ABSTRACT

Title of dissertation: Violent Democracies: Essays on Crime, Inequality and Preferences for Protection in Latin America

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My dissertation collects four papers investigating changes in political behavior in violent and unequal societies. These four independent, but theoretically interconnected papers, work around three main questions: how do citizens form preferences about security policies when stressed about risks of crime victimization? How does exposure to crime interact with income differences to explain citizens' preferences for police allocation and voting behavior? How do these concerns ultimately enter into the electoral arena via support for candidates campaigning on tough-on-crime policies? I integrate these questions across my four papers with a general theory considering both the micro-level dynamics behind preferences for security policies, and the supply of politicians framing the menu of security policies available to voters. My first chapter brings together fine-grained observational data and an endorsement experiment to understand the effect of crime victimization and partisanship on voting for law and order candidates for legislative elections in Brazil. My second chapter develops an insurance model to explain preferences for crime deterrence policies and uses a behavioral experiment to assess the

model's empirical implications. The third chapter uses computational text analysis on a corpus with more than one hundred thousand Congressional speeches to discuss issue ownership and how politicians use their professional history in law enforcement agencies as informational heuristics about their security preferences. The fourth chapter uses novel network models and a conjoint design to uncover the effects of exposure to criminal violence on citizens' preferences in Mexico using a conjoint design. Chapter one shows that a local exogenous crime shocks right before the election increases the vote share of law-and-order candidates in cities more afflicted by violence. This effect is only present in municipalities with more robust support for more conservative presidential candidates and driven mainly by wealthier voters. Experimental results converge with macro-level results. Chapter two's main finding shows with experimental data that income and fear of crime follow a positive joint distribution, making wealthier respondents with high fear of crime more supportive of greater levels of police allocation on high-crime and low-income geographical areas. Chapter three shows that occupation on law enforcement explains which politicians "own" the issue of security in the Brazilian Congress. To conclude, using a conjoint design, chapter four finds that higher exposure to crime using network information increases support for punitive policies and candidates previously employed in the local police forces. Chapter four's findings combine new models to measure crime exposure, using information from respondents' friendship networks and a conjoint candidate-choice design. My dissertation contributes empirically and theoretically to deepen our understanding of preferences for protection in violent and unequal democracies. My most general result provides observational and experimental evidence for a positive joint distribution between income and risk. This dynamic explain how

wealthy voters in Latin America form the main electoral and social support behind the emergence of populist, iron-fist politicians in the continent.

Violent Democracies: Essays on Crime, Inequality and Preferences for Protection in Latin America

by

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Dedication

To Rafaela Rodrigues

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It takes a village to write a Ph.D. Dissertation. This adaption from the famous African proverb perfectly represents the amount of gratitude I wish to express here. The past few years have been a long journey. Moving across countries, learning to socialize and build a personal and professional network in a new environment, and learning how to write and express me in another language are all things that profoundly as an international student marked my Ph.D. journey. This journey was only doable, and most of the time fun, because of my village: friends, mentors, and family I have by my side. This acknowledgment expresses my gratitude to all of them.

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Like all the other degrees I earned, this dissertation is dedicated to my wife, Rafaela Rodrigues. Rafaela has been my partner for more than a decade. All my dreams and adventures were only possible because we are together. From our hometown Belém to everything we became, I owe to Rafaela. This is for you. And a little bit for Brisa as well.

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Epigraph

"Não há considerações gerais a fazer
Tá tudo aí
Tá tudo aí
Para quem quiser ver"
Tributo ao Regional - Baiano e os Novos Caetanos

Introduction

As crime and concerns about personal security expanded during the last decades in Latin American (Muggah and Tobón, 2018; Pérez, 2015; Yashar, 2018), the political landscape in the continent likewise went through profound transformations. Among these major changes, the emergence of democratic leaders openly supporting the adoption of war-type policies to deal with crime is a worrisome new characteristic of several countries in Latin America (Bueno, 2012; Flores-Macías and Zarkin, 2019; Bonner, 2019; Weintraub and Blair, 2020; Holland, 2013). The rise of crime and its likely political consequences have become a fundamental threat to democratic politics and rule-of-law in Latin America, and therefore deserve detailed attention from the political science scholarship.

Several previous studies have appreciated such transformations. An emerging literature in political science has researched about the effects of victimization, fear of crime, and concerns about personal security on the political attitudes of Latin American citizens (Krause, 2014; Pérez, 2015; Merolla et al., 2013; Malone, 2010; Trelles and Carreras, 2012; Visconti, 2019; Garcia-Ponce et al., 2019; Bateson, 2012; Singer et al., 2020). These studies have some unifying characteristics. First, most of the focus resides on the ways that living on violent democracies affect citizens' attitudes. Second, most of these pieces focus on the direct effect of crime victimization on preferences for security policies, but without

considering a more general micro-level model to describe how these preferences emerge and interact with other micro-level incentives. Finally, this scholarship has a significant focus on the demand side (voter), rather than on how parties and candidates adapt their strategies to win politically in the context of high levels of violence. Due to the vast focus on attitudes and policy preferences, we still know relatively little about how criminal violence shapes the electoral arena, voters' behavior, and party strategies in Latin America.

This dissertation collects four papers investigating changes in political behavior in violent and unequal societies. These four independent, but theoretically interconnected papers, work around three main questions: how citizens form preferences about security policies when stressed about risks of crime victimization? How exposure to crime interacts with income differences to explain citizens' preferences for police allocation and voting behavior? How do these concerns ultimately enter into the electoral arena via support for candidates campaigning on tough-on-crime policies? I integrate these questions across my four papers with a general theory considering both the micro-level dynamics behind preferences for security policies, and the supply of politicians framing the menu of security policies available to voters. On the *demand* side, I argue that security appeals work as a type of insurance concern, in which risk, income, and their joint distribution are key to understand the preferences for security policies and the emergence of punitive attitudes. From these micro-level incentives, I argue that security preferences enter into the electoral arena as a wedge issue, in which voters have sharply divisive preferences about the best political strategies to reduce crime, as these preferences overlap with existing socioeconomic and political cleavages among voters. On the *supply* side, I explore how heuristics at the candidate level, particularly their professional experience working

on public security, become more valuable and are heavily used by candidates as voters grow more concerned about violence.

My work departs from the previous literature following three primary efforts. First, this dissertation focuses primarily on political behavior, particularly voting decisions, using observational and experimental data. Second, it pays close attention to the *supply side* of politics. Notably, some of the dissertation's chapters examine how candidates' professional background and party reputation affect the credibility of security policy proposals and their support by voters. Third, the papers develop novel methodological strategies focusing on establishing robust causal effects between concerns about crime, income and citizens' behavior, avoiding therefore a over-reliance on multivariate analysis with survey data. In addition, the fours papers make an effort to think carefully about measurement errors and use research designs with high validity to understand how voters make decisions and form their preferences when concerned about crime.

