appears unlikely that papal visits increase contraceptive usage. A plausible channel may be increased religiosity triggered by papal visits that reduces the frequency of non-procreational sexual intercourse. We cannot test this hypothesis directly in the absence of individual survey data that measures sexual activity. However, we find suggestive evidence that increased religiosity, as proxied by regular church attendance, may be playing a role. We find that the reduction in abortions is concentrated among low educated and married women. As we will show in section 4.7.1, married women also show the biggest increase in religiosity during papal visits.

This paper contributes to a number of different literatures. First, we shed additional light on the determinants of abortion. The economic literature on abortions can be traced back to seminal work by Becker (1991) and Rosenzweig and Schultz (1983). They model children as an investment producing benefits over time. Contraception and abortion are seen as methods for achieving the number of children desired by the household. More recent research has studied how the demand for abortion responds to changes in public policies. Blank et al. (1996) and Levine et al. (1996) show that the enactment of restrictions on Medicaid funding is correlated with a decline in abortion rates in the US. Joyce and Kaestner (1996) show that parental involvement laws have no impact on the probability of abortion for minor in the US, with the only exception of South Carolina, where a negative and statistically significant effects is found for 16 years old non-black minors. Levine (2003) contributes to the literature on parental involvement laws showing a reduction in the abortion rates for younger teens, but not for older teens or adult women. A new stream of research has shed light on the causal effect of media coverage on fertility choices. Kearney and Levine (2015), for example, focus on a TV show documenting

the problems and difficulties faced by teen childbearing. They find a reduction in teen births, which could take place through an increased interest in contraceptive use and abortion.

Second, we add to the growing body of evidence that religion is one of the key factors influencing individuals' socio-economic behaviours (Iannaccone, 1998; Guiso et al., 2003; McCleary and Barro, 2006; Iyer, 2016). In this context, our paper is closely related to a recent paper by Bassi and Rasul (2016) on the effect of papal visits on fertility-related beliefs and behaviour in Brazil. They exploit the fortuitous timing of the 1991 DHS survey in Brazil which was fielded in the weeks before, during and after the papal visit to study how the short-run beliefs and long-run behaviour of individuals respond to the Pope's messages of persuasion. The authors analyse the fertility responses to persuasion, finding a significant increase in the hazard rate for births nine months post-visit. We complement Bassi and Rasul (2016) using administrative records to study the impact on fertility outcomes such as abortion and to a lesser extent births. To the best of our knowledge no study before has sought to measure the effect of heightened religious sentiment on the number of abortions or used administrative data to precisely estimate the effect of the papal visits on the number of births.

Finally and more broadly, the paper contributes to a growing literature focused on the impact of role models on behaviour. Beaman et al. (2009) and Beaman et al. (2012) show that exposure to a female politician reduces gender stereotypes and influences adolescent girls' career aspirations and educational attainment. DellaVigna (2010) uses an event study methodology to explore how Obama's election affects racial discrimination against Blacks and economic outcomes for Blacks by changing perceptions. Bertrand and Schoar (2003) analyse how individual managers affect corporate behavior and performance. Jones and Olken (2005) investigate the impact of national leaders on economic growth. Stroebel and Van Benthem (2013) use the appointment of local bishops in Kenya to study the impact of church authorities' teaching on sexual behaviour.

The paper is organised as follows. Section 4.2 presents the institutional setting. Section 4.3 describes the data on abortion and the papal visits. Section 4.4 presents evidence on the impact of the papal visits on the number of pregnancy terminations. Section 4.5 analyses who responds to the Pope whilst section 4.6 estimates the impact of the papal visits on live-births. Section 4.7 discusses the main channels through which the papal visits could affect the number of abortions and presents further tests. Finally, Section 4.8 concludes.

4.2 Institutional Setting

Italy is a predominantly Catholic country. Historically the Church has exerted a strong influence on the Italian culture. For example, the current Italian education system requires the teaching of the Catholic religion in all schools below the University level due to the Lateran Treaties, an agreement between the Italian Kingdom and the Holy See signed by Mussolini during the fascist regime. Since the institutional referendum in 1946, in which the Italian population voted to abolish the monarchy, the Vatican tried to actively condition the political course of the republic. For example, in 1948 the Church supported the Christian Democratic party against the Communist Party presenting the election as a conflict between good and evil. In 1974, the Italian Bishop conference strongly supported the initiative in favour of the promotion of the referendum repealing the law on divorce passed in 1970.[3] Similarly, after an abortion bill became law in 1978, the Pope and the Italian Bishops' Conference promoted the attempt to restrict abortion in the referendum proposed by the right-to-life movement in 1981.

Vezzoni and Biolcati-Rinaldi (2015) have documented a declining trend in religiosity in Italy since the late 1960s until 2010, in spite of a period of stability in the 1980s and 1990s. Nonetheless, Italy today remains one of the countries with the highest number of Catholics, which comprised 71% of the population in 2016

[3]As reported by Wertman (1982), the Italian Bishops' Conference issued a document arguing that opting for divorce would be an act of disobedience for Catholics.

(Eurispes, 2016).

According to the Catholic doctrine, family represents the original cell of social life, where individuals learn moral values from childhood. The creation of the nuclear family cannot prescind from marriage, seen as a covenant linking a man and a woman for the rest of their lives. Sexuality is only admitted within the wedlock, and if aimed at fulfilling the twofold obligation of the "good of the spouses" and the transmission of life.[4] In the light of this perception adopted by the Church, divorces, the recourse to sterilisation, the use of contraceptives and abortion[5] are seen as "a sign of the refusal that man gives to the love of God" (John Paul II, 1981)

Voluntary pregnancy termination in Italy became legal in May 1978, with the approval of the Law 194/78 by the Italian Parliament. Abortions are performed free-of-charge in public hospitals or in private structures authorised by the regional health authorities.

Women at least eighteen years old[6] can request a termination of pregnancy during the first 90 days for health, economic or social reasons. Abortions are also allowed in the second trimester of the pregnancy if the life of the woman would be at risk if the pregnancy is carried to term or the foetus presents genetic malformations which would expose the mother to a risk of serious psychological or physical consequences.

After a woman obtains the medical authorisation, a period of seven days has to occur before the date of the abortion operation, unless an immediate intervention is required due to the presence of risks for the woman's health conditions. The abortion operation is generally performed eight to thirty days after a woman obtains the medical authorisation. During the Question Time on 19 April 2017, the Minister of Health Beatrice Lorenzin claimed that 65.3% of voluntary pregnancy terminations

[4]See, for example, the Catechism of the Catholic Church at the following link: `http://www.vatican.va/archive/ccc_css/archive/catechism/p3s2c2a6.htm`.

[5]In a survey from year 2016, 83.2% of the people interviewed report to be in favour of the abortion in case of danger for the mother while only the 18.6% of people think abortion is acceptable if a woman doesn't want to have children (Eurispes, 2016).

[6]For women below eighteen, permission must be sought from their legal guardian. In the event of refusal, a judge may intervene with an injunction, within five days of the request if there are sufficient legal reasons.

are performed within 14 days since the medical authorisation.[7]

Figure 4.1 presents the ratio of the voluntary pregnancy terminations to spontaneous abortions at the national level relative to the period 1980-2012. In spite of a strong negative trend mostly driven by a steady decrease in the number of voluntary abortions, in 2012 voluntary pregnancy terminations outnumbered the cases of spontaneous abortions.

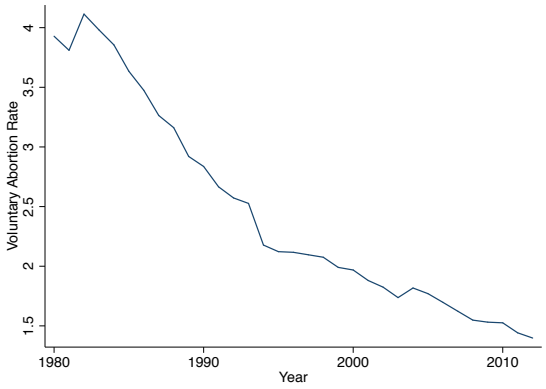


Figure 4.1: Voluntary to spontaneous abortion rate - National Counts.

From 1979 to 2012 John Paul II and Benedict XVI made 125 official visits to 87 provinces within Italy[8](see Appendix C, Figure C.1). Even though the Vatican is located within Italy, papal visits generate considerable excitement within local clergy and population, and there is intense local media coverage. We document anecdotal evidence on the differential coverage that media from *treated* provinces dedicate to a papal visit as compared to the media in those provinces not visited by the Pontiff. In order to do so, we randomly pick two visits and, for each of them, we count the number of articles dedicated to the Pope in a) the local newspaper from the treated province, b) the local newspaper from a province non treated and c) a national newspaper in a 7-days window enveloping the event[9].

We start with the trip of John Paul II in February 1984 to the province of Bari, the 7^{th} most populous Italian province, and examine the coverage of the visit in three

[7]See, for example, Magnano (2017).

[8]We decided to exclude the visits of Pope Francis I from our analysis because the data on abortions from 2013 were not available.

[9]In the specific case, we randomly selected two papal events. Hence, for each visit we made a list of all the remaining provinces and randomly picked a province as a control.

newspapers: *La Gazzetta Del Mezzogiorno* (local), *Il Mattino di Napoli* (non-local) and *Il Corriere della Sera* (National).

Table 4.1: Media Coverage

	before	**event**	**after**
	(1)	**(2)**	**(3)**
Panel A: Bari			
Local	16	30	11
Non Local	0	1	1
National	0	1	1
Panel B: Palermo			
Local	12	10	14
Non Local	0	0	1
National	0	1	2

Note: Each entry reports the number of articles on the papal visits taken from a) a newspaper established in the province hosting the Pope (local), b) a newspaper established in a province non-hosting the Pope (non local) and a national newspaper (national). The articles refer to the three days before the event (column 1), the day of the visit (column 2) and the 3 days after the event (column 3). Panel A refers to the papal visit to Bari in February 1984 whilst Panel B reports information on the visit to Palermo, occurred in October 2010.

In Table 4.1 - Panel A, we show the number of articles on the papal visits to the province of Bari in the 3 days before the visit (column 1), on the day of the event (column 2) and in the 3 days following the visit (column 3). Prior to the event we count 16 articles in the *local* newspaper in Bari. This number spikes to 30 on the day of the event while in the following 3 days we count 11 different articles. In contrast, the *Non-local* and the National newspapers both carry only one article each on the day of the visit, and in the 3 days after the event.

The second visit we study took place in Palermo in October 2010, during the reign of Benedict XVI. In this case we compare the number of articles from the newspaper *La Sicilia* (Local) with the news coverage in the province of Genova on the event occurred in Palermo[10] and the national newspaper *Il Corriere della Sera*. As we can see, also in this case the number of articles on the papal visits from the local newspaper is considerably high when compared to the coverage in the non-local

[10]We now use *Il Secolo XIX* as the non-local newspaper.

and the National newspapers. To give the reader a flavour of the type of coverage, Figure C.2 and Figure C.3 in Appendix C display a selection of articles extracted from *La Gazzetta Del Mezzogiorno* and *La Sicilia*.

Overall such a marked difference in media coverage presented for the two papal visits displayed in this section offers reinforcing evidence in favour of the strong influence that the Pope exerts on the local population during his official trips. In contrast, the importance of such religious events does not seem to be excessively stressed by the media in the provinces not hosting the Pope.[11]

Table 4.2: Text analysis

	Family	**Abortion**	**Sex-Contrac.**	**Chastity**
	(1)	**(2)**	**(3)**	**(4)**
Keywords	0.6381	0.0544	0.0161	0.0312
	(0.481)	(0.227)	(0.126)	(0.174)

Note: Each entry reports mean and standard deviation in parentheses relative to the number of keywords per speech held during the papal visits.

It is worth noting that the papal visits expose individuals to persuasive messages related to Catholic Church doctrine. The contents of the speeches is typically in line with mainstream Catholic doctrine and, as a consequence, they do not provide any new information to Catholics. Nonetheless, as remarked by Bassi and Rasul (2016), non-informative dimensions of communication can influence belief formation through salience, attention and framing.

Using the information made available by the Vatican papal Archives, we study how frequently the Pope refers to abortion or other themes that could influence individuals' fertility choices in his speeches. In Table 4.2 we present summary statistics relative to our text analysis, focusing on five keywords, i.e. *family*, *abortion*, *sex-contraception* and *chastity*. On average the Pope refers to family in approximately the 63.8% of his speeches, confirming the centrality of the family unit according to the Catholic doctrine. The frequency is considerably lower when we look at the word "abortion" (5.44%), "chastity" (3.12%) and "sex" or "contraception" (1.61%).

[11] Unfortunately we do not have information on TV and radio coverage of such events; nonetheless it is reasonable to expect local broadcasters to devote more time to the visit of the Pope, if compared to a broadcaster from a different area.

4.3 Data and Events

We generate an event binary indicator mapping each town visited by the Pope in a given quarter of year to the corresponding province.[12] Due to the presence of multiple destinations within the same visit, we identify 173 episodes (called *Pope Events* hereafter) in which the Italian provinces were visited by the Pope in a given quarter of year.[13]

Table 4.3: Descriptive Statistics - papal Visits

	All Visits 1979-2012	**JP-II 1979-2004**	**B-XVI 2005-2012**
	(1)	**(2)**	**(3)**
# papal Visits	125	95	30
# Pope Events	173	141	32
# Provinces visited	87	84	26
Pope Events/Year	4.404	4.766	2.812
# Provinces	110	103	110

Note: Authors' calculations.

Summary statistics are reported in Table 4.3. The number of provinces visited by the Pope from 1979 to 2012 amounts to 87 out of 110; on average the Pope visited 4.4 provinces per year. The last two columns in Table 4.3 offer a comparison between John Paul II's papacy (column 2) and Benedict XVI's one (column 3). It is worth noting that the number of provinces visited per year by Pope John Paul II is on average higher than Benedict XVI's visits, reflecting John Paul's proverbial higher propensity to travel, from which the appellations *Globetrotter Pope* or *Voyager Pope* derive.[14]

[12]Italian provinces are administrative units between a municipality and a region, corresponding to NUTS-3 regions according to the European Union classification. Several municipalities form a province while several provinces form a region (Valle d'Aosta is the sole exception, since the provincial functions are exercised by the region.). Provinces fulfil three main functions, i.e. local planning and zoning, provision of local police and fire services and, finally, transportation regulation such as car registration or maintenance of local roads. In 2012 there were 110 provinces, even though the number has been steadily growing in recent years.

[13]The number of *Pope Events* does not change when we conduct our analysis at the monthly level.

[14] See for example the article by Danesi (N A).

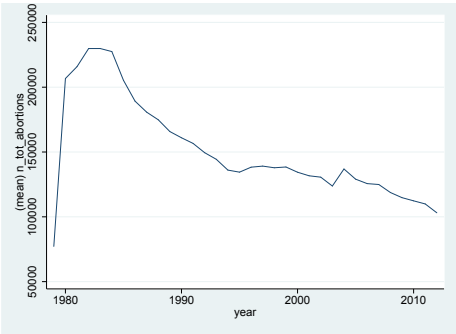


Figure 4.2: Yearly Abortions - National Counts.

Following the legalisation of abortion in Italy, the data on induced abortions performed in public and private clinics certified and authorised by the Italian regions are provided since 1979 by the Italian National Institute of Statistics together with the Italian regions and the Ministry of Health. The survey requires the doctor performing the termination of pregnancy to collect important information on the socio-economic status of the patient such as date and place of birth, place of residence, marital status, educational level and work status. Information on the operation are also provided, such as date of pregnancy interruption, province of the operation, length of stay in hospital and presence of complications.

In Figure 4.2 we present the number of yearly abortions for the period 1979-2012 at the national level. The strong increase in the early 80s in response to the legalisation of abortion has been followed by a steady decrease over time.

Table 4.4: Descriptive Statistics - Abortions (1979-2012)

	Quarters	**Months**
	(1)	**(2)**
# tot abortions	384.14	128.05
	(558.40)	(187.56)

Note: The entries in columns (1) and (2) present the average and standard deviation in parentheses relative to the provincial number of abortions grouped at the province-quarter of year and monthly level, respectively.

In order to study the impact of the visits of the Pope to the Italian provinces, we aggregate the number of abortions at the province-quarter of year level. The reason

we do not exploit a finest degree of geographical identification focusing on the cities and towns visited by the Pope is motivated by the fact that the data on abortions are available at the provincial level only. In Table 4.4 we report the descriptive statistics relative to the provincial number of abortions aggregated at the quarter of year (column 1) and monthly level (column 2).

4.4 Effect on Abortions

To study the impact of the papal visits to the Italian provinces on the number of abortions, we estimate the following model:

$$ln(n_{p,q}) = \alpha + \beta_j^{pre} \sum_{j=-1}^{j=-2} pre_j + \beta_k^{post} \sum_{k=0}^{k=4} post_k + \theta_p + \theta_y + \sum_{l=1}^{l=4} \lambda_l + \gamma_p \times t + \delta_p \times t^2 + u_{p,q} \tag{4.1}$$

where $n_{p,q}$ represents the number abortions in province p in the quarter of year q; pre_j are placebo dummy variables capturing any impact of the papal visits on abortions in the two quarters prior to the visit; $post_k$ are post-event dummies enveloping the *Pope Event* ($post_0 = 1$) up to the fourth quarter after the papal visits in a given province. θ_p and θ_y represent province and year fixed effects; λ_l are calendar quarters dummy variables capturing possible seasonalities. $\gamma_p \times t$ and $\delta_p \times t^2$, finally, represent province specific yearly linear and quadratic trends, respectively. In the most rigorous specification, we augment model (4.1) by controlling for quarters of year fixed effects and province specific quarters of year linear and quadratic trends.

Table 4.5 shows the results for the number of abortions. We observe that the estimates are stable across different specifications; reassuringly, the pre-event dummy indicators are not statistically significant at any conventional level. Focusing on our preferred specification that is also the most stringent one - column (4) - we can see a strong reduction in the number of abortions in the provinces visited by the Pope starting from the first quarter after the papal visits. The size of the effect is quite substantial, since it varies between -9.57% ($post_1$) and -18.70% ($post_3$). When

compared to the average provincial number of abortions per quarter of year presented in Table 4.4, this corresponds to a reduction varying approximately between 37 and 72 abortions[15].

Table 4.5: The impact of the papal Visits on Abortions - Quarterly

	ln(abor)	**ln(abor)**	**ln(abor)**	**ln(abor)**
	(1)	**(2)**	**(3)**	**(4)**
pre_2	0.00058	−0.01642	0.00248	−0.01243
	(0.0225)	(0.0230)	(0.0233)	(0.0246)
pre_1	0.02060	0.00501	0.01670	0.00003
	(0.0200)	(0.0240)	(0.0204)	(0.0239)
$post_0$	0.01128	−0.00488	0.01202	−0.00409
	(0.0197)	(0.0192)	(0.0192)	(0.0178)
$post_1$	−0.09037	**−0.10692***	−0.08577	**−0.10062***
	(0.0583)	(**0.0572**)	(0.0588)	(**0.0573**)
$post_2$	**−0.12438***	**−0.14002****	**−0.12075***	**−0.13484****
	(**0.0648**)	(**0.0621**)	(**0.0654**)	(**0.0627**)
$post_3$	**−0.19682****	**−0.20004****	**−0.20240*****	**−0.20706****
	(**0.0761**)	(**0.0788**)	(**0.0766**)	(**0.0793**)
$post_4$	**−0.14572****	**−0.14787****	**−0.14599****	**−0.14874****
	(**0.0720**)	(**0.0741**)	(**0.0727**)	(**0.0749**)
N	12762	12762	12762	12762
R^2	0.81265	0.87458	0.81324	0.87457
Province f.e.	Yes	Yes	Yes	Yes
Year f.e.	Yes	Yes	No	No
Calendar Quarters f.e.	Yes	Yes	No	No
Quarters f.e.	No	No	Yes	Yes
Prov. yearly trends	No	Yes	No	No
Prov. quarterly trends	No	No	No	Yes

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the coefficients and std. errors relative to the papal visits on the provincial quarterly number of abortions. Std. errors are clustered at the provincial level.

To better capture the dynamics of the number of pregnancies voluntarily terminated in response to the papal visits, we run monthly event study regressions, as specified by the following model:

[15]A possible concern is the fact that women might seek an abortion operation in a province different from the one visited by the Pope. However, this is unlikely to invalidate our results, as approximately 88% of pregnancy terminations are performed in the women's province of residence, as reported by the Minister of Health Beatrice Lorenzin during her Question Time on 19 April 2017. For the sake of completeness we have re-estimated model (4.1) aggregating the number of abortions by the patient's province of residence. The results, available upon request, confirm the main findings presented in Table 4.5.

$$ln(n_{p,m}) = \alpha + \beta_j^{pre} \sum_{j=-1}^{j=-4} pre_j + \beta_k^{post} \sum_{k=0}^{k=12} post_k + \theta_p + \theta_y + \sum_{l=1}^{l=12} \lambda_l + \gamma_p \times t + \delta_p \times t^2 + u_{p,m} \tag{4.2}$$

where $n_{p,m}$ represents the number of abortions in province p in month m; pre_j are placebo dummy variables capturing the impact of the papal visits on the number of abortions occurred in the four months preceding to the visit; $post_k$ are post-event dummies enveloping the *Pope Event* ($post_0 = 1$) up to the 12^{th} month after the papal visits in a given province. θ_p and θ_y represent province and year fixed effects; λ_l are calendar months dummy variables capturing possible seasonalities. $\gamma_p \times t$ and $\delta_p \times t^2$, finally, represent province specific yearly linear and quadratic trends, respectively.

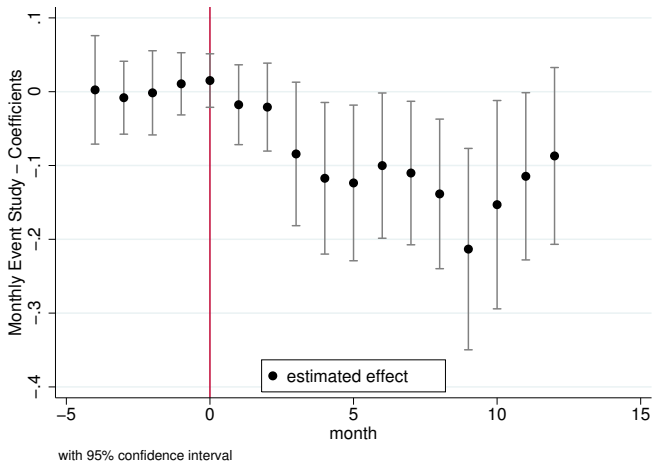


Figure 4.3: Monthly Event Study - Abortions

In Figure 4.3 we plot the coefficients and 95% confidence intervals for the most rigorous specification of model (4.2), controlling for months fixed effects, province specific monthly linear and quadratic trends. The pre-event indicators are not statistically significant at any conventional level and the size of the coefficients is close to 0. The variable $post_0$ is positive but not-significant at any conventional level, allowing us to rule out the presence of a contemporaneous effect of the Pope on the number of abortions. We find a strong and statistically significant effect starting from the 3^{rd} to the 11^{th} month following the visits of the Pope to the Italian

provinces. The effects are statistically significant and the magnitude is considerable, varying between -8.09% ($post_3$) and -19.20% ($post_9$); if compared to the provincial monthly average, this corresponds to a reduction in the number of monthly abortions varying approximately between 10 and 25 operations with respect to the provinces not visited by the Pope.

One plausible story relates to reduced demand and/or supply of abortion due to the heightened perception of the stigma attached to the abortions under Catholic doctrine. Women may be less likely to choose to abort. Alternatively (or additionally) there may be a constriction in supply i.e. an increased reluctance of abortion providers to do the procedure. Another related possibility is that there is under-reporting of the procedure around the time of the visit. This could happen for instance if women switch to using "unofficial" abortion providers to keep the procedure secret, or because they perceive reluctance on part of official abortion providers. However, in any of these cases, one would expect to see a contemporaneous drop in abortions. There is no such drop - the number of abortions only start to decrease about 3 months after the visit. Therefore, it is unlikely that heightened stigma attached to abortions explains our findings. However, as we discuss later, it may still play a role indirectly by inducing women to reduce the frequency of sexual intercourse to avoid the risk of unplanned pregnancy.

The timing of the effect coincides with when one would expect to see abortions for pregnancies that commence around the time of the visit. Most pregnancies are typically detected around 6 to 8 weeks after conception, and presumably women who discover an unplanned pregnancy still take a few more weeks to abort as they need to first decide and then schedule an abortion. This suggests that the reduction in abortions is occurring among women who conceive around the time of the papal visits. Abortions are most likely to occur in the case of unplanned pregnancies.[16]

[16]They could also occur in planned pregnancies on medical grounds or if the woman or couple changes its mind. However, most abortions are related to unplanned pregnancies. For instance, Finer and Henshaw (2006) indicate that less than 5 percent of abortions in the US were were intended pregnancies at the time of conception. Likewise, Schünmann and Glasier (2006) find that 92% of women undergoing an abortion operation in Scotland did not plan their pregnancy.

This in turn suggests that papal visits may be reducing unplanned pregnancies. This could come about through less frequent sexual intercourse or increased use of contraception during sex. The former may be more plausible in this context than the latter. Church doctrine frowns upon sex unless it is with the intention of procreation. Contraceptive usage is explicitly discouraged because it breaks the connection between sex and reproduction within marriage and encourages recreational sex out of wedlock.[17]

4.5 Who Responds to the Papal Visits?

We exploit socio-demographic information of women deciding to undergo an abortion operation to understand who is more influenced by the Pope. In Table 4.6 - column (1) - we present the summary statistics on the number of abortions classified according to the age, the education level and marital status of women who decide to terminate their pregnancies. In column (2), we present the ratio of abortions to live births for each group. Between 1979 and 2012, nation-wide approximately 5 million abortions-episodes were registered. The abortion rate is the highest for women aged 19 years or younger - about half the pregnancies are aborted in this group. The abortion rate is also high for women aged 40 years or more. In this group about 45% of the pregnancies are aborted; in large part presumably on medical grounds since pregnancies tend to be riskier for older women. Notably though, the abortion rate is non-trivial for all other age groups, and women aged 25 to 34 years account for more than 44% of all abortions.

Also, women who have completed lower secondary school education account for almost 43% of all abortions.[18] The abortion rates cannot be calculated by educational attainment since this information is not available for mothers due to changes in data collection on births starting from 1999. Unsurprisingly, the abortion rate

[17] In the Encyclical Letter *Humanae Vitae*, Paul VI in reference to contraceptives states that "human beings - and especially the young, who are so exposed to temptation - need incentives to keep the moral law, and it is an evil thing to make it easy for them to break that law".

[18] According to the Italian educational system, this corresponds to 8 years of education, including elementary school.

is much higher for unmarried women but married women account for the majority (about 59%) of abortions.

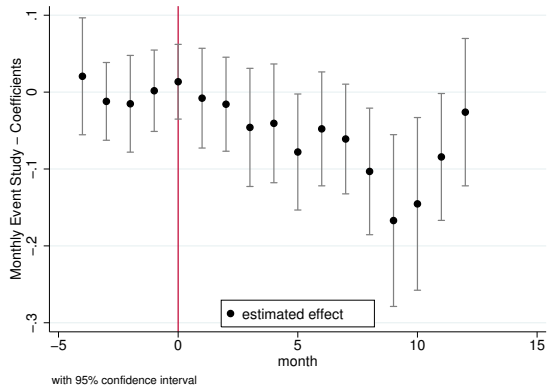
Table 4.6: Descriptive Statistics - Abortions (1979-2012) - Women's Demographics.

	Abortions (1)	**Abortion Rate (2)**
Panel A - Age Category		
Not reported	12,100	9.68%
Age$\leq$ 19	460,932	49.75%
20 $\leq$Age$\leq$ 24	993,223	24.65%
25 $\leq$Age$\leq$ 29	1,128,878	17.03%
30 $\leq$Age$\leq$ 34	1,121,674	17.62%
35 $\leq$Age$\leq$ 39	926,822	25.90%
Age$\geq$ 40	490,988	45.17%
Panel B - Education Lv.		
Not reported	280,175	–
Elementary school	1,345,696	–
Lower secondary school	2,172,676	–
Upper secondary school	1,188,268	–
Higher Education	147,802	–
Panel C - Marital Status		
Unmarried	2,125,774	54.65%
Married	3,008,843	16.09%
N	5,134,617	22.58%

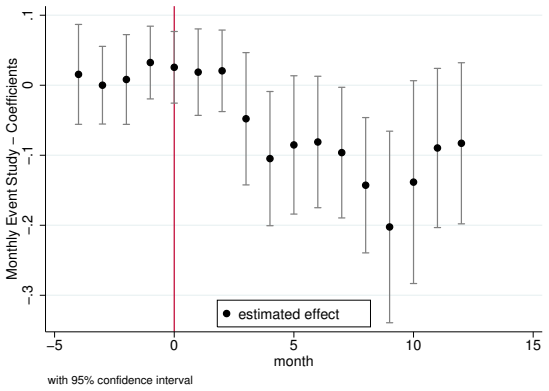
Note: Column (1) reports the number of abortions for each subcategory occurred from 1979 to 2012. Column (2) displays the abortion rate, defined as $abortions/(abortions + births)$.

We re-estimate model (4.2) for subgroups of population to understand who responds to the papal visits. For the sake of brevity and readability, we graph the estimate for the strictest specifications, including province-specific monthly trends.