The theoretical issues discussed in the dissertation are investigated using a variety of methodological tools and data sources. Throughout the four chapters, I use several distinct experimental designs, well-identified statistical models with observational data from Brazil on crime and voting data, computational text analysis on hundred of thousands of congressional speeches, and novel network models to build a contextual measure of voters' exposure to criminal violence. Three of my chapters focus on Brazil, a country with highest rates of violence in the world (Denyer Willis, 2015; Misse, 2011; Arias, 2006; Arias and Goldstein, 2010; Arias and Barnes, 2017), and my last chapter works on preferences for law and order policies and candidates in Mexico.

The first chapter, *Voting for Violence: Crime and the Election of Law-and-order Politicians in*

Brazil, discusses how criminal violence affects voting behavior and citizens' demand for harsh-on-crime candidates using electoral and experimental data in Brazil. The paper is framed in discussion with the literature on issue ownership. These studies often assume that concerns about security affect the electoral arena as a valence issue (Kaplan et al., 2006; Petrocik, 1996; Beckett, 1999; Beckett and Western, 2001; Cohen and Smith, 2016; Holland, 2013). Under this perspective, behavioral effects from violence are argued to affect elections and party strategies merely as competence shock in which voters more afflicted by violence increase their support to candidates who can credibly signal about their competence to reduce crime.

I propose an alternative explanation in which security works as a wedge issue, rather than valence. In my model, as criminal violence increases, voters develop sharply divisive preferences about security policies and the most appropriate policy response to reduce crime. Such dynamic is argued to follow an insurance model, which I introduce in this paper, and develop further in Chapter Two. I use the model to derive hypotheses to predict when voters show greater support for harsh-on-crime policies. The paper also argues that as voters become more supportive of punitive policies, these changes on the demand side increase the importance attributed to occupational heuristics. Rather than conservative parties, the candidates with professional experience in law-and-order agencies, who can credibly signal about their *mano-dura* preferences, will receive greater electoral support.

The chapter shows robust evidence for the theoretical model using the election of law-and-order candidates in Brazil. The empirical sections combine fine-grained observational data with well-identified models, and a novel online factorial experiment. Results

using crime and electoral data indicate that House candidates from enforcement agencies received greater support in municipalities where a random crime shock occurred right before the election. This effect is mostly driven by voters living in wealthier neighborhoods that increase electoral support for law enforcement candidates as crime shocks occur in their municipalities. The factorial experiment provides evidence that voters do pay more attention to public security messages from law and order candidates, that wealthier and more conservative voters are on average more punitive, and that punitive preferences also increase support for messages from candidates with a military background. Therefore, providing micro-level evidence in a similar direction to the observational results.

In the second chapter, *Preferences for Police Allocation on Violent Democracies: An Insurance Model*, I fully develop my theory of security preferences as an insurance model endogenizing risk and income incentives at the individual level. The novel theory integrates these two distinct micro-level incentives as the main determinants of how citizens form their preferences for investment in personal security. I use a novel behavioral experiment to provide empirical evidence for the model's predictions. All the hypotheses for the experiment were pre-registered beforehand.

The paper argues that the theoretical challenges of explaining individual-level decisions to support more protection from the State bear striking similarities to the economic models describing welfare preferences. Economic models of welfare provisions assume individuals shape their policy choices by considering the social policies' redistributive and insurance effects. Two key factors are discussed in these models i) the net impact between paying taxes and receiving social policies provision by the State (Meltzer and Richard, 1981; Romer, 1975; Rueda and Stegmueller, 2015; Lupu and Pontusson, 2011),

and ii) how much protection one needs from the State to counteract uncertainty of an exogenous income loss due to fluctuation of the labor market (Moene and Wallerstein, 2001, 2003; Iversen and Soskice, 2001; Rehm, 2016). Welfare policies, therefore, would provide citizens with both pure redistribution and coverage against risk.

My insurance theory extends this logic to explain preferences for investment in protection when concerns about crime are factored in on citizens' strategic decision-making. Two micro-level incentives are discussed at length: i) income effect – how much one pays and receives from investing in public security; and ii) risk – measured as personal concerns about the risk of being a crime victim. Although I am dealing with a political economy model, I do not formalize the microeconomic incentives of the theory. A future expectation is to convert this theory to a fully developed microeconomic model, as I plan to convert this dissertation as a book.

From the model, I derive three main predictions: i) wealthier individuals are more willing to invest on public security; ii) the higher an individual is at risk of being a crime victim, the higher their willingness to pay for police protection; and iii) the joint distribution of risk and income will be positive. Therefore, as crime increases, the income effects will be more pronounced. The last prediction is the more interesting, theoretically. This prediction occurs because, as I discuss in the paper, although wealthier voters are less exposed to crime, in countries where police forces are historically committed to the illegal use of violence against social and racial minorities the chances of paying personal costs from more police and its inefficiencies is negligible. Therefore, wealthier individuals have higher incentives to support more police – and more harsh-on-crime strategies - as a solution to deal with crime.

To examine the empirical implication of my model, I developed a novel behavioral experiment implemented with an online sample of Brazilian voters. The design combines a framing experiment with a realistic exercise to measure individual-level preferences for police allocation. The behavioral exercise shows respondents a map colored with three possible options: distribution of crime, property price (income), and the city's population. One-third of the sample is assigned to each map. I then ask respondents to choose the location of six police stations on the map. This number of stations is fixed, doing the work of imposing a budget constraint on respondents' decisions. Using the population map as a control, I compare the number of stations allocated in each map area, the average treatment effect of the property price and crime map, and its interaction with respondents' income, fear of crime, and victimization.

The results provide support for my theoretical model. Contrary to my expectation, direct victimization has a null effect on respondents' decision to allocate more police stations in high-crime areas. The effects of fear of crime are also modest and mostly null. This finding conflicts with previous studies, which show a direct connection between victimization and attitudinal changes on security policy preferences (Visconti, 2019; Garcia-Ponce et al., 2019; Singer et al., 2020; Bateson, 2012). Nevertheless, the pre-registered income effects are detected. In my experiment, wealthier voters are more sensitive to investing in public security, allocating more police stations to high crime and low-income areas. More importantly, results confirm the expectation about the positive joint distribution of risk and income: the higher sensibility among the wealthy to allocate more police in high crime areas is mostly driven by respondents who reported high levels of fear of crime.

The first two chapters provide robust observational and experimental evidence for the insurance model. Overall, I present robust evidence on how criminal violence, personal concerns about crime and income differences interact turning citizens more supportive of punitive candidates (Chapter One) and more likely to allocate police stations on high-crime areas (Chapter Two). The third chapter of the dissertation turns the discussion to the *supply* side of my puzzle. It pays closer attention to how the candidates own the issue of security in Brazil.

Chapter Three, *Legislating for Violence: Issue Ownership and Occupational Heuristics in the Brazilian Congress*, discusses how heuristics at the candidate level work as a crucial information that politicians rely upon to send signals to voters about their policy priorities and competence. As in Chapter One, most of the framing in Chapter Three is presented as an extension of issue ownership theory. While most of the previous literature has explained when parties will focus on certain issues using prediction from issue ownership (Petrocik, 1996; Kaplan et al., 2006; Adams et al., 2005; Budge and Farlie, 1983; Egan, 2013; Pardos-Prado and Sagarzazu, 2016), I argue and show empirically that this expectation does not travel well to the democracies with high-fragmented party systems. My results show that a candidate's professional experience is the most critical mechanism through which politicians build issue ownership and reputation in democracies with fragmented party systems.

Evidence of my theory is provided through computational text analysis on a corpus with more than one hundred thousand Congressional speeches of the Brazilian lower-chamber representatives from 2002 to 2019. Outputs from the text analysis show the different ways that Federal Deputies talk about security in Congress. Then, using multilevel

modeling, I show evidence that House Members' prior professional history explains who talks about security in the House and different framing effects of how law-and-order representatives discuss the issue of public security in their speeches. These results provide strong validation for the methodological and theoretical choices in Chapter One. In the first chapter, I use observational and experimental models to tap on the importance of occupation heuristics rather than candidates' policy preferences. This choice has proved to be theoretically sound considering the results discussed in Chapter Three.

The fourth chapter, *Voting for Law and Order in Mexico: A Network Approach to Crime Victimization*, which is based on a co-authored ongoing by with Sandra Ley (Centro de Investigación y Docencia Económicas - México) and Francisco Cantú (University of Houston), expands this dissertation in several directions. The paper mainly expands my investigation about the logic of voters' strategic choices on security policies to another case of violent democracy in Latin America, the Mexican case. In addition, the paper provides novel methodological strategies to measure exposure to violence at the individual level.

The chapter discusses that citizens' support of law and order policies depends on two main factors. On one side, the underlying characteristics among the electorate can shape the demand for such policies.On the other side, the available supply of policy options, which may be more or less credible, depending on who is proposing the policies also affects the citizens' decision. To understand the demand side, the paper focuses on victimization experiences, distinguishing among direct victims of criminal violence and contextual exposure to violence, which we measure using novel network models. On the supply side, the chapter focuses on two elements that affect the credibility of iron-fist policy options: candidates' professional backgrounds and their party reputation. This

approximation allows the work to delve into the role of victimization experiences on voters' electoral and policy preferences and explore the process through which voters assess candidate profiles amid security concerns, which has been largely understudied in the extant literature.

The fourth chapter proposes a research design specifically developed to deal with several shortcomings in the existing literature about preferences for iron-fist policies. As mentioned before, so far, most of this literature on security policy preferences —both experimental and observational— rely on abstract or purely attitudinal measures of support for *mano dura* (Visconti, 2019; Holland, 2013; Cohen and Smith, 2016; Gerber and Jackson, 2016; Singer et al., 2020; Krause, 2014; Garcia-Ponce et al., 2019). Based on these abstract measures these studies evaluate how victimization affects support for harsh-on-crime policies. The critical issue related to risks of social desirability bias on surveys responses, which is particularly large when using solely abstract measures.

I mitigate this concern by measuring behavioral decisions using a creative research design to approximate voters' behavior and preferences for real-world policy options. The paper uses a candidate-choice conjoint experiment specifically designed to understand preferences for security policies and the relevance of heuristics at the candidate's level. Our conjoint experiment taps on three main dynamics: (a) citizens' preferences for real-world security policies; (b) explain advantages at the candidates' and party level, and (c) examine interactive effect across these features. In our conjoint task, respondents are presented with two hypothetical candidates for a municipal election in Mexico. These profiles vary across four attributes: policy proposals for public security, gender, work experience, and political party. Respondents are asked to indicate their preferred candi-

date. The hypotheses for the experiment were pre-registered [1], and the experiment was embedded on a representative online sample of Mexican voters recruited through Lapop-Netquest. [2]

In addition, this chapter departs from the previous literature on crime and politics proposing an innovative measure to understand the behavioral effects of exposure to violence. Recent studies have called the attention that victimization is neither a one-time act nor exclusively an individual experience, but more likely an interactive process among victims, and their networks (Moncada, 2020). I take this argument seriously and propose a new measure to capture exposure to violence using survey and network data. We make use of recent advances on multilevel modeling strategies from social network analysis and use indirect survey questions to build a contextual measure of exposure to crime victimization (Zheng et al., 2006a; Calvo and Murillo, 2019, 2013; McCarty et al., 2001). We use this new estimate to understand the effects of victimization on policy preferences using our conjoint experiment

The results indicate two critical findings. Using the contextual measure of victimization, we find that respondents more exposed to criminal violence on their friendship network show a greater taste for iron-fist policies, such as the death penalty, and higher support for candidates employed in the local police forces. We do not find similar effects when considering solely the direct question on personal victimization, which suggests the importance of considering contextual experiences of violence. However, different from the previous chapters focusing on Brazil, we do not find partisan effects on voters' pref-

[1] Pre-registration available at https://osf.io/r7vah/

[2] The experiment received the approval of the University of Maryland Institutional Board Review 1552091-3.

erences for harsh-on-crime security policies. Both leftists and more conservative voters in Mexico are equally likely to support iron-fist policies or other candidates' profiles.

My dissertation contributes empirically and theoretically to deepen our understanding of preferences for protection in violent democracies. In theoretical aspects, I contribute with a novel micro-level model explaining how citizens develop preferences for investment in public security. In particular, my results provide observational and experimental evidence for a positive joint distribution between income and risk and depicts how wealthy voters in Latin America form the social support behind the emergence of populist, iron-fist politicians in the continent. Methodologically, the dissertation shows the importance of moving from studies focusing on attitudes to greater attention to behavior. Across the four chapters, I overcome this concern by designing experiments focusing on behavior, imposing trade-offs on respondents' choices, and finding ways to reduce social desirability bias. To conclude, using network models, this dissertation also contributes with a new measurement strategy for exposure to violence, allowing future studies to theorize about victimization as a repeated and interactive process and not as a one-shot event.