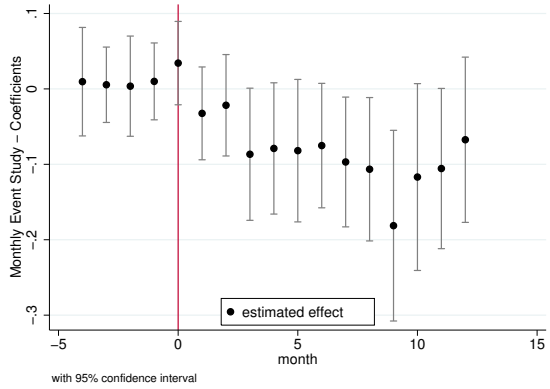
In Figure 4.4 we present the impact of the papal events on the number of abortions for three age groups, i.e. women 24 years old or younger, women older than 24 and younger than 35 and, finally, women whose age is greater or equal than 35. Once again, reassuringly, the placebo indicators (*pre-event*) are not significant regardless of the specification adopted. The graphs indicate that the papal visit has a roughly similar sized lagged negative effect on the number of abortions for all three age groups. The drop in the number of abortions is observed starting from the 3^{rd} month after the papal visits and persist until the 11^{th} month (the 10^{th} month in the



(a) Age ≤ 24



(b) $25 \leq$ Age ≤ 34



(c) Age ≥ 35

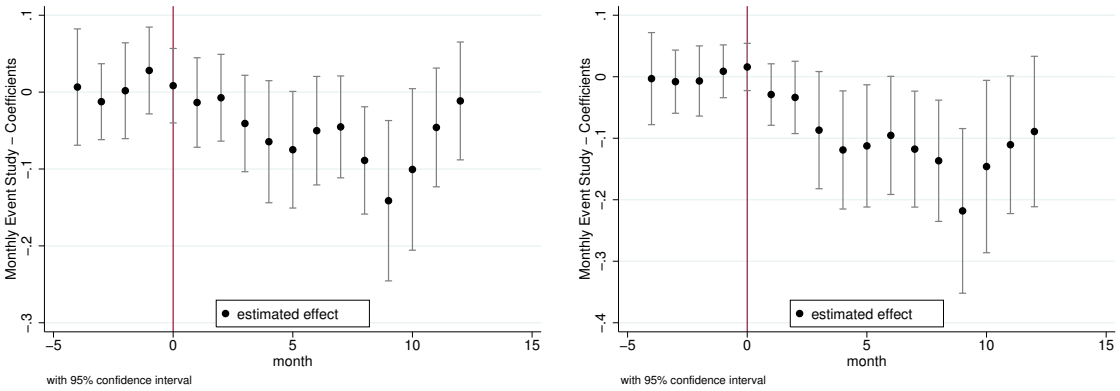
Figure 4.4: Monthly Event Study - Age Category

case of women aged 25-34).

Figure 4.5 shows how the papal visits to the Italian provinces affect the number of abortions for women classified according to their marital status. In both cases the Pontiff has a negative effect on the monthly number of abortions, as we can see from panel (a) and (b). However, the effects appear to be smaller and often insignificant for unmarried women. In contrast, the magnitude of the effect on married women is almost twice as large, and therefore usually highly significant.

Turning to educational attainment, we adopt a new classification, grouping women undergoing an abortion operation into low educated and high educated women, where the former encompasses women with no education, primary school and lower secondary school education whereas the latter includes women with higher secondary education and university degree.

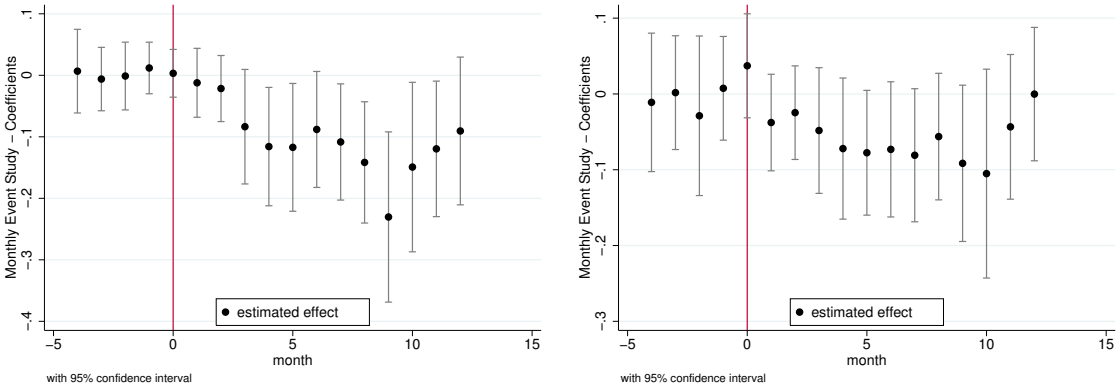
Figure 4.6 shows that both subgroups respond to papal visits with a reduction in



(a) Unmarried (b) Married

Figure 4.5: Monthly Event Study - Marital Status.

abortions. However, lower educated women respond more strongly; the coefficients are negative and statistically significant from the third to the eleventh month. For highly educated women, the post-event dummy coefficients are often not significant at any conventional level, with few exceptions (*post-5*, *post-7* and *post-9*, significant at the 10% level). The standard errors obtained from the regressions estimated for this group are comparable to those obtained for the low educated group; however, the size of the coefficients is generally smaller.



(a) Low Education (b) High Education

Figure 4.6: Monthly Event Study - Education Level.

Summing up, the reduction in abortions appears to be operating mainly through a reduction in unplanned pregnancies, plausibly due to less frequent sexual intercourse. Conventional wisdom suggests that younger and/or unmarried women are most likely to have unplanned pregnancies and this group may be driving the drop

in abortions. However, Figure 4.5 and Figure 4.6 show that the effect on abortions in lesser educated and married women is higher than among unmarried and high educated women. We offer two additional pieces of evidence as to why this may be the case. First, the incidence of unplanned pregnancy among married women is non-trivial. As documented by Castiglioni et al. (2001), 13% of childless married women in Italy report the occurrence of an unwanted pregnancy; this number rises to 30% and 68% for married women with one child and two or more children, respectively. As Table 4.6 shows, the abortion rate for this group is also non-trivial (16.09%), far higher than can be explained by abortion on medical grounds i.e. risks to maternal health or issues with the foetal health. Second, as we show later, married women appear to be the most responsive to papal visits. They show a bigger jump in religiosity during papal visits as compared to unmarried women.

The reduction in unplanned pregnancies appears to persist for up to 11 months after the Pope Events since abortions are reduced up to 12 months after the visit. However, as Figures 4.4, 4.5 and 4.6 show, the effect diminishes substantially after the 9^{th} month.

4.6 Live-Births

The results presented in the previous section indicate a large drop in the number of abortions, which seems to be concentrated among low educated and married women. All else equal, this should translate into a fairly large increase in the number of births. In order to shed light on this aspect, we next investigate the effect of papal visits on the number of births.

Births may increase for a number of reasons. First, papal visits which emphasise the importance of family can increase desired fertility level or induce a forward shift in fertility as documented in the case of Brazil by Bassi and Rasul (2016). Second, births may also increase due to reduced access to or usage of contraception. Third, births may increase due to a reduction in abortions, a fact that we have already documented above. Any such positive effects are likely to show up in birth rates 8-9

months after the papal visit. On the other hand, births could also decrease if women become less likely to engage in sexual intercourse. We have suggested above that papal visits reduce unplanned pregnancies in which case one would see a decrease in abortions, and possibly in live births as well (as not all unplanned pregnancies are terminated). Such effects too are likely to show up 8-9 months after the papal visit. The net effect on births is an empirical question. In our analysis we use the survey on live births carried out by the Italian National Institute of Statistics. Until 1996 the ISTAT collected information from the population registers of the municipalities where the birth events occurred, providing detailed information on the delivery of the newborn as well as socio-demographic indicators of the parents.

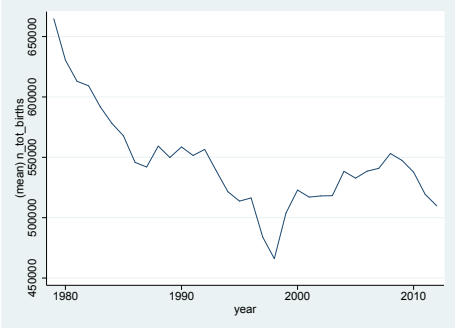


Figure 4.7: Yearly Live Births - National Counts

The introduction of the law 127/97 in 1997 on administrative simplification has dramatically changed the data collection process, allowing parents to declare live births not only at the registers of the municipality where the birth-event took place but also at the registers of the municipality where parents normally resided. The immediate application of the law, in the middle of 1997, caused a period of strong uncertainty which resulted in the underreporting of live-births for the years 1997-1998, as it can be seen from Figure 4.7. For this reason, we excluded these two years from the analysis of the live-births events.

We aggregate the number of live-births at the province-quarter of year level.[19]

[19]Since not all Italian cities are endowed with hospitals or birthing centres, we did not focus on cities and towns visited by the Pope in order to estimate the impact of the papal visits more accurately. For instance, assuming the pope has a positive effect on the number of births, our

We use an event study methodology to test for an effect on the number of births.

Table 4.7: The impact of the papal Visits on Births - Quarterly

	ln(births)	**ln(births)**	**ln(births)**	**ln(births)**
	(1)	**(2)**	**(3)**	**(4)**
pre_2	0.00634	−0.00202	0.00452	−0.00413
	(0.0108)	(0.0046)	(0.0111)	(0.0052)
pre_1	−0.00299	**−0.00968***	−0.00269	−0.00833
	(0.0102)	(**0.0056**)	(0.0103)	(0.0056)
$post_0$	−0.00395	**−0.01012***	−0.00049	−0.00605
	(0.0105)	(**0.0058**)	(0.0104)	(0.0054)
$post_1$	−0.00069	−0.00106	0.00005	−0.00115
	(0.0109)	(0.0063)	(0.0108)	(0.0061)
$post_2$	0.00231	0.00361	−0.00094	0.00039
	(0.0096)	(0.0049)	(0.0095)	(0.0050)
$post_3$	0.00074	−0.00026	0.00214	0.00207
	(0.0102)	(0.0053)	(0.0101)	(0.0048)
$post_4$	−0.00281	−0.00115	−0.00010	0.00205
	(0.0096)	(0.0057)	(0.0096)	(0.0054)
N	12160	12160	12160	12160
R^2	0.96322	0.99002	0.96379	0.99052
Province f.e.	Yes	Yes	Yes	Yes
Year f.e.	Yes	Yes	No	No
Calendar Quarters f.e.	Yes	Yes	No	No
Quarters f.e.	No	No	Yes	Yes
Provincial yearly trends	No	Yes	No	No
Provincial quarterly trends	No	No	No	Yes

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the coefficients and std. errors relative to the papal visits on the provincial quarterly number of births. Std. errors are clustered at the provincial level.

Table 4.7 displays the estimates of the effect of papal visits on the quarterly total number of births. Focusing on the most rigorous specification in column (4), we fail to find evidence of any significant net effect on births. If the decrease in the number of abortions was not coupled with a decrease in the number of pregnancies, we should expect an increase in the number of births. Given the size of the standard errors relative to the third and fourth quarter presented in Table 4.7, we have the power to detect an increase of 1%. Since our back of the envelope calculations

estimates would be downward biased if the papal visit took place in a town with no hospitals or birthing centres.

suggest births should go up approximately by 3%, we conclude that births are not responding to the papal visits.

It may be that the positive and negative effects mentioned above largely cancel each other, or it may be that the effects if any, are relatively small in the case of Italy.[20]

4.7 Discussion

The evidence presented so far points to a considerable decrease in the number of abortions in the Italian provinces starting from the 1^{st} quarter of year following the papal visits. The effect seems to be especially strong for low educated and married women across different age groups. As we have argued above, the timing of the drop in abortions as well as the lack of any discernible increase in live births, both suggest that papal visits induce a reduction in unplanned pregnancies.

The decrease in abortions could take place through a reduction in the frequency of sexual intercourse and/or increased use of contraceptives. The latter is rather implausible since Church doctrine frowns on contraception. Heightened religiosity around papal visits can temporarily strengthen the dominance the Roman Catholic Church's morality exerts on its followers. Two features of the moral code may be particularly relevant. First, the Church regards sexual intercourse as a sin if conducted outside sacramental marriage, or, even within wedlock, if deprived of its procreative function. Therefore, during and after papal visits, couples may eschew sexual intercourse unless aimed at procreation. Interestingly, our findings suggest that if this is indeed the case, it is occurring among married women and not among unmarried women. Second, the Church strongly condemns voluntary termination of abortions. Papal visits could increase the stigma attached to abortions. While

[20]For the sake of completeness, we also estimated the impact of the papal visits on the number of births disaggregated by parity. We did not find any statistically significant effect on the number of first born infants. We do find a positive and statistically significant effect at the 10% level in the third quarter following the papal visits on the number of second born (0.099%) and third or higher born infants (2.11%). These results are broadly consistent with our findings on abortion, confirming the strong influence exerted by the Pope on married women, i.e those who are more likely to give birth to second and third or higher infants.

it is true that we do not find a contemporaneous drop in abortions, that does not in itself conclusively rule out heightened stigma of abortions as a mechanism. The cost-benefit calculus around abortion for women who are already pregnant is likely very different from those who are not yet pregnant. Consider a women who finds that she has an unplanned pregnancy just around the papal visit. It is plausible that for most such women, the cost of an unwanted child will continue to outweigh even the heightened (psychic) cost of abortion. Therefore, the abortion count may not decrease significantly for several weeks after the papal visit since these abortions are being scheduled by women who became pregnant before the papal visit. In contrast, consider women who are not pregnant during the papal visit. They are comparing the cost of avoiding sexual intercourse with the heightened cost of abortion in case of an unplanned pregnancy (the perceived cost of abortion would be adjusted by the perceived risk of becoming pregnant). Many such women may opt to avoid sexual intercourse to avoid the risk of an unplanned pregnancy, and this effect could be reinforced if contraceptive usage also declines.

Unfortunately due to lack of data we are not able to explore how the visits of the Pope may change individuals' attitudes and belief on abortion, or the frequency of sexual intercourse and contraceptive usage. Nonetheless, in what follows we offer indirect evidence on these issues, studying how religious attitudes change in response to the papal visits, documenting an increase in church attendance. This effect seems to be driven by married women that is also the group where the effect on abortions is the strongest.

We follow this analysis with an assessment of the possible factors influencing the decision of the Pope to visit a specific province, testing whether the Pope is more likely to visit a region that exhibits an increase in the number of abortions or a decrease in the level of religiosity in the five years preceding the papal event. Finally, we check if the impact on the number of abortions differs by the identity of the Pope in office.

4.7.1 Religious Attitudes

Women might restore or reinforce their own religiosity, adhering to the principles of the Catholic morality in response to the papal visits. This, in turn, might lead them to perceive a heightened stigma attached to abortion, which has been constantly regarded by the Church as grave evil. According to the *Donum Vitae*:

> *"Human life is sacred because from its beginning it involves the creative action of God and it remains for ever in a special relationship with the Creator, who is its sole end. God alone is the Lord of life from its beginning until its end: no one can under any circumstance claim for himself the right directly to destroy an innocent human being" (Ratzinger, 1987).*[21]

We study whether the papal visits have an impact on religiosity, using the repeated cross-section annual survey *Aspects of daily life* made publicly available by the Italian National Institute of Statistics. From 1993 to 2003 the data were collected during the month of November, while starting from 2005, it was run in February.[22] The survey explores multiple facets of daily life such as individuals' religious, political and social participation, allowing us to conduct the analysis at the regional level, corresponding to NUTS-2 regions according to the European Union classification.

We focus our analysis on women and exploit the section on *religious participation*, where individuals are asked to report the frequency with which they usually go to Church or other places of worship, and generate a binary indicator taking value 1 if the individual interviewed goes to Church at least once a week and 0 otherwise. As a placebo test, we also check if the papal visits have an impact on binary variables such as participation to volunteering activities, political debates, political party meetings, trade union meetings and, finally, cultural activities.[23]

[21] The full text is available at: `http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_19870222_respect-for-human-life_en.html`.

[22] In 2004 the survey did not take place.

[23] See Appendix C for a detailed description of the dependent variables.

Hence we run the following probit model:

$$Pr(Y_{i,r,a} = 1) = \Phi(\alpha + \beta pope_{r,a} + \delta X_{i,r,a} + \theta_r + \theta_a) \tag{4.3}$$

Where $Y_{i,r,a}$ is the religiosity indicator or the placebo variables described above for woman i in region r in year a; the variable of interest, $pope_{r,a}$, takes value 1 if the respondent lived in a region visited by the pope in the three months before the survey took place and 0 otherwise; $X_{i,r,a}$ includes individual observable characteristics such as age, education, job type and marital status; θ_r and θ_a are region and year fixed effects.