1 Voting for Violence: Crime and the Election of Law-and-order Politicians in Brazil

Abstract

This paper discusses how criminal violence affects voting behavior and citizens' demand for security policies in unequal and violent societies. I propose a theory considering both the micro-level dynamics behind preferences for security policies and the supply of politicians framing the menu of security policies available to voters. I argue that, rather than priming on valence considerations on the voter side, security policies work as a wedge issue in which voters' security preferences overlap with prior partisan identities and income status, as the salience of violence increases. Using the Brazilian case, one of the most violent countries in the world, I apply a combination of fine-grained observational data on crime and voting for legislative candidates, and a novel factorial experiment to support my theory. Observational results show that crime shocks increase law-and-order candidates' vote share only in more conservative municipalities, and, within each city, particularly in wealthier neighborhoods. Similar results are replicated using a factorial experiment on an online sample of Brazilian voters.

1.1 Introduction

Crime and violence have spiked in Latin America's democracies, not only in urban centers but all over the continent. Survey data indicates that, on average, 20 percent of the population in every Latin American country has been a victim of crime during the past 12 months, and personal security has peaked among citizens' concerns (Muggah and Tobón, 2018; Pérez, 2015). As crime has risen on the continent, politicians advancing more punitive policies based on populist, anti-liberal platforms are becoming more numerous, and are increasingly enacting war-type policies with evident human and social costs (Bueno, 2012; Flores-Macías and Zarkin, 2019; Mummolo, 2018; Bonner, 2019). In the realm of both personal safety and threats to individual human rights, the rise of crime and its likely political consequences have become a fundamental threat to democratic politics and deserve detailed attention from political science scholarship.

Much of the previous literature relies on theories of party competence and issue ownership to argue that conservative parties have a comparative advantage when campaigning on security policies in an environment where violence is on a rise (Kaplan et al., 2006; Petrocik, 1996; Beckett, 1999; Beckett and Western, 2001; Cohen and Smith, 2016; Holland, 2013). For example, the seminal piece by Holland (2013) argues that "conservative parties have a comparative advantage in touting their security credentials. Crime can be viewed as a valence issue in which parties advertise their unique competence to achieve shared security," (p. 52). This, and related arguments, imply that conservative parties own the issue of security, and are likely to use their valence advantage to win elections in

violent democracies. Arguments viewing security as a valence issue assume voters have homogeneous responses to security appeals. Under this perspective, behavioral effects from exposure to crime victimization are argued to enter in the electoral arena merely as competence shock in which voters more afflicted by violence increase their support to candidates who can credibly signal about their competence to reduce crime.

This paper outlines an alternative explanation to how criminal violence affects voting behavior and citizens' demand for security policies. I propose a theory considering both the micro-level dynamics behind preferences for security policies, and the supply of politicians framing the menu of security policies available to voters. In this model, I argue that security appeals enter into the electoral arena as a wedge issue, in which voters have sharply divisive preferences about the best political strategies to reduce crime, and security preferences overlap with existing socioeconomic and political cleavages among voters.

Voters more afflicted by violence increase their subjective concerns about personal security, and as recent scholarship has shown, victimization in Latin America make voters develop a greater taste for punitive penal policies (Visconti, 2019; Garcia-Ponce et al., 2019). I posit that this effect follows a simple insurance dynamic in which voters more exposed to risks of victimization are willing to increase the amount of punishment delivered by the state apparatus as a form of protection. However, absent in these previous studies is considerations about the externalities and human costs of these harsh-on-crime policies. Although benefits of these policies are arguably spread among the entire society, the *costs* are mainly concentrated on underprivileged sectors and social and racial minorities (Magaloni et al., 2020; Mummolo, 2018; Denyer Willis, 2015; Gelman and Hill, 2007).

I argue that this difference makes wealthier, usually politically conservative groups, less risk-averse and more willing to support candidates campaigning on punishment. Consequently, the effects of crime shocks become a wedge issue dividing voters on the best strategies to reduce crime, and overlapping with partisan identities and economic status.

These changes on the demand side, with some voters growing a greater taste for more punitive policies, affect parties and candidates strategies. I argue that as violence becomes more salient, candidates with professional experience in law-and-order agencies, who can credibly signal about their *mano dura* preferences, will receive greater electoral support. Former police officers, members of the army, and other law-and-order candidates strategically use their personal history to convince voters concerned with crime control about their capacity and willingness to prioritize security *at all* costs while in office. The importance of occupation as an heuristic for voters is a consequence of party labels' fluidity in newly democratized countries (Lupu, 2017; Samuels and Zucco, 2018; Baker et al., 2016a), but also a historical consequence of the strong historical pattern of abuses and violence committed by security forces in Brazil (Bueno, 2012; Caldeira, 2002; Denyer Willis, 2015; Cano, 1997; Misse, 2011).

I show empirical evidence for my theory using data from the election of law-and-order candidates in Brazil. In 2018, the populist leader Jair Bolsonaro, a former captain of the Brazilian Army, won in a landslide presidential election, and together with Bolsonaro, the public security caucus became the largest in the Congress with several candidates from police forces, the military, or other enforcement agencies elected to the House in recent years . In a country where 57,358 people were violently murdered just in 2019 (Cerqueira et al., 2019), making Brazil one of the most violent democracies in the world, law-and-

order candidates ran and won on promises of being tough on crime. This dynamic makes Brazil an ideal case to understand the effects of criminal violence on voting behavior.

The empirical sections of this paper use a unique combination of fine-grained observational data with well-identified statistical models and an online factorial experiment. Each section builds an important piece of my theoretical work [1]. Observational data indicates that House candidates from enforcement agencies received greater support in municipalities where a random crime shock occurred right before the election, and is mostly driven by voters from wealthier neighborhoods in Brazil. And the factorial experiment provides evidence that voters do pay more attention to public security messages from law and order candidates, that wealthier and more conservative voters are on average more punitive, and that punitive preferences also increase support for messages from candidates with a military background.

The rest of the paper is structured as follows: the next section introduces the theory and positions the paper within the broader literature on the political effects of violence in electoral democracies. The following section describes the Brazilian case and provides evidence about the growth of law and order politics. I then present the empirical sections of the paper. I conclude with a discussion about the main findings and contributions of the manuscript.

[1] In the fourth chapter of the dissertation, I use computational text analysis on a large corpus of congressional speeches to show evidence of the crucial assumption of this paper: law-and-order candidates dedicate greater attention in their speeches, more than other conservative parties, to public security and are more likely to be associated with more punitive issues

1.2 Violent Democracies, Attitudes and Issue Ownership Theory.

Research on the intersection between criminal violence and political behavior has received increased attention from political scientists in the last few years. Measuring citizens' attitudes, recent comparative studies have found that victims of violence are less trusting of democratic institutions (Krause, 2014; Pérez, 2015; Merolla et al., 2013) and criminal justice agencies (Malone, 2010), and are less supportive of democratic attitudes (Fernandez and Kuenzi, 2010; Carreras, 2013; Bateson, 2012). Considering political participation, the effects of criminal victimization and exposure to violence are more mixed; evidence suggests that while crime is associated with higher levels of non-electoral forms of participation, victimization is also associated with diminishing electoral turnout (Ley, 2017b; Bateson, 2012; Trelles and Carreras, 2012).

The effects of violence on mass policy preferences, particularly with regard to penal policy, have also been a topic of increased attention. Using cross-national survey data in Latin America and the Caribbean, some studies suggest that victimization and fear of crime is strongly associated with approval of repressive institutions and vigilantism (Bateson, 2012; Singer et al., 2020). Visconti (2019) finds that subjects who were victims of crime are more likely than non-victims to support strong-arm policies to reduce crime in Brazil, while experimental studies also indicate that exposure to news about violence and victimization elicits similar effects on preferences for punitive crime control policies (Garcia-Ponce et al., 2019; Krause, 2014). These studies have substantially shaped our

knowledge about political behavior and citizens' attitudes in violent democracies. Nevertheless, our understanding of how these political attitudes shape the electoral arena, candidates' competitiveness, and party strategies amid high-levels of violence is still limited.

The majority of the scholarship discussing the effects of crime on voting behavior and party dynamics often relies on the assumptions of issue ownership and party competence to explain who wins and who loses when crime increases in democratic societies (Holland, 2013; Beckett, 1999; Beckett and Western, 2001; Kaplan et al., 2006; Petrocik, 1996; Berens and Dallendörfer, 2019; Calvo and Murillo, 2019). The issue ownership argument usually runs on two mechanisms: first, voters afflicted by violence are more likely to vote for candidates they perceive as more credible and capable of reducing crime, a purely non-policy effect. Second, conservative parties "own" the issue of security (Kaplan et al., 2006; Petrocik, 1996). Therefore, when crime becomes a salient topic, conservative candidates have a valence advantage commonly perceived by voters as more competent and credible to fight against crime.

In the following paragraphs, I propose an alternative theory in which security policies work as a wedge issue and expand on how these preferences affect voting behavior and partisan strategies.

1.3 Theory: Security as a Wedge Issue

Lower crime rates are a desirable goal for every society. However, the way one achieves this goal is not a matter of competence, but rather involves some crucial trade-offs on

voters' minds. Conservative voters, usually coming from the upper echelon of society, see harsh-on-crime policies as an effective strategy to reduce crime, while liberal voters point to redistribution as a path to be followed. These differences are not new (Beckett, 1999; Beckett and Western, 2001), but this distinction is crucial to understand how voting in violent democracies is affected by crime.

Taking this distinction into consideration, I argue that as concerns about violence and crime in a particular society increase, security appeals enter the electoral arena as a wedge issue in which voters react differently to policy strategies to reduce crime. Thus, policy preferences by voters will play the strongest role in how crime shocks impact the electoral arena, rather than valence concerns that bluntly favor a given party or candidate.

The wedge dimension of security concerns is a consequence of micro-level dynamics behind the support for punitive policies. Recent scholarship has pointed out to attitudinal effects emerging from crime victimization resulting in increased support for punitive penal policies (Visconti, 2019; Garcia-Ponce et al., 2019). In this argument, as victimization increases, voters become more punitive and likely to support the adoption of harsh-on-crime policies. I consider this policy effect as an insurance decision. As the risk of being a victim of crime increases, voters make a decision to invest more on protection, allowing the security apparatus to adopt more punitive security policies.

However, even assuming that these punitive policies are indeed effective reducing crime and all the society equally enjoys their benefits, which recent research has questioned (Weintraub and Blair, 2020), the costs of these policies are not equally spread across socioeconomic groups and ethnic and racial minorities. For example, iron-fist policies usually come associated with the adoption of large-scale crackdowns against crimi-

nals, often involving strong military deployment. Research in developing countries, and some developed countries like the U.S., has shown that police militarization has deep human costs for social and racial minorities (Mummolo, 2018; Flores-Macías and Zarkin, 2019; Lessing, 2017; Durán-Martínez, 2015). In Latin America specifically, security forces have used legal instruments to justify and hide the indiscriminate use of violence (Denyer Willis, 2015; Misse, 2011), taking advantage of weak vertical and horizontal mechanisms of oversight from other institutions (Brinks, 2007; Ahnen, 2007).

This unequal distribution of the risks and costs associated with the adoption of punitive policies suggests that the formation of punitive preferences emerge as an insurance dynamic. As criminal violence and personal risk increases, the salience of security appeals goes up; because the chances of being caught on a arbitrary police action are lower for rich voters, and the benefits of harsh-on-crime policies are equal to the entire society, better-off voters have more incentives to support candidates promising these policies. In the language of an insurance dynamic, when afflicted by violence, rich voters become less risk-averse on their security decision, and become more supportive of punitive candidates.

This argument converges with findings of victimization making voters more punitive (Visconti, 2019; Garcia-Ponce et al., 2019). However, when considering also the costs and risks of adopting punitive policies, my argument adds a direct income effect on how voters update their preferences when crime becomes a salient issue. In this format, my theory connects the effects of victimization with existing work on the established association between conservatism and more punitive views about the society (Cohen and Smith, 2016; Gerber and Jackson, 2016). Due to the intersection between income differences and

conservatism in unequal societies like Brazil, punitivism as policy dimension will overlap with socioeconomic and partisan dynamics, substantiating the idea of security concerns as a wedge policy, rather than a valence, non-policy shock in the electoral market.

The wedge dimension of security preferences adds dangerous incentives to law enforcement officials in Brazil. As crime increases, conservative and wealthier voters are more receptive to punitive appeals from law-and-order officials. And, as a consequence to be more competitive at the polls, likely candidates use more punitive practices while working in security forces in order to build around them a personal reputation. This electoral dimension potentially explains the persistence of punitive actions and cases of state-sponsored violence among security forces in Brazil; delivering punishment in the present increases the credibility of specific candidates, and is commonly rewarded with votes from conservative and wealthier classes.