In Table 4.8 we present the results from estimating model (4.3). In Panel A, we can see that women living in a region visited by the Pope within 3 months from the date of the interview are more likely to go to church at least once a week and to be engaged with volunteering activities as compared to those regions where the Pope did not go. In the following columns we show that the papal visits have no effect on the participation to political debates (column 3), political party's meetings (column 4), trade union's meetings (column 5) and cultural activities (column 6). Notably, the observed increases in the probability of going to church at least once a week and of participation in volunteering activities seem to be driven by married (0.078%, significant at the 10% level) and low educated women (6.40% - significant at the 5% level - which translates into an increase in the probability of being engaged with volunteering activities by 0.052%).

In Panel B we show the results obtained on re-estimating model (3) by adding region-specific yearly linear and quadratic trends. The coefficient relative to the measure of religiosity is now significant at the 10% level in spite of a slight increase in its size, if compared to the estimate in Panel A. Also in this case, the effect on religiosity (2.54%, which translates into an increase in the probability of going to church at least once a week by 0.093%) is positive but statistically significant at the 1% level when we restrict the analysis to married women. However, the inclusion of regional specific yearly trends makes the impact of the papal visits

on the participation to volunteering activities statistically not-significant at any conventional level. Finally, as in the previous case, participation to political, social and cultural activities are not affected by the visit of the Pontiff.

Table 4.8: The Impact of the papal Visits on Religiousness and Other Aspects of Daily Life

	Religiosity	**Volunt.**	**Pol. Party**	**Pol. Debate**	**Trade Union**	**Cult. Act.**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A						
Pope Event	**0.0221****	**0.0388****	−0.0263	0.0203	0.0070	0.0261
	(**0.010**)	(**0.018**)	(0.036)	(0.024)	(0.019)	(0.024)
N	426460	422759	423823	424020	422989	422896
Pope Event - Married Women	**0.0210***	0.0371	−0.0041	0.0166	0.0018	0.0247
	(**0.011**)	(0.023)	(0.037)	(0.030)	(0.024)	(0.030)
N	235565	233246	233933	234104	233426	233314
Pope Event - Low Ed. Women	0.0048	**0.0640****	−0.0095	0.0187	0.0343	0.0324
	(0.017)	(**0.031**)	(0.063)	(0.040)	(0.034)	(0.025)
N	259336	257215	257853	257677	257250	257207
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Regions f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Year f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Regional Yearly Trends	No	No	No	No	No	No
Panel B						
Pope Event	**0.0272***	0.0263	0.0061	0.0259	0.0164	0.0337
	(**0.014**)	(0.021)	(0.041)	(0.026)	(0.013)	(0.023)
N	426460	422759	423823	424020	422989	422896
Pope Event - Married Women	**0.0254*****	0.0155	0.0334	0.0256	0.0067	0.0277
	(**0.009**)	(0.025)	(0.049)	(0.029)	(0.022)	(0.028)
N	235565	233246	233933	234104	233426	233314
Pope Event - Low Ed. Women	0.0042	0.0373	0.0239	0.0251	0.0401	0.0363
	(0.016)	(0.038)	(0.060)	(0.044)	(0.029)	(0.024)
N	259336	257215	257853	257677	257207	257207
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Regions f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Year f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Regional Yearly Trends	Yes	Yes	Yes	Yes	Yes	Yes

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the coefficients and std. errors relative to the papal visits on different indicators. Individual weights provided by ISTAT were applied. Controls include age, marital status, education level and job type. Std. errors are clustered at the regional level.

4.7.2 Possible factors influencing the papal visits

Is our main result on abortions a causal effect of papal visits? The identification strategy relies on the precise timing of the event, and in the preferred specifications, we control for province-specific quadratic time trends. Reassuringly, we find no discernible effect in the quarters (or months) preceding the event. Hence, we would argue that our estimates can be credibly inferred as causal.

Nevertheless, the time and place of a papal visit is unlikely to be random.[24] The decision made by the pope to visit a place could be driven by specific factors e.g. motivated by the desire to reverse a general decline in religiosity among the population that may show up ad an increasing abortion rate. If so, a papal visit may coincide with other (unobserved) activities by the Church in that province and during that time that could be driving our results.

We test whether the pope is more likely to visit a region that exhibits an increase in the number of abortions or a decrease in the level of religiosity in the five years preceding the papal event, as presented by equation (4):

$$Pr(\text{Pope Event}_{r,a} = 1) = \Phi(\alpha + \beta \%\Delta_5 Z_{r,a-1} + \theta_r + \theta_a) \tag{4.4}$$

where $\text{Pope Event}_{r,a}$ is a binary indicator taking value 1 if region r was visited by the Pope in year a, $\%\Delta_5 Z_{r,a-1}$ represents the percentage change in the number of abortions or in the average religiosity indicator, as defined in Section 4.7.1, over the 5 years preceding the visit of the Pope in region r, θ_r and θ_a are region and year fixed effects. In its strictest specification, we modify model (4) controlling for the presence of papal visits occurred in the 5 years preceding the event.

Table 4.9 displays the results from estimating model (4.4). Starting from column (1) - Panel A - we can see that the growth rate of abortions in the five years preceding the papal visits to the Italian regions has a negative effect on the probability of a region hosting the pope. However, the effect is not significant at any conventional level. The inclusion of region and year fixed effects - column (2) - lowers the size of the coefficient in absolute value, while it remains statistically insignificant. Finally, the inclusion of a binary indicator controlling for the occurrence of papal visits in the 5 years preceding the papal event - column (3) - does not change the main findings. The estimates relative to the percentage change in the reported level of religiosity, presented in Panel B, confirm that the decision of the Pope to visit a specific region

[24] As a matter of fact, most papal visits are planned well in advance. See for example the article by the Archdiocese of Baltimore (N A) at the following link: `https://www.archbalt.org/planning-papal-trips-takes-diplomacy-collaboration-fine-tuning/`.

is not driven by the change in religiosity in the five years before the visit, regardless of the specification adopted.

Table 4.9: Factors influencing the papal visits

	Pope Event	**Pope Event**	**Pope Event**
	(1)	**(2)**	**(3)**
Panel A			
$\%\Delta_5 Abortion_{r,a-1}$	−0.6501	−0.0851	−0.0634
	(0.915)	(0.237)	(0.247)
N	440	360	360
Panel B			
$\%\Delta_5 Religiosity_{r,a-1}$	−0.5518	−0.3925	−0.5825
	(1.410)	(2.092)	(2.077)
N	247	126	126
Region f.e.	No	Yes	Yes
Year f.e.	No	Yes	Yes
Region visited 5 years	No	No	Yes

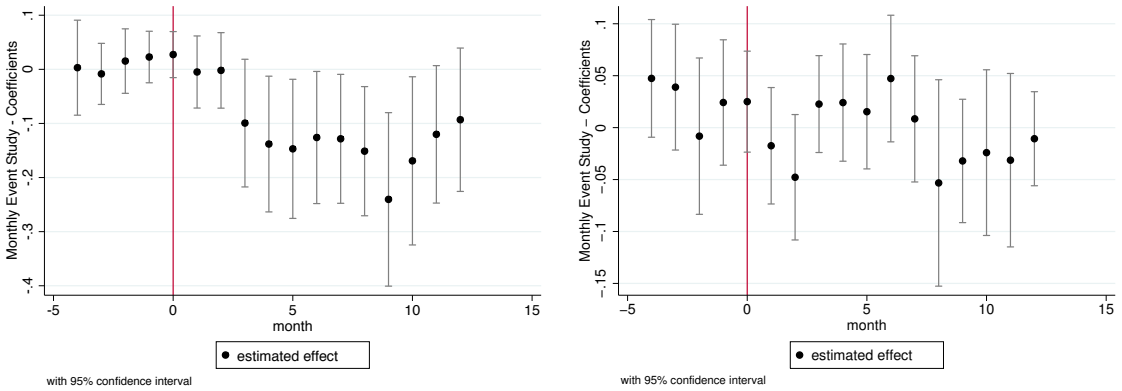
Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry in Panel A reports the coefficients and std. errors relative to the percentage change in the number of abortions over the 5 years preceding the visit of the Pope in region r on the the papal visits indicator for region r in year a. Each entry in Panel B reports the coefficients and std. errors relative to the percentage change in the average reported religiosity over the 5 years preceding the visit of the Pope in region r on the the papal visits indicator for region r in year a. Std. errors are clustered at the regional level.

4.7.3 Which Pope is more influential?

In this section we check if the effect on the number of abortions differs by the identity of the Pope in office. In order to do so, we disaggregate the sample into two parts, according to the length of reign of John Paul II and Benedict XVI, respectively.

In Figure 4.8 we graph the estimates from the most stringent specification adopted for model (2), which includes province-specific monthly trends. The negative effect on the number of pregnancy interruptions seems to be driven by John Paul II's papacy. In contrast, the impact of the visits of Pope Benedict XVI on abortions, positive from the 3^{rd} to the 7^{th} month after the papal trip, is not statistically significant at any conventional level.

Since the two Popes spanned different eras, this difference in the effects on abor-



(a) John Paul II (b) Benedict XVI

Figure 4.8: Monthly Event Study - Pope.

tion may simply reflect a long run decline in religiosity and respect for the Pope within Italian society. However, it is worth noting that there was a substantial drop in trust among Italians in Pope Benedict XVI as compared to Pope John Paul II. In Appendix C - Figure C.4, we report the results of the survey representative at the national level conducted in 2007 by Demos & Pi and Gfk Eurisko (2007). When asked the question "How much do you trust the Pope?", only 55.3% of the respondents expressed a strong preference for Benedict XVI against the 77.2% recorded in 2003 for John Paul II. This drop seems to be specific to Benedict XVI, given the rebound of trust back up to 84% with the election of Francis I, as documented by Demos & Pi (2015). The different communication strategies adopted by the two Popes might explain such a drop in trust and, consequently, why people reacted differently to the visits of the two popes.[25]

4.8 Conclusions

We find that papal visits to Italian provinces cause approximately a 10% to 20% decline in the number of abortions, starting in the third month after the visit and persisting until around the eleventh month after. The effect is strongest among married women and women with lesser education. We argue that the decline in

[25]According to public opinion, the main difference between John Paul II and Benedict XVI was related to the extraordinary capability of the former to reach out to people as individuals with his speeches (Aziz, 2010).

abortions is being primarily driven by a reduction in unplanned pregnancies. We offer two main pieces of evidence for this explanation. First, the timing of the effect - the drop in abortions is not contemporaneous with papal visits. So, the causal mechanism is unlikely to be merely an increased aversion to abortion. Instead, abortions start decreasing about 3 months after the visit which would approximately coincide with the timing of abortions for unplanned pregnancies that occur during the papal visit. Second, ceteris paribus, given the abortion rate in Italy, the large fall in abortions would translate into a measurable increase in the number of live births. But we fail to find any discernible increase in live births 9 months after the visit. It is worth noting that other plausible channels would likely boost the birth rate e.g. through an increase in desired fertility or a shift forward in fertility. Taken together, the timing of the effect and the lack of an increase in births, point towards a decline in unplanned pregnancies as the likely explanation.

Papal visits could induce a decline in unwanted pregnancies through a decrease in the frequency of sexual intercourse not intended for procreation and/or an increase in the use of contraception. The latter is implausible since the Church has traditionally opposed contraception. Why might women eschew sexual intercourse not aimed at procreation? Papal visits may lead to heightened religiosity that makes Church doctrine more salient for a while. Two precepts may play a key role. The first is the strong stance of the Catholic Church against abortion. This could reduce the frequency of sexual intercourse as women seek to avoid the risk of unplanned pregnancies and the associated dilemma of abortion. Second, the Church has frowned on sexual intercourse unless it occurs for procreation. We document that papal visits lead to heightened religiosity, as proxied by weekly church attendance. Notably, this effect is significant for married women, that is the demographic that shows the decline in abortions. The saliency of Church doctrine appears to be reinforced by the messages in Papal speeches that lay a major emphasis on family and to some extent also criticise abortions.

Chapter 5

Conclusions

This thesis analyses the role of political and religious leaders on three relevant issues: the incidence of crime, the decision to migrate and the choice of undergoing an abortion operation. A vast array of studies has largely documented the importance of culture, intended as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation" (Guiso et al., 2006), on several socio-economic outcomes. This work indirectly contributes to the aforementioned literature, showing how the ethnic background of a politician, the cultural values adopted and expressed by a specific political party or the diffusion of religious beliefs can shape society.

Chapter 2 adds to the debate started in the 1970s by political scientists and sociologists on the differences between the set of policies adopted by an African-American mayor and the measures implemented by a white officer. A decrease in the number of police employment with respect to a city ruled by a non-black candidate explains why an increase in the number of motor vehicles theft is observed in the year following the close electoral contest. One limitation of this paper is related to the lack of data on the race of the offender, which does not allow to test whether the observed increase in car theft is driven by a specific ethnic group. Future research could explore if the decrease in police employment is coupled with an increase in other types of public spending, such as schooling. If this is the case,

African-American mayors might tolerate high property crime rates in the short run against a decrease in property crimes in the long-run.

Chapter 3 asks if foreign citizens with a legal residency permit in Italy relocate to a different city in response to the election of a mayor affiliated to the Northern League Party, a far right political movement known for its racist and xenophobic attitudes. A diminished perception of social inclusion towards non-Italian residents could explain why foreign citizens relocate to a different city in response to the election of a mayor affiliated to the Northern League party; on the contrary, the effect on the number of in-migrants from different Italian cities per 1,000 inhabitants is not statistically significant at any conventional level. Due to data limitation, this paper does not explain how undocumented immigrants respond to the election of a Northern League mayor. On one hand, we could assume that their movements most likely resemble those of documented immigrants. On the other, we could expect them to be more responsive to NL mayors.

Finally, Chapter 4 explores the importance of religion in influencing the way people interact or make important life decisions. In the specific case, the paper studies how the papal visits to Italian provinces affect the number of abortions, documenting a strong decrease starting in the third month after the visit and persisting until around the eleventh month after. The timing of the effect and the absence of any impact on live births nine months after the visit suggests that the decline in abortions is driven by a reduction in unplanned pregnancies. A decrease in the frequency of sexual intercourse not intended for procreation and/or an increase in the use of contraception could explain such a strong reduction in abortion. Alternatively, heightened religiosity, proxied by weekly church attendance, could provide an alternative mechanism. Although an increase in the use of contraceptives seems implausible given the strong stance adopted by the Church against contraception, future research will be aimed at providing direct evidence on whether papal visits have a direct impact on the sales of contraceptives and on sexual attitudes, conditional on data availability.

Politicians and religious leaders exert a strong influence on how human behaviours are shaped. The themes discussed in this thesis offer a new insight on the importance of cultural and social values embedded in the identity of political and religious leaders as key factors to deepen our understanding of economic and social behaviours.

Bibliography

Archdiocese of Baltimore (N. A.). Planning papal trips takes diplomacy, collaboration, fine-tuning. Available at: https://www.archbalt.org/planning-papal-trips-takes-diplomacy-collaboration-fine-tuning/.

Aziz, K. (2010). Pope John Paul and Pope Benedict. Available at: http://www.communicatemagazine.com/features/2010-october/pope-john-paul-and-pope-benedict/.