A possible alternative argument to my theory should be considered. Canonical economic models relate a growth in crime with high levels of inequality (Becker, 1968). As such, voters afflicted by violence may choose between two different strategies to reduce crime: invest more on redistribution or adhere to more punitive policies promising a reduction on crime in the short-run. Rueda and Stegmueller (2015) has shown the former scenario is prevalent in Europe, where wealthier voters are on average more redistributive where inequality is high, suggesting fear of crime works as the main mechanism turning the affluent more redistributive.

This is a unlikely path in Latin America. While in Europe, welfare schemes controlled or regulated by the state work as redistributive and insurance tools (Moene and Wallerstein, 2001, 2003), in Latin America, social expenditures historically have done little to aid

the poor (Díaz-Cayeros and Magaloni, 2009; Haggard and Kaufman, 2020). As this "truncation" of the welfare states has been used to explained poor's diminishing expectations about social spending and publicly funded redistribution (Holland, 2018b), I argue these institutional effects on behavior also affect the strategies of the wealthy. In a context of ineffective redistribution, investments in the state are less attractive. Therefore, promises of punishment and tough-on-crime crackdowns become the main policy strategy to fight against crime.

1.3.1 Occupational Heuristics: Voting for Law and Order in Fragmented Democracies

In democracies more afflicted by violence, one should expect that the number of candidates campaigning on security increases. However, not all candidates have the same set of endowments (Calvo and Murillo, 2019) to convince voters about their best predicates for the office. Issue ownership theory solves this puzzle by arguing that some parties are perceived as more competent in some particular policy areas, and therefore, as this issue increases in salience, these parties win elections at higher rates (Petrocik, 1996; Kaplan et al., 2006). For the issue of crime, this theory has been used to argue that conservative parties "own" the issue of security and would therefore win elections at higher rates when crime grows (Holland, 2013; Beckett, 1999; Beckett and Western, 2001).

While this argument might reflect dynamics in long-standing democracies, in newly-democratized countries, where party labels are often uninformative, more fluid, and brand dilution frequently occurs (Lupu, 2017; Samuels and Zucco, 2018; Baker et al.,

2016a), issue ownership theory requires some scope conditions. And particularly because countries with a more recent party system often intersect with societies where crime is more widespread, a detailed discussion about party and candidates' strategies makes is yet more critical when considering how these actors frame issues related to crime.

I expect that in the absence of strong party labels, heuristics at the candidate level will be more relevant than party labels, as suggested by the literature on source cues (Botero et al., 2015; Lupia, 2002; McDermott, 2005). When parties are less informative, the candidates' professional experience serves as the heuristic voters rely upon to infer the candidates' credibility and competence. For voters concerned about crime, a candidate's previous professional history in law enforcement agencies supplies the information needed, rather than one's party affiliation. For example, a police officer might argue that having years of experience patrolling the streets, interacting with criminals, or possessing an extensive network of contacts on criminal justice agencies makes one a more credible candidate to fight against crime.

This distinction about how criminal violence affects the supply of politicians and the weight of particular heuristics on voters' mind is far from trivial. In most developing countries, candidates emerging from the police and the military are historically committed with punitive practices, and usually campaign on, and once in office defend the adoption of law-and-order policies (Bueno, 2012; Cano, 1997; Denyer Willis, 2015; Brinks, 2007; Caldeira, 2002). Therefore, different than a simple non-policy issue advantage bluntly attributed to party labels, the candidates with criminal justice system experience that are the one whom hew more closely to those voters that have more punitive preferences.

My theory of security as a wedge issue forms the hypotheses of this paper. Based di-

rectly on the occupational advantages argument, I expect higher exposure to violence to have a substantial, positive effect on the electoral support for law-and-order candidates (*h1*), and that these effects are larger among candidates from law enforcement agencies than on candidates from more conservative parties (*h1a*). To show how the crime issue is divisive among voters, I discuss how the support for law-and-order candidates is driven by politically conservative voters (*h2*) voters, and voters living close to olling stations located at wealthier neighborhoods in Brazil (*h2a*). I analyze these predictions using observational electoral data, with well-identified statistical models leveraging random variation on pre-electoral shocks on crime at the local level for all municipalities in Brazil in three electoral cycles. I conclude by replicating the macro-level findings from observational data on a novel factorial endorsement experiment providing micro-level evidence of my theory.

Police, Politics and Law-and-Order Candidates in the Brazilian Lower-Chamber

Brazilian federalism delegates most public security and policing responsibilities to state-level authorities. At the state level, the police are divided into a civil and a military arm. The former shares the duties of investigation; they do not patrol the streets, generally does not use uniforms, and is directly subordinate to the state government. The military police are in charge of maintaining order, patrolling the streets, and imprisoning criminal suspects.

Police forces in Brazil were built historically as an institution for the deployment of state-level repressive strategies, particularly against social and racial minorities, such as yenslaves, formerly enslaved people, and city dwellers (Rose, 2005; Caldeira, 2002). The periods of military authoritarianism (1930-1945 and 1964-1985) exacerbated police officers' roles in repressive enterprises, including not only minorities, but also political dissidents. Through these years, regular police officers, together with highly trained military forces, became key components of extralegal violence as a mechanism to sustain the authoritarian regime. Consequently, police forces in Brazil carry an institutional history of illegal use of violence, weak accountability, and generations of officials trained under non-democratic practices (Caldeira, 2002; Brinks, 2007).

More importantly, when these specialists in security and repression enter politics, their actions overwhelmingly replicate their previous experiences with illegal use of force and the adoption of more punitive security policies. Several recent papers show these historical legacies affect levels of criminal violence and state-sponsored abuses even in post-authoritarian periods (Frantz, 2018; Trejo et al., 2018). In Brazil, after thirty years of democratization, few institutional reforms were implemented in the police and military forces, and a persistent pattern of excessive use of force by security forces targeting more underprivileged neighborhoods and social and racial minorities persists (Bueno, 2012; Cano, 1997; Denyer Willis, 2015; Brinks, 2007; Caldeira, 2002).

The country's electoral and legal system imposes no restrictions on military members and police officers who decide to run for elected positions. During the electoral campaign, these candidates are legally forced to request a leave of absence from work, losing their access to the institution and other benefits momentarily; however, after the elections, all

the benefits are immediately reinstated for candidates who were not elected.

While several studies and news reports use a broader set of factors to classify law-and-order politicians in Brazil, including participation in the Public Security Caucus, policy and attitudinal preferences, and their past history in criminal agencies (Medeiros and Fonseca, 2016; Faganello, 2015), I opt for a more restrictive definition. Both theoretical and methodological reasons explain this decision. I classify law-and-order candidates as actors who previously held an occupation in police and/or military forces before entering politics. Theoretically, this classification is derived from my argument about occupation working as the main heuristic voters rely upon to make decision in a context of fluid party labels. Methodologically, this straightforward definition can be retrieved directly from the electoral data available from official sources. [2]

Table 3.1 presents descriptive evidence for the growth of law-and-order candidates in the Brazilian elections over time. These descriptive results showcase a consistent upward trend on the absolute number of House candidates with professional experience in security forces. In the last three electoral cycles, working in public security is among the top three most reported occupations by House candidates – only behind lawyers and businessmen. With a growth in the number of candidates, their electoral support has increased substantially over the years. In the last 2018 House election, 35 law-and-order candidates were elected for the House (6% of the total); this number gives security actors their biggest presence in legislative politics since the years of the military dictatorship in Brazil. If unified in a single party, these candidates would represent the third-largest party in the House.

[2] I present more information about this classification in the appendix.

Table 1.1: Descriptive Statistics for the Law and Order Candidates for the House Elections in Brazil (2002-2018)

House Election	# Candidates	# Elected	Total Votes	Share of Votes	Number of Parties (Only Elected)
2002	230	5	1,188,900	1.5\%	5
2006	299	5	1,457,570	1.7\%	4
2010	302	6	2,055,477	2.3\%	6
2014	292	16	3,370,487	3.8\%	12
2018	458	35	8,884,020	9.7\%	12

A crucial assumption of this dissertation assumes that a professional experience on enforcement agencies signals to voters a commitment on the supply side greater willingness to enact more punitive policies. If this assumption is true, we should expect law and order candidates to express these punitive preferences, at higher rates compared to traditional conservative parties, during their routine legislative activities, such as, speeches, bill proposals, committee participation, among other.

In the chapter four of the dissertation, I provide evidence for this central assumption using computational text analysis. Using data from congressional speeches for House members from 2002-2019 [3], I estimate a Structural Topic Model (STM) (Roberts et al., 2014a) to identify the prevalence of security as an policy issue in Congress. Then, I use multilevel modeling to explain determinants of these issues across the speeches, particularly how law-and-order representatives, and not conservative parties, dedicate more attention to security and crime in their House speeches.

[3]The speeches were collected through the Congress API, available here https://dadosabertos.camara.leg.br/

The results provide support for the main assumption of the paper: candidates with a history in criminal agencies rely more heavily on security and crime issues in their public statements in the House. As theorized, law-and-order House members dedicate more attention on their public speeches to public security and crime issues, however, these politicians also dedicate less attention about how some social and ethnic minorities are the main victims of violence, including abuses from state forces. These last topics are actually dominated by more liberal, left-wing politicians in the House.

1.4 The Effects of Crime Electoral Shocks on Voting for law and order.

Over the past two decades, criminal activity and violence in Brazil have grown exponentially. Official data from the United Nations provides a worrisome snapshot of the violent ecology of Brazilian Democracy. In 1998, two decades ago, Brazil had a homicide rate of 22.6 people per 100,000 population (38,442 people killed in a single year), a statistic already above the homicide rate in South America, the most violent continent in the World. Twenty years later, in 2018, the Brazilian homicide rate jumped to 27.4 per 100 population, and a raw count of 57,338 thousand people killed [4].

This section explores the effects of criminal violence on the electoral support for law-and-order House candidates across Brazil's three more recent electoral cycles (2010-2018). To causally identify the effects of violence on punitive voting choices, I explore month-to-month granular homicide count data from all Brazilian municipalities to isolate exoge-

[4]See (Murray et al., 2013) for an overview of homicide trends in Brazil

nous effects of crime on voting behavior. I build a treatment group of cities with a sudden pre-election growth in violence in the three months before an election and a control group with a similar shock but occurring during the three months after an election. I add a set of control variables, state and year fixed effects to improve the causal parameters' identification and efficiency. I have three main predictions from this analysis. First, municipalities with pre-electoral violence will show more significant support for law-and-order candidates. Second, more violent municipalities, using the overall homicide rates in all the months before the election, will also increase the vote share of these candidates. Third, pre-electoral shocks will have greater effects in municipalities in more violent municipalities, where the salience of appeals to fight against crime will be higher.

Data

I rely on several official data sources to estimate the effects of violence shocks on support for law-and-order candidates across the three most recent electoral cycles for the House. Electoral results aggregated for all Brazil's 5.570 municipalities come from the Superior Electoral Court (TSE), and municipal level socio-demographics, except for the violence data, comes from official census information. The outcome variable for all the models is the logarithm of the vote share of law-and-order candidates. As previously described, I use the candidates' official electoral registration to identify those who reported being a member of criminal justice agencies (military, civil and any private police, armed forces, and firefighters) or reference their law-and-order occupation in their ballot names.

Brazil has no month-to-month official data on crime. Therefore, I use homicide in-

formation from the Death Certificates data extracted from the Brazilian System of Death Registration (SIM/Datasus). This is widely recognized as the most reliable and granular information source on homicides in Brazil. [5] Although homicide rates are not a perfect measure of criminal violence, several recent studies have relied on this statistic to measure the level of criminal conflict where finer-grained data are not available (Magaloni et al., 2020; Murray et al., 2013; Menezes et al., 2013; Dube et al., 2013). I also use data from census information and the National Institute of Geography and Statistics (IBGE) as a battery of municipal level control variables, such as population, Gini index, rural population, income per capita, and others.

All the models control for the vote share of the front-runner conservative presidential candidate and the his party vote share for the House election in each respective year. This set of controls are instrumental to provide robustness to the results. The fact that results hold, even when controlling out the vote share of conservative party provides evidence voters reward at higher levels law-and-order candidates when afflicted by violence, and this variation rules out explanations based solely on partisan issue ownership.

1.4.1 Model

To isolate the effect of crime from unobserved factors that might also be correlated with support for law-and-order candidates, I leverage short-term variation in the monthly homicide rates right before and right after the House elections for each municipality. My main identification assumption states that the variation over a short period of time in

[5] All deaths with codes X85 to Y09 and Y87.1 in ICD-10 were counted as homicides, which corresponds with the coding of violent deaths from previous studies (Murray et al., 2013; Cerqueira et al., 2019)

homicides is exogenous to the overall homicide rate and other socio-demographic characteristics in a given municipality, as well as from other observed and unobserved covariates. Under this assumption, spikes in homicides are equally likely to occur before and after the election. This approach borrows from previous empirical studies in corruption and news cycle in Brazil and México (Ferraz and Finan, 2008; Marshall, 2019).