Barone, G., D'Ignazio, A., de Blasio, G., and Naticchioni, P. (2016). Mr. Rossi, Mr. Hu and politics. the role of immigration in shaping natives' voting behavior. *Journal of Public Economics*, 136(Supplement C):1 – 13.

Basile, R. and Filoso, V. (2016). The market value of political partisanship: Quasi-experimental evidence from municipal elections. *Papers in Regional Science*, pages 1–17. PIRS-FA-2014-1374.R2.

Bassi, V. and Rasul, I. (2016). Persuasion: A Case Study of Papal Influences on Fertility-Related Beliefs and Behavior. CEPR Discussion Papers 11698, C.E.P.R. Discussion Papers.

Beaman, L., Chattopadhyay, R., Duflo, E., Pande, R., and Topalova, P. (2009). Powerful Women: Does Exposure Reduce Bias? *The Quarterly Journal of Economics*, 124(4):1497–1540.

Beaman, L., Duflo, E., Pande, R., and Topalova, P. (2012). Female Leadership

Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India. *Science*, 335(6068):582–586.

Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76(2):169–217.

Becker, G. S. (1991). *A Treatise on the Family*. Harvard University Press.

Becker, S. O. and Fetzer, T. (2016). Does Migration Cause Extreme Voting? *CAGE Online Working Paper Series 306, Competitive Advantage in the Global Economy (CAGE)*.

Beland, L.-P. (2015). Political Parties and Labor-Market Outcomes: Evidence from US States. *American Economic Journal: Applied Economics*, 7(4):198–220.

Beland, L.-P. and Oloomi, S. (2017). Party Affiliation and Public Spending: Evidence From U.S. Governors. *Economic Inquiry*, 55(2):982–995.

Bertrand, M. and Schoar, A. (2003). Managing with Style: The Effect of Managers on Firm Policies. *The Quarterly Journal of Economics*, 118(4):1169–1208.

Besley, T. and Coate, S. (1997). An Economic Model of Representative Democracy. *The Quarterly Journal of Economics*, 112(1):85–114.

Bettin, G. and Cela, E. (2014). The evolution of migration flows in Europe and Italy. *Economia Marche - Journal of Applied Economics*, 33(1):37–63.

Bhalotra, S. and Clots-Figueras, I. (2014). Health and the Political Agency of Women. *American Economic Journal: Economic Policy*, 6(2):164–97.

Bhalotra, S., Clots-Figueras, I., Cassan, G., and Iyer, L. (2014). Religion, politician identity and development outcomes: Evidence from India. *Journal of Economic Behavior & Organization*, 104(Supplement C):4 – 17.

Blank, R. M., George, C. C., and London, R. A. (1996). State abortion rates the impact of policies, providers, politics, demographics, and economic environment. *Journal of Health Economics*, 15(5):513 – 553.

Bordignon, M., Nannicini, T., and Tabellini, G. (2016). Moderating Political Extremism: Single Round versus Runoff Elections under Plurality Rule. *American Economic Review*, 106(8):2349–70.

Bracco, E., Paola, M. D., Green, C., and Scoppa, V. (2017). The Effect Of Far Right Parties On The Location Choice Of Immigrants: Evidence From Lega Nord Mayors. *Working Papers 201701*, Università della Calabria, Dipartimento di Economia, Statistica e Finanza "Giovanni Anania" - DESF.

Calonico, S., Cattaneo, M. D., and Titiunik, R. (2014). Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs. *Econometrica*, 82(6):2295–2326.

Campbell, D. and Feagin, J. R. (1975). Black Politics in the South: A Descriptive Analysis. *The Journal of Politics*, 37(1):129–162.

Castiglioni, M., Zuanna, G. D., and Loghi, M. (2001). Planned and unplanned births and conceptions in italy, 1970-1995. *European Journal of Population / Revue Europenne de Dmographie*, 17(3):207–233.

Catechism of the Catholic Church. Life In Christ. Available at: `http://www.vatican.va/archive/ccc_css/archive/catechism/p3s2c2a6.htm`.

Chaney, E. (2013). Revolt on the Nile: Economic Shocks, Religion, and Political Power. *Econometrica*, 81(5):2033–2053.

Chauvet, L. and Mercier, M. (2014). Do return migrants transfer political norms to their origin country? Evidence from Mali. *Journal of Comparative Economics*, 42(3):630 – 651.

Clots-Figueras, I. (2011). Women in politics: Evidence from the Indian States. *Journal of Public Economics*, 95(7):664 – 690.

Clots-Figueras, I. (2012). Are Female Leaders Good for Education? Evidence from India. *American Economic Journal: Applied Economics*, 4(1):212–244.

Coleman, P. K., Coyle, C. T., Shuping, M., and Rue, V. M. (2009). Induced abortion and anxiety, mood, and substance abuse disorders: Isolating the effects of abortion in the national comorbidity survey. *Journal of Psychiatric Research*, 43(8):770–776.

Dal Bó, E., Dal Bó, P., and Snyder, J. (2009). Political Dynasties. *The Review of Economic Studies*, 76(1):115–142.

Danesi, G. (N. A.). Giovanni Paolo II il Papa Globetrotter. Available at: `http://www.ilgazzettinodelviaggiatore.it/magazine/editoriale/220-giovanni-paolo-ii-il-papa-globetrotter.html`.

DellaVigna, S. (2010). The Obama Effect on Economic Outcome: Evidence from Event Studies.

Demos & Pi (2015). 51° Atlante Politico. Available at: `http://www.demos.it/2015/pdf/362320151028_papa_ap51.pdf`.

Demos & Pi and Gfk Eurisko (2007). Gli italiani e la religione. Available at: `http://www.demos.it/2007/pdf/eurisko_03_2007.pdf`.

Di Tella, R. and Schargrodsky, E. (2004). Do police reduce crime? estimates using the allocation of police forces after a terrorist attack. *American Economic Review*, 94(1):115–133.

Downs, A. (1957). An Economic Theory of Political Action in a Democracy. *Journal of Political Economy*, 65(2):135–150.

Dustmann, C., Vasiljeva, K., and Damm, A. (2016). Refugee Migration and Electoral Outcomes. *CReAM Discussion Paper Series 1619, Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.*

Eurispes (2016). Rapporto Italia 2016. La sindrome del Palio. Available at: `https://eurispes.eu/content/rapporto-italia-2016-la-sindrome-del-palio`.

European Commission against Racism and Intolerance (2002). Secondo Rapporto Sull'Italia. Available at: http://www.coe.int/t/dghl/monitoring/ecri/Country-by-country/Italy/ITA-CbC-II-2002-004-ITA.pdf.

Ferreira, F. and Gyourko, J. (2009). Do Political Parties Matter? Evidence from U.S. Cities. *The Quarterly Journal of Economics*, 124(1):399–422.

Ferreira, F. and Gyourko, J. (2014). Does gender matter for political leadership? The case of U.S. mayors. *Journal of Public Economics*, 112(Supplement C):24 – 39.

Finer, L. B. and Henshaw, S. K. (2006). Disparities in Rates of Unintended Pregnancy In the United States, 1994 and 2001. *Perspectives on Sexual and Reproductive Health*, 38(2):90–96.

FirstPost (2015). Your Italian isn't good enough: Mayor denies Indian woman citizenship. Available at: http://www.firstpost.com/world/your-italian-isnt-good-enough-mayor-denies\-indian-woman-citizenship-2131785.html.

Gagliarducci, S. and Paserman, M. D. (2012). Gender Interactions within Hierarchies: Evidence from the Political Arena. *The Review of Economic Studies*, 79(3):1021–1052.

Galindo-Silva, H. (2015). New parties and policy outcomes: Evidence from Colombian local governments. *Journal of Public Economics*, 126(Supplement C):86 – 103.

Guiso, L., Sapienza, P., and Zingales, L. (2003). People's opium? Religion and economic attitudes. *Journal of Monetary Economics*, 50(1):225 – 282.

Guiso, L., Sapienza, P., and Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives*, 20(2):23–48.

Halla, M., Wagner, A., and Zweimller, J. (2017). Immigration and Voting for the Far Right. *Journal of the European Economic Association. (Forthcoming)*.

Hopkins, D. J. and McCabe, K. T. (2012). After It's Too Late. *American Politics Research*, 40(4):665–700.

Hotelling, H. (1929). Stability in Competition. *The Economic Journal*, 39(153):41–57.

Iannaccone, L. R. (1998). Introduction to the Economics of Religion. *Journal of Economic Literature*, 36(3):1465–1495.

Il Fatto Quotidiano (2017). "Dire la Lega è un partito razzista" non è diffamatorio, gip archivia indagine su Cecile Kyenge. Available at: `http://www.ilfattoquotidiano.it/2017/01/13/dire-la-lega-e-un-partito-razzista-\non-e-diffamatorio-gip-archivia-indagine-su-cecile-kyenge/3314873/`.

Imbens, G. W. and Kalyanaraman, K. (2012). Optimal Bandwidth Choice for the Regression Discontinuity Estimator. *The Review of Economic Studies*, 79(3):933–959.

Imbens, G. W. and Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of Econometrics*, 142(2):615 – 635.

Iyer, S. (2016). The New Economics of Religion. *Journal of Economic Literature*, 54(2):395–441.

Jacobs, D. and Carmichael, J. T. (2002). Subordination and Violence against State Control Agents: Testing Political Explanations for Lethal Assaults against the Police. *Social Forces*, 80(4):1223–1251.

Jacobs, D. and Wood, K. (1999). Interracial Conflict and Interracial Homicide: Do Political and Economic Rivalries Explain White Killings of Blacks or Black Killings of Whites? *American Journal of Sociology*, 105(1):157–190.

John Paul II (1981). Familiaris Consortio. Available at: http://w2.vatican.va/content/john-paul-ii/en/apost_exhortations/documents/hf_jp-ii_exh_19811122_familiaris-consortio.html.

Jones, B. F. and Olken, B. A. (2005). Do Leaders Matter? National Leadership and Growth Since World War II. *The Quarterly Journal of Economics*, 120(3):835–864.

Joyce, T. and Kaestner, R. (1996). State reproductive policies and adolescent pregnancy resolution: The case of parental involvement laws. *Journal of Health Economics*, 15(5):579 – 607.

Karnig, A. K. and Welch, S. (1980). *Black Representation and Urban Policy*. Chicago U.P.

Kearney, M. S. and Levine, P. B. (2015). Media Influences on Social Outcomes: The Impact of MTV's 16 and Pregnant on Teen Childbearing. *American Economic Review*, 105(12):3597–3632.

Keller, E. J. (1978). The Impact of Black Mayors on Urban Policy. *The Annals of the American Academy of Political and Social Science*, 439:40–52.

Kelly, M. (2000). Inequality and Crime. *The Review of Economics and Statistics*, 82(4):530–539.

Kington, T. (2013). Italy's first black minister compared to orang-utan by Northern League senator. Available at: http://www.telegraph.co.uk/news/worldnews/europe/italy/10178616/Italys-first-black-minister-compared\-to-orang-utan-by-Northern-League-senator.html.

Leavy, W. (1983). Can black mayor stop crime? *Ebony*, 39(2):116–122.

Lee, D. S. (2008). Randomized experiments from non-random selection in U.S. House elections. *Journal of Econometrics*, 142(2):675 – 697.

Lee, D. S. and Lemieux, T. (2010). Regression Discontinuity Designs in Economics. *Journal of Economic Literature*, 48(2):281–355.

Levine, P. B. (2003). Parental involvement laws and fertility behavior. *Journal of Health Economics*, 22(5):861 – 878.

Levine, P. B., Trainor, A. B., and Zimmerman, D. J. (1996). The effect of Medicaid abortion funding restrictions on abortions, pregnancies and births. *Journal of Health Economics*, 15(5):555 – 578.

Levitt, S. D. (1996). How Do Senators Vote? Disentangling the Role of Voter Preferences, Party Affiliation, and Senator Ideology. *The American Economic Review*, 86(3):425–441.

Levitt, S. D. (1997). Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime. *American Economic Review*, 87(3):270–90.

Levitt, S. D. (2002). Using electoral cycles in police hiring to estimate the effects of police on crime: Reply. *American Economic Review*, 92(4):1244–1250.

Magnano, R. (2017). Ivg, Lorenzin: "Liste d'attesa ridotte e carichi di lavoro sostenibili". Aborto farmacologico in consultorio? "Solo sperimentazione regionale". Available at: `http://www.sanita24.ilsole24ore.com/art/dal-governo/2017-04-19/ivg-lorenzin-liste-d-attesa-ridotte-e-carichi-lavoro-sostenibili-aborto-\farmacologico-consultorio-solo-sperimentazione-regionale-161124.php?uuid=AELqCq7`.

Mayda, A.-M., Peri, G., and Steingress, W. (2016). Immigration to the U.S.: A problem for the Republicans or the Democrats? *Working papers 597*, Banque de France.

McCleary, R. M. and Barro, R. J. (2006). Religion and Economy. *Journal of Economic Perspectives*, 20(2):49–72.

McCrary, J. (2002). Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime: Comment. *The American Economic Review*, 92(4):1236–1243.

McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics*, 142(2):698 – 714.

Meyersson, E. (2014). Islamic Rule and the Empowerment of the Poor and Pious. *Econometrica*, 82(1):229–269.

Ministero dell'Interno (2016). Alfano al question time: il sindaco non pu rigettare il procedimento di cittadinanza. Available at: `http://www.interno.gov.it/it/notizie/alfano-question-time-sindaco-non-puo-rigettare-procedimento-cittadinanza`.

Motyl, M. (2014). "If He Wins, I'm Moving to Canada": Ideological Migration Threats Following the 2012 U.S. Presidential Election. *Analyses of Social Issues and Public Policy*, 14(1):123–136.

Motyl, M., Iyer, R., Oishi, S., Trawalter, S., and Nosek, B. A. (2014). How ideological migration geographically segregates groups. *Journal of Experimental Social Psychology*, 51(Supplement C):1 – 14.

Murgese, E. (2015). Razzismo, "crisi fa aumentare xenofobia". Rom, ebrei e migranti i pi discriminati. Available at: `http://www.ilfattoquotidiano.it/2015/02/07/razzismo-crisi-fa-aumentare-xenofobia-rom-ebrei-migranti-i-discriminati/1405764/`. Il Fatto Quotidiano.

Nelson, W. and Meranto, P. (1977). *Electing Black mayors; political action in the Black community.* Ohio State University Press.

Nelson, W. E. (1978). Black Mayors As Urban Managers. *The Annals of the American Academy of Political and Social Science*, 439:53–67.

Norris, A., Bessett, D., Steinberg, J. R., Kavanaugh, M. L., De Zordo, S., and

Becker, D. (2011). Abortion Stigma: A Reconceptualization of Constituents, Causes, and Consequences. *Women's Health Issues*, 21(3):S49–S54.

Nye, J. V., Rainer, I., and Stratmann, T. (2015). Do Black Mayors Improve Black Relative to White Employment Outcomes? Evidence from Large US Cities. *The Journal of Law, Economics, and Organization*, 31(2):383–430.

Otto, A. H. and Steinhardt, M. F. (2014). Immigration and election outcomes? evidence from city districts in hamburg. *Regional Science and Urban Economics*, 45(Supplement C):67 – 79.

Paul VI. Humanae Vitae. Available at: `http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_25071968_humanae-vitae.html`.

Pettersson-Lidbom, P. (2008). Do Parties Matter for Economic Outcomes? A Regression-Discontinuity Approach. *Journal of the European Economic Association*, 6(5):1037–1056.

Pew Research Center (2013). The Global Catholic Population. Available at: `http://www.pewforum.org/2013/02/13/the-global-catholic-population/`.

Pfutze, T. (2012). Does migration promote democratization? Evidence from the Mexican transition. *Journal of Comparative Economics*, 40(2):159 – 175.

Poinsett, A. (1970). *Black power: Gary style: the making of Mayor Richard Gordon Hatcher*. Johnson Pub. Co.

Politi, J. (2017). Migration opens the door to Italy's populists. Available at: `https://www.ft.com/content/b964453a-72b1-11e7-aca6-c6bd07df1a3c`. Financial Times.

Porter, J. (2003). Estimation in the Regression Discontinuity Model. Mimeo. Department of Economics, University of Wisconsin.

Ratzinger, J. (1987). Instruction on respect for human life in its originand on the dignity of procreationreplies to certain questions of the day. Available

at: http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_19870222_respect-for-human-life_en.html.

Rosenbaum, M. E. (1986). The repulsion hypothesis: On the nondevelopment of relationships. *Journal of Personality and Social Psychology*, 51(6):1156–1166.

Rosenzweig, M. R. and Schultz, T. P. (1983). Consumer Demand and Household Production: The Relationship Between Fertility and Child Mortality. *The American Economic Review*, 73(2):38–42.

Schünmann, C. and Glasier, A. (2006). Measuring pregnancy intention and its relationship with contraceptive use among women undergoing therapeutic abortion. *Contraception*, 73(5):520 – 524.

Sedgh, G., Bearak, J., Singh, S., Bankole, A., Popinchalk, A., Ganatra, B., Rossier, C., Gerdts, C., Tunçalp, Ö., Johnson, Brooke Ronald, J., Johnston, H. B., and Alkema, L. (2016). Abortion incidence between 1990 and 2014: global, regional, and subregional levels and trends. *The Lancet*, 388(10041):258–267.

Stroebel, J. C. and Van Benthem, A. (2013). The Power of the Church: The Role of Roman Catholic Teaching in the Transmission of HIV. *Working Paper, Wharton*.

Stucky, T. D. (2003). Local Politics and Violent Crime in U.S. Cities. *Criminology*, 41(4):1101–1136.

Stucky, T. D. (2012). The Conditional Effects of Race and Politics on Social Control. *Journal of Research in Crime and Delinquency*, 49(1):3–30.

The Economist (2007). Italy and the Catholic church - By hook or by crook. Available at: http://www.economist.com/node/9259081.

The Economist (2011). Holy relevance - Faith can influence economic behaviour but not always directly. Available at: http://www.economist.com/node/21534762.

Van Der Klaauw, W. (2008). Regression Discontinuity Analysis: A Survey of Recent Developments in Economics. *LABOUR*, 22(2):219–245.

Vezzoni, C. and Biolcati-Rinaldi, F. (2015). Church Attendance and Religious Change in Italy, 1968?2010: A Multilevel Analysis of Pooled Datasets. *Journal for the Scientific Study of Religion*, 54(1):100–118.

Vogl, T. S. (2014). Race and the politics of close elections. *Journal of Public Economics*, 109(Supplement C):101 – 113.

Wadsworth, T. and Kubrin, C. E. (2004). Structural factors and black interracial homicide: A new examination of the causal process. *Criminology*, 42(3):647–672.

Washington, E. (2006). How Black Candidates Affect Voter Turnout. *The Quarterly Journal of Economics*, 121(3):973–998.

Wertman, D. A. (1982). The Catholic Church and Italian Politics: The impact of Secularisation. *West European Politics*, 5(2):87–107.

West, H. C. (2010). Prison Inmates At Midyear 2009 - Statistical Tables. Available at: `http://www.bjs.gov/index.cfm?ty=pbdetail&iid=2200`. Bureau of Justice Statistics.

Yegon, E. K., Kabanya, P. M., Echoka, E., and Osur, J. (2016). Understanding abortion-related stigma and incidence of unsafe abortion: experiences from community members in Machakos and Trans Nzoia counties Kenya. *The Pan African Medical Journal*, 24:1–9.

Appendix A

Appendix to Chapter 2

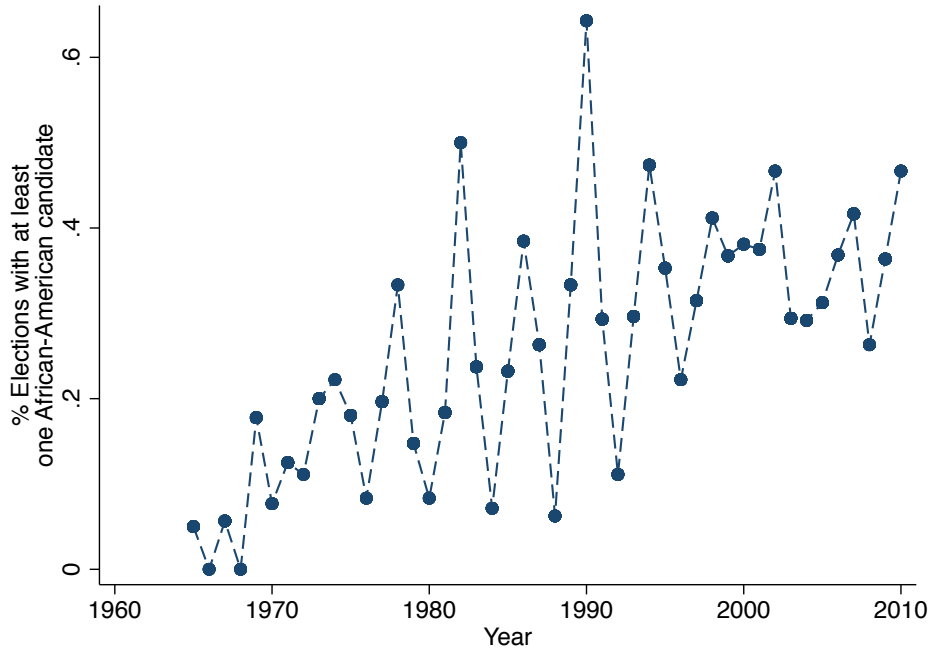


Figure A.1: Proportion of mayoral elections with at least one African-American candidate (1965-2010).

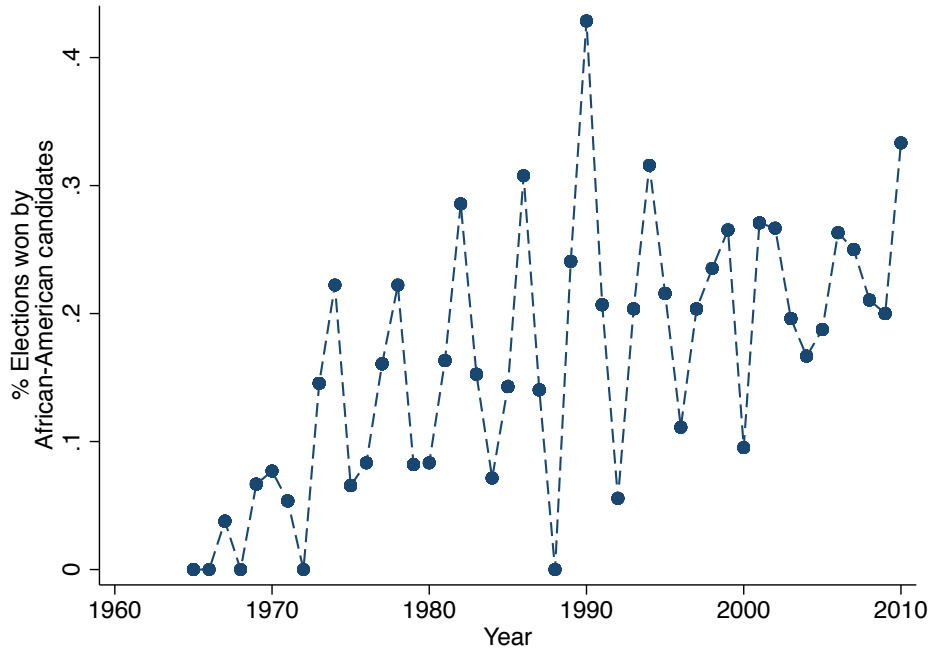


Figure A.2: Proportion of mayoral elections won by African-American mayors (1965-2010).

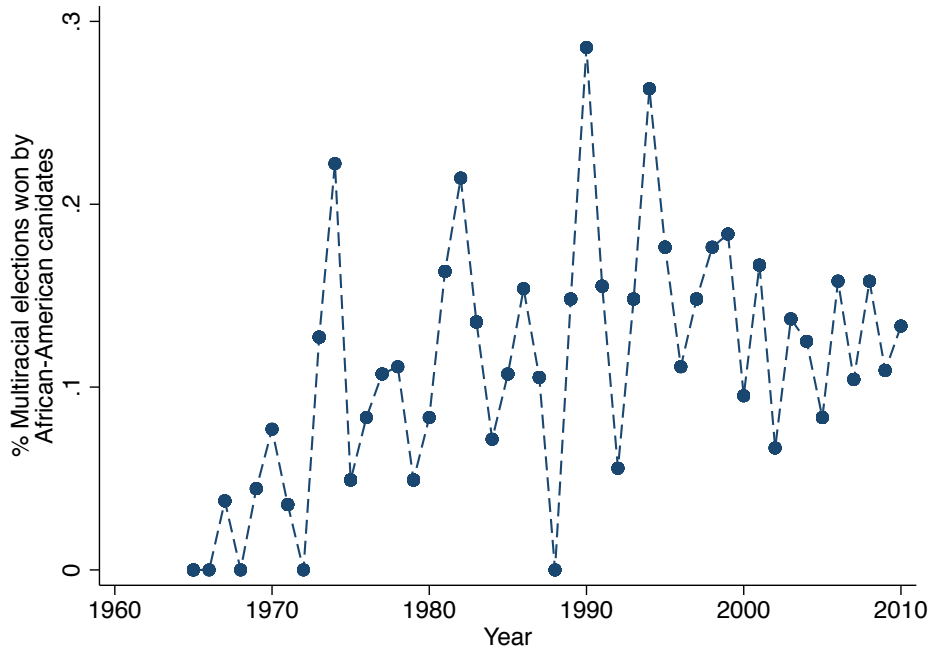


Figure A.3: Proportion of multi-racial mayoral elections won by African-American mayors (1965-2010).

UCR offense definitions

Criminal homicide: a) Murder and non-negligent manslaughter: the wilful (non-negligent) killing of one human being by another. Deaths caused by negligence, attempts to kill, assaults to kill, suicides, and accidental deaths are excluded. The program classifies justifiable homicides separately and limits the definition to: (1) the killing of a felon by a law enforcement officer in the line of duty; or (2) the killing of a felon, during the commission of a felony, by a private citizen. b) Manslaughter by negligence: the killing of another person through gross negligence. Deaths of persons due to their own negligence, accidental deaths not resulting from gross negligence, and traffic fatalities are not included in the category Manslaughter by Negligence.

Forcible rape: The carnal knowledge of a female forcibly and against her will. Rapes by force and attempts or assaults to rape, regardless of the age of the victim, are included. Statutory offences are excluded.

Robbery: The taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear.

Aggravated assault: An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury. This type of assault usually is accompanied by the use of a weapon or by means likely to produce death or great bodily harm. Simple assaults are excluded.

Burglary (breaking or entering): The unlawful entry of a structure to commit a felony or a theft. Attempted forcible entry is included.

Larceny-theft (except motor vehicle theft): The unlawful taking, carrying, leading, or riding away of property from the possession or constructive possession of another. Examples are thefts of bicycles, motor vehicle parts and accessories, shoplifting, pocket-picking, or the stealing of any property or article that is not taken by force and violence or by fraud. Attempted larcenies are included. Embezzlement, confidence games, forgery, check fraud, etc., are excluded.

Motor vehicle theft: The theft or attempted theft of a motor vehicle. A motor vehicle is self-propelled and runs on land surface and not on rails. Motorboats, construction equipment, airplanes, and farming equipment are specifically excluded from this category.

Table A.1: Violent Crimes per 1,000 inhabitants

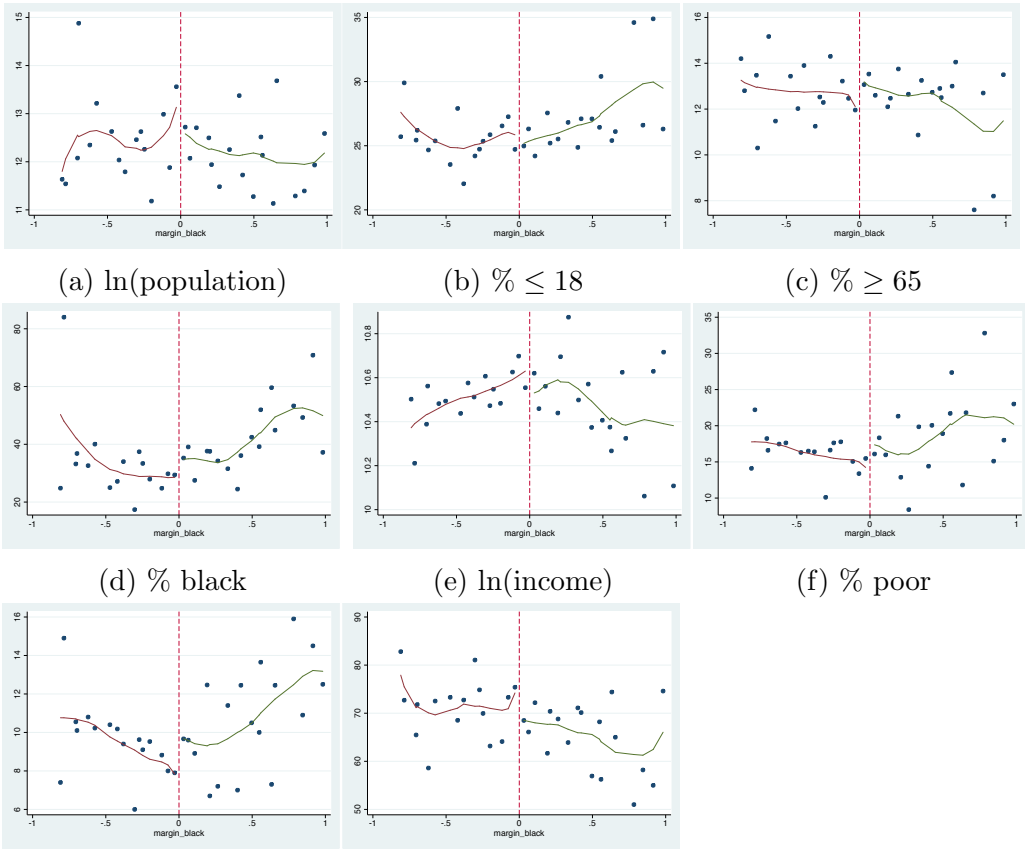
	US	**Midwest**	**Northeast**	**South**	**West**
Violent Crime Index	4.79	3.80	3.59	6.35	4.50
	(3.04)	(1.92)	(2.27)	(3.88)	(2.15)
Murder	0.06	0.05	0.04	0.10	0.05
	(0.07)	(0.03)	(0.02)	(0.11)	(0.03)
Rape	0.35	0.35	0.26	0.37	0.41
	(0.13)	(0.13)	(0.06)	(0.12)	(0.15)
Robbery	1.39	1.05	1.27	1.93	1.08
	(1.37)	(0.78)	(1.17)	(1.88)	(0.83)
Assault	2.99	2.36	2.03	3.96	2.96
	(1.76)	(1.17)	(1.21)	(2.07)	(1.43)
N	1428	336	252	476	364
# States	(50+1)	12	9	17	13
Violent Crime Index	11.60	11.51	12.50	11.45	10.68
	(6.98)	(7.78)	(7.43)	(6.70)	(5.58)
Murder	0.16	0.18	0.15	0.17	0.14
	(0.14)	(0.19)	(0.11)	(0.13)	(0.14)
Rape	0.60	0.73	0.56	0.60	0.49
	(0.33)	(0.41)	(0.34)	(0.29)	(0.26)
Robbery	4.67	4.43	5.95	4.22	4.29
	(3.25)	(2.96)	(3.95)	(2.98)	(2.62)
Assault	6.28	6.67	5.84	6.46	5.76
	(4.44)	(5.98)	(3.49)	(4.17)	(3.08)
N	3125	760	707	1220	438
# Cities	120	32	26	46	16

Source: Author's calculations based on data from FBI-UCR.
Note: Each entry represents the mean and, in parentheses, standard deviation of the relevant variables at the state level (top panel) and city level relative to the election sample (bottom panel) per 1,000 inhabitants. Violent crime index is computed as the sum of murder, rape, robbery and aggravated assault.

Table A.2: Property Crimes per 1,000 inhabitants

	US	**Midwest**	**Northeast**	**South**	**West**
Property Crime Index	39.10	34.84	31.02	42.50	44.17
	(12.07)	(8.12)	(8.73)	(12.71)	(12.02)
Burglary	8.73	7.24	6.80	10.50	9.14
	(3.56)	(2.41)	(2.64)	(3.57)	(3.78)
Larceny	26.50	24.53	20.70	27.75	30.69
	(7.51)	(4.94)	(4.32)	(7.61)	(7.98)
Motor vehicle theft	3.87	3.07	3.52	4.26	4.34
	(2.45)	(1.53)	(2.52)	(2.81)	(2.36)
N	1428	336	252	476	364
# States	(50+1)	12	9	17	13
Property Crime Index	68.28	67.17	63.31	73.85	62.73
	(29.42)	(20.43)	(42.99)	(24.48)	(25.40)
Burglary	16.42	17.20	14.39	17.96	14.04
	(7.78)	(7.15)	(8.02)	(7.74)	(7.28)
Larceny	42.57	40.91	38.72	47.68	37.42
	(21.67)	(12.50)	(35.12)	(15.53)	(17.12)
Motor vehicle theft	9.30	9.06	10.21	8.22	11.28
	(6.66)	(6.70)	(8.55)	(5.54)	(5.19)
N	3125	760	707	1220	438
# Cities	120	32	26	46	16

Source: Author's calculations based on data from FBI-UCR.
Note: Each entry represents the mean and, in parentheses, standard deviation of the relevant variable at state level (top panel) and city level relative to the election sample (bottom panel) per 1,000 inhabitants. Property crime index is computed as the sum of burglary, larceny and motor vehicle theft.



(a) ln(population) (b) % $\leq$ 18 (c) % $\geq$ 65

(d) % black (e) ln(income) (f) % poor

(g) unemp. rate (h) education

Figure A.4: Baseline Covariates

Table A.3: Impact of a black mayor on the violent crime index per 1,000 inhabitants. - RD estimates

	(1)	**(2)**	**(3)**
Linear	**3.920***	−0.481	**−3.066***
	(**2.09**)	(2.14)	(**1.81**)
Flexible Linear	**4.045***	−0.098	−1.354
	(**2.10**)	(2.17)	(1.54)
Quadratic	**3.958***	−0.541	−1.899
	(**2.13**)	(2.19)	(1.61)
Flexible Quad.	**4.132***	**3.798***	−0.989
	(**2.43**)	(**2.03**)	(1.64)
Cubic	3.208	0.265	−1.967
	(2.32)	(2.25)	(1.63)
Flexible Cubic	**5.690***	1.883	−1.491
	(**3.30**)	(2.59)	(1.90)
Quartic	**4.602***	2.918	−1.113
	(**2.31**)	(2.30)	(1.51)
Flex Quartic	4.698	1.857	−1.106
	(2.83)	(2.41)	(1.47)
N	112	109	109
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.4: Impact of a black mayor on the number of murders per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	0.016	0.019	−0.029
	(0.03)	(0.03)	(0.03)
Flexible Linear	0.024	0.016	−0.025
	(0.03)	(0.03)	(0.03)
Quadratic	0.024	0.014	−0.025
	(0.03)	(0.03)	(0.03)
Flexible Quad.	0.017	0.078	0.043
	(0.04)	(0.05)	(0.04)
Cubic	0.007	0.032	0.005
	(0.03)	(0.04)	(0.03)
Flexible Cubic	0.092	**0.109***	0.057
	(0.06)	(**0.06**)	(0.04)
Quartic	0.013	0.047	0.026
	(0.04)	(0.05)	(0.03)
Flex Quartic	0.069	0.062	0.036
	(0.05)	(0.05)	(0.03)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.5: Impact of a black mayor on the number of rapes per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	0.174	−0.036	**−0.205***
	(0.12)	(0.16)	(**0.12**)
Flexible Linear	0.166	0.019	−0.077
	(0.13)	(0.15)	(0.10)
Quadratic	0.164	0.002	−0.131
	(0.13)	(0.16)	(0.11)
Flexible Quad.	0.168	−0.012	−0.056
	(0.17)	(0.17)	(0.09)
Cubic	0.166	−0.040	−0.185
	(0.14)	(0.16)	(0.12)
Flexible Cubic	0.146	−0.152	−0.050
	(0.21)	(0.19)	(0.12)
Quartic	0.182	0.027	−0.100
	(0.15)	(0.16)	(0.11)
Flex Quartic	0.166	−0.031	−0.105
	(0.17)	(0.14)	(0.11)
N	112	109	109
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.6: Impact of a black mayor on the number of robberies per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	**1.919***	0.321	−0.172
	(**1.10**)	(0.89)	(0.84)
Flexible Linear	**1.972***	0.224	0.133
	(**1.11**)	(0.87)	(0.69)
Quadratic	**1.918***	0.142	0.055
	(**1.11**)	(0.84)	(0.75)
Flexible Quad.	**2.040***	**1.738***	−0.297
	(**1.16**)	(**1.00**)	(0.71)
Cubic	1.521	0.360	−0.017
	(1.07)	(0.88)	(0.78)
Flexible Cubic	2.486	0.856	−1.700
	(1.59)	(1.25)	(1.11)
Quartic	**2.236****	1.306	0.286
	(**1.08**)	(1.00)	(0.67)
Flex Quartic	**2.226***	0.727	0.166
	(**1.29**)	(1.13)	(0.70)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.7: Impact of a black mayor on the number of aggravated assaults per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	0.937	−1.697	**−2.190*****
	(1.01)	(1.03)	(**0.68**)
Flexible Linear	1.033	−1.599	**−1.743*****
	(1.02)	(1.08)	(**0.71**)
Quadratic	0.991	−1.725	**−1.937*****
	(1.04)	(1.05)	(**0.68**)
Flexible Quad.	1.541	0.669	−0.456
	(1.27)	(1.33)	(0.69)
Cubic	0.915	−1.210	**−1.680****
	(1.25)	(1.17)	(**0.71**)
Flexible Cubic	2.084	0.697	−0.208
	(1.76)	(1.46)	(0.79)
Quartic	1.586	0.087	−0.826
	(1.16)	(1.35)	(0.66)
Flex Quartic	1.584	0.090	−0.730
	(1.49)	(1.40)	(0.68)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.8: Impact of a black mayor on the property crime index per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	12.371	−6.791	−13.075
	(8.14)	(11.38)	(8.14)
Flexible Linear	10.894	−9.478	−8.942
	(9.16)	(12.26)	(6.60)
Quadratic	10.178	−9.894	−10.228
	(9.20)	(11.68)	(7.04)
Flexible Quad.	21.753	8.492	−1.182
	(16.28)	(11.71)	(6.41)
Cubic	13.848	−5.391	−6.648
	(11.08)	(9.28)	(6.18)
Flexible Cubic	30.167	−2.763	−7.051
	(25.19)	(14.10)	(7.41)
Quartic	17.641	0.808	−2.268
	(12.05)	(10.12)	(5.90)
Flex Quartic	20.501	−7.404	−3.224
	(19.66)	(9.70)	(5.22)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.9: Impact of a black mayor on the number of burglaries per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	3.204	0.065	−3.338
	(2.69)	(2.58)	(2.73)
Flexible Linear	3.106	0.184	−2.201
	(2.85)	(2.49)	(2.46)
Quadratic	2.991	−0.034	−2.655
	(2.84)	(2.50)	(2.60)
Flexible Quad.	2.739	3.048	−1.780
	(3.53)	(2.50)	(1.98)
Cubic	2.129	0.555	−2.945
	(2.97)	(2.23)	(2.50)
Flexible Cubic	3.691	1.850	**−4.441***
	(4.49)	(3.29)	(**2.41**)
Quartic	2.569	1.614	−1.058
	(3.25)	(2.48)	(2.10)
Flex Quartic	2.037	0.472	−1.394
	(3.98)	(2.62)	(2.10)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.10: Impact of a black mayor on the number of larcenies per 1,000 inhabitants - RD estimates

	(1)	**(2)**	**(3)**
Linear	3.219	−10.128	**−13.636***
	(4.86)	(10.16)	(**6.94**)
Flexible Linear	1.941	−12.739	**−9.643***
	(5.90)	(11.18)	(**5.64**)
Quadratic	1.326	−13.005	**−10.971***
	(6.02)	(10.58)	(**5.89**)
Flexible Quad.	13.556	2.056	−1.275
	(12.77)	(10.90)	(4.90)
Cubic	6.076	−9.424	−7.527
	(7.84)	(8.36)	(4.75)
Flexible Cubic	20.794	−7.804	−3.210
	(20.99)	(12.47)	(6.63)
Quartic	9.208	−4.137	−4.038
	(8.61)	(9.26)	(4.46)
Flex Quartic	12.841	−10.863	−4.360
	(15.52)	(8.32)	(3.84)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Table A.11: Impact of a black mayor on the number of motor vehicle thefts per 1,000 inhabitants - RD estimates

	(1)	(2)	(3)
Linear	**5.948*****	**3.272****	**3.899*****
	(**2.03**)	(**1.39**)	(**1.38**)
Flexible Linear	**5.847*****	**3.077****	**2.902****
	(**2.00**)	(**1.37**)	(**1.22**)
Quadratic	**5.860*****	**3.145****	**3.397*****
	(**1.99**)	(**1.37**)	(**1.21**)
Flexible Quad.	**5.458****	**3.388****	1.873
	(**2.31**)	(**1.53**)	(1.80)
Cubic	**5.643****	**3.479****	**3.823*****
	(**2.12**)	(**1.30**)	(**1.08**)
Flexible Cubic	**5.682***	**3.192***	0.600
	(**2.91**)	(**1.81**)	(2.42)
Quartic	**5.864****	**3.331****	**2.828****
	(**2.24**)	(**1.53**)	(**1.38**)
Flex Quartic	**5.624****	**2.987***	**2.530***
	(**2.50**)	(**1.62**)	(**1.41**)
N	127	124	124
Controls	N	Y	Y
Year f.e.	N	Y	Y
State f.e.	N	Y	N
City f.e.	N	N	Y

Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of a black mayor using different functional forms. Controls include city, mayoral characteristics, year and state or city fixed effects. Standard errors are clustered at city level.

Appendix B

Appendix to Chapter 3

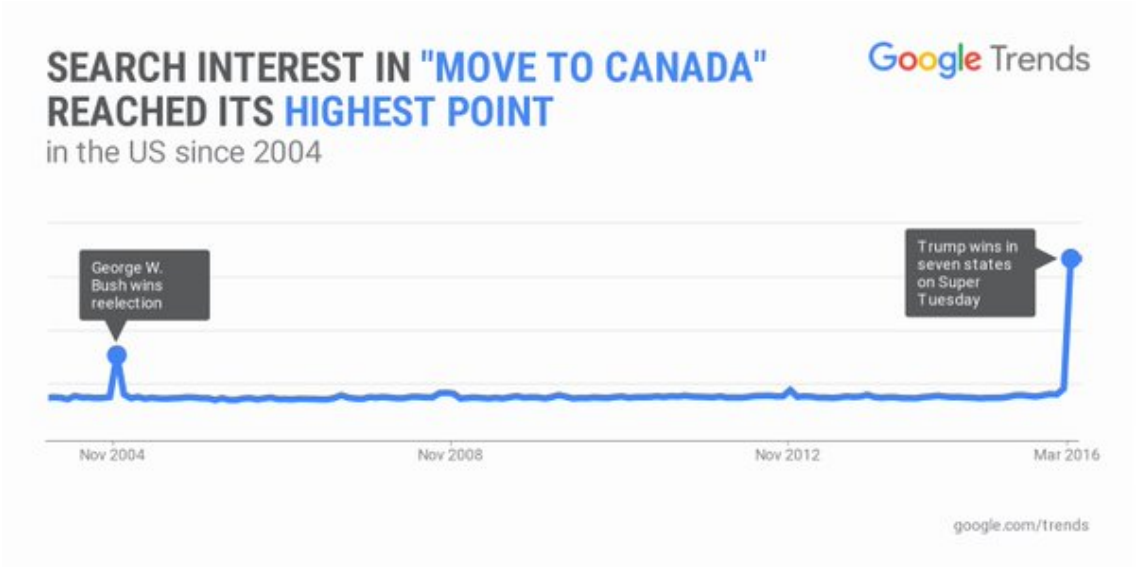


Figure B.1: Google Searches in USA: Moving to Canada - Super Tuesday
Source: Google Trends.

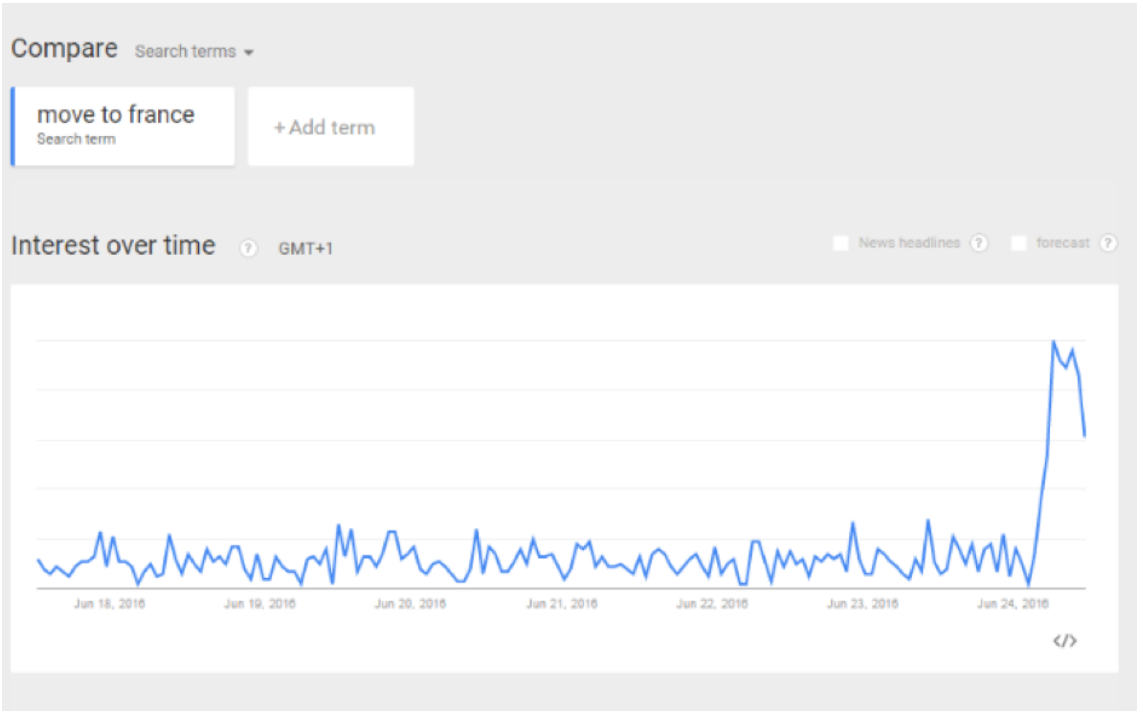


Figure B.2: Google Searches in the UK: Moving to France - Brexit
Source: Google Trends.

Figure B.3: Italian Regions - Election Data
Source: Author's elaborations.

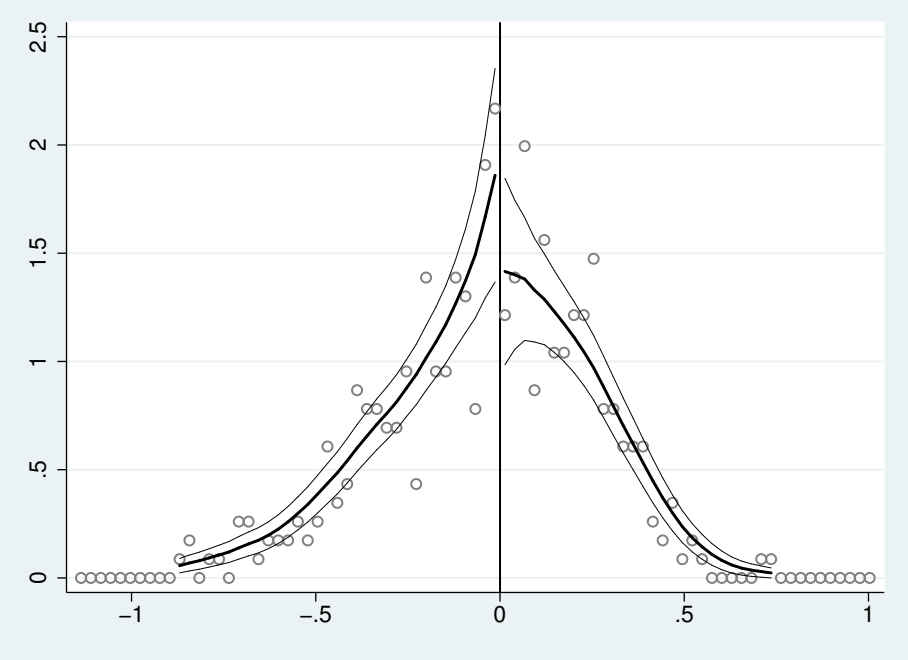
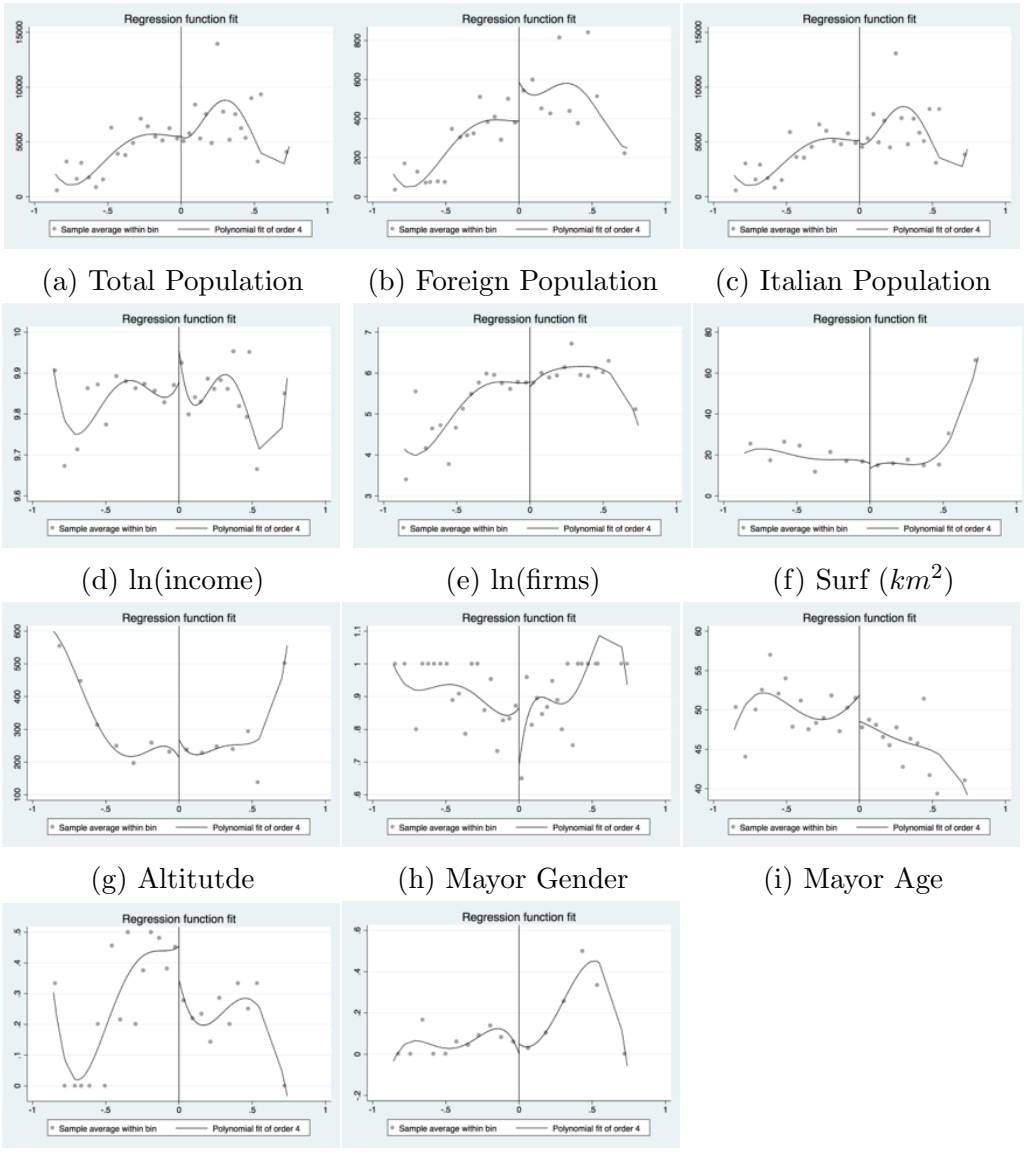


Figure B.4: Continuity of the running variable



(a) Total Population (b) Foreign Population (c) Italian Population

(d) ln(income) (e) ln(firms) (f) Surf (km^2)

(g) Altitutde (h) Mayor Gender (i) Mayor Age

(j) Mayor Education (k) Mayor Incumbency

Figure B.5: Baseline Covariates

Table B.1: Internal validity test - Discontinuity in the covariates

	$\boldsymbol{\beta}$ **(se)**	**N**	$\boldsymbol{h}$
Tot Pop.	−2664.4	89	0.07
	(2747.6)		
Foreign Pop.	210.91	100	0.082
	(239.81)		
Italian Pop.	−2878.1	85	0.069
	(2627.3)		
ln(Income pc in 2010€)	0.031	97	0.080
	(0.08)		
ln(Firms in 2012)	−0.510	84	0.068
	(0.53)		
Area (km^2)	8.596	110	0.092
	(9.08)		
Altitude	65.624	123	0.110
	(89.71)		
Mayor gender (male =1)	−0.149	99	0.076
	(0.23)		
Mayor age	−3.999	101	0.083
	(5.04))		
Mayor education	0.058	123	0.105
	(0.27)		
Mayor incumbent	0.228	103	0.085
	(0.17)		

Source: Author's calculations based on data from the ISTAT and the Historical Election Archive.
Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico *et al.* (2014). Standard errors are clustered at the municipal level.

Table B.2: Internal validity test - Discontinuity in the covariates

	$\boldsymbol{\beta}$ **(se)**	**N**	$\boldsymbol{h}$
Tot Pop.	−569.23	274	0.280
	(1384.2)		
Foreign Pop.	226.89	298	0.328
	(145.48)		
Italian Pop.	−891.97	272	0.276
	(1278.9)		
ln(Income pc in 2010€)	0.060	292	0.320
	(0.06)		
ln(Firms in 2012)	−0.284	267	0.272
	(0.31)		
Area (km^2)	−0.689	323	0.370
	(4.56)		
Altitude	37.202	352	0.442
	(50.25)		
Mayor gender (male =1)	−0.177	288	0.304
	(0.13)		
Mayor age	−3.853	305	0.336
	(2.86)		
Mayor education	−0.116	348	0.422
	(0.14)		
Mayor incumbent	0.040	307	0.340
	(0.07)		

Source: Author's calculations based on data from the ISTAT and the Historical Election Archive.
Note: Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Each entry reports the RD coefficients and std. errors relative to the election of an NL mayor using the method developed by Calonico *et al.* (2014). Standard errors are clustered at the municipal level.

Appendix C

Appendix to Chapter 4

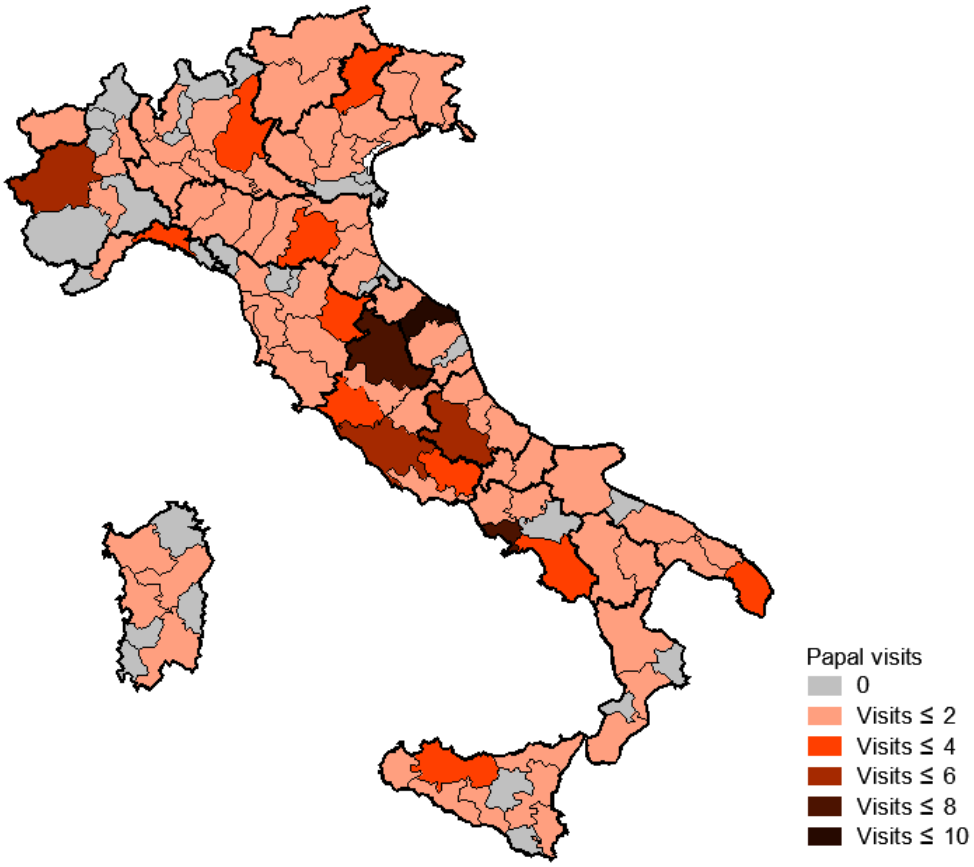


Figure C.1: Papal Visits - Italian Provinces
Source: Author's elaborations.

Figure C.2: Media Coverage - papal visits to Bari - February 1984

Figure C.3: Media Coverage - papal visits to Palermo - October 2010

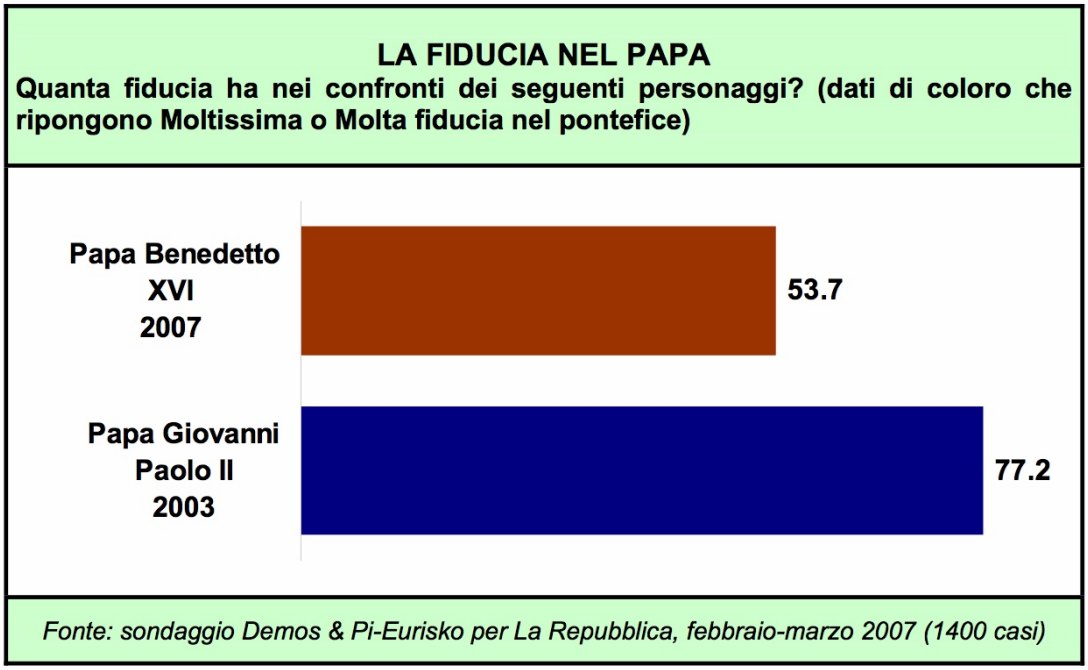


Figure C.4: Trust in Pope Benedict XVI vs Pope John Paul II
Source: Demos & Pi - Gfk Eurisko (2007) - Gli italiani e la religione

Dependent Variables - "Aspetti della Vita Quotidiana" Survey

- **Religiousness**
  - How often do you go to the Church or other place of worship?
    - At least once a week (1)
    - Less than once a week (0)
- **Volunteering**
  - Did you participate to volunteer associations' meetings in the last 12 months?
    - Yes (1)
    - No (0)
- **Political Party**
  - Did you participate to political party meetings in the last 12 months?
    - Yes (1)
    - No (0)
- **Political Debate**
  - Did you participate to political debates in the last 12 months?
    - Yes (1)
    - No (0)
- **Trade Union**
  - Did you participate to trade union's meetings in the last 12 months?
    - Yes (1)
    - No (0)

- **Cultural Activity**
  - Did you participate to cultural associations' meetings in the last 12 months?
    - Yes (1)
    - No (0)