The empirical models compare municipalities with a spike in crime in the months before the election with municipalities with a spike right after the election. Let's formalize the research design. Considering municipality m, on the election month t, I assume a pre-electoral shock occurs when the number of homicides h_{pop} per 100.000 population in city m in the three months before the election is strictly higher than in the three months after the election. On the other side, I classify as post-electoral shock when municipality m experiences the same or higher number of homicides in the three months after the election (including t). To make comparisons more reliable, all the municipalities where no homicide occurred between t_{-3} to t_{+2} are not included in the analysis. Equation 1.1 presents a formal definition of the main variable of interest:

$$\text{Homicide Shock} = \begin{cases} \text{if } \sum_{i,t_{-3}}^{t} h_{i,pop} > \sum_{i,t}^{t+2} h_{i,pop}, \text{ then = 1} \\ \text{if } \sum_{i,t_{-3}}^{t} h_{i,pop} \leq \sum_{i,t}^{t+2} h_{i,pop}, \text{ then = 0} \\ \text{if } \sum_{i,t_{-3}}^{t} h_{i,pop} and \sum_{i,t}^{t+2} h_{i,pop} = 0, \text{ then = .} \end{cases} \tag{1.1}$$

As mentioned before, the identification of the causal effects assumes that the potential outcomes for electoral support to law-and-order candidates are ignorable conditional on the timing of homicides around elections occurs. The first threat for the causal design re-

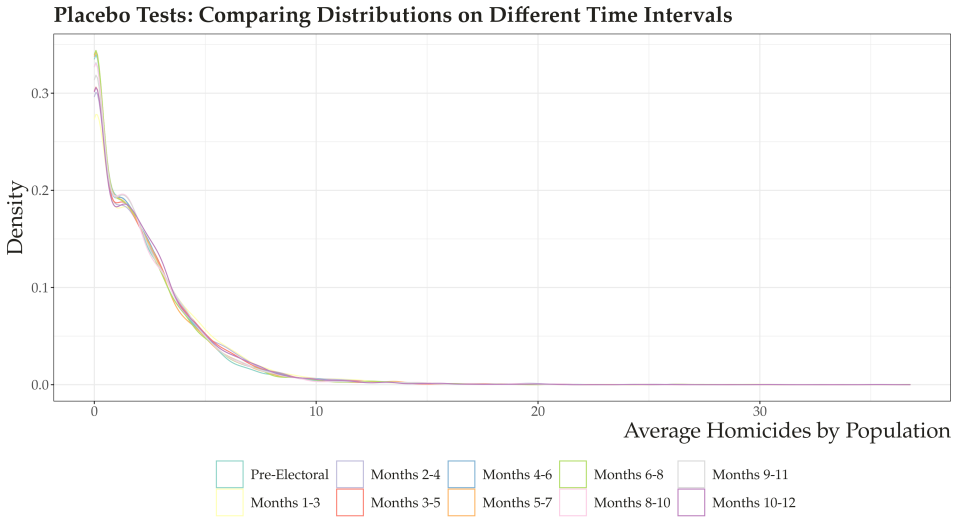
lates to the plausibility of the exogeneity assumption on observable covariates. To ensure the validity of this assumption, I demonstrate in the appendix that the pre-election homicide shocks are not systematically affected by a wide variety of observable pre-treatment covariates, including the municipal monthly homicide rate for the same year, and also compare the distributions of crime rate over time. No violations are detected.

Another identification threat relates to the possibility of sorting of the use of violence conditional on the electoral months. Two distinct problems emerge here: first, criminal organizations can use violence to affect electoral outcomes, as argued by the recent scholarship on Drug Trafficking Organizations (DTOs) (Daniele and Dipoppa, 2017; Trejo and Ley, 2018), or local officials might respond to the electoral cycles by investing more on security right before the elections. I argue that both processes are unlikely in the Brazilian case. First, DTOs in Brazil are, particularly the largest one (*Comando Vermelho*), are mainly present in major metropolitan areas of the country, and evidence of their direct electoral engagement has not been identified by the specialized literature (Feltran, 2018; Denyer Willis, 2015). Second, House elections in Brazil do not coincide with local races, which means mayors have no incentives to adjust policies, particularly in long-term structural areas such as public security, in response to these upper-level races.

To conclude, I report results comparing the average levels of violence between the pre-electoral period and all the other three months intervals across a year. I perform this test for all the three electoral years in my data. If changes in the crime rate before the election were not exogenous, we would expect to find differences in their distributions when comparing our target distribution with some placebo examples. Results are presented in figure 1.1, and visually, results indicate that the average crime rate across

ten distinct time periods all seem to emerge from a common distribution, reducing concerns of strategic manipulation of violence around the elections. More rigorously, I use Kolmogorov-Smirnov tests to compare these distributions, and the results fail to reject equality of distributions.

Figure 1.1: Validity Tests for the Pre-Electoral Shocks



After showing evidence of the plausibility of my identification strategy, I estimate the models using standard OLS Estimators. I report models using several control variables, and two-way fixed effect at the state and election cycle. The pre-electoral violence shock represents the main causal effect of interest, and I present models with the average effect for electoral violence shock and interact it with the overall trend in violence in a municipality i.

1.4.2 Results: The Effects of Violence and Pre-electoral Crime Shocks

Table 1.2 presents the results from the main statistical model. I report only the coefficients for the effect of pre-electoral homicide shocks, the homicide rate before the campaign starts, and the interactive effect between both variables. Overall, I find no support for a direct effect of pre-electoral homicide shocks on the support for law-and-order candidates. Using the different specifications on models 1, 3, and 5, none of the coefficients for pre-electoral homicides shocks is statistically different from zero.

Table 1.2: Regression Models: Average and Interactive Effect of Pre-electoral Homicide Shock.

	Dependent variable:					
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-8.751^{***}	-8.691^{***}	-9.001^{***}	-8.897^{***}	-9.702^{***}	-10.121^{***}
	(0.734)	(0.734)	(0.723)	(0.724)	(0.652)	(0.605)
Pre-Electoral Homicide Shock	0.031	-0.052	0.042	-0.045	-0.038	-0.080^{**}
	(0.034)	(0.046)	(0.029)	(0.039)	(0.030)	(0.033)
Pre-Electoral Homicide Shock x Homicides Before Electoral Campaign		0.006^{***}		0.007^{***}		0.004^{**}
		(0.002)		(0.002)		(0.002)
Homicides Before Electoral Campaign	0.015^{***}	0.012^{***}	0.015^{***}	0.012^{***}	0.009^{***}	0.006^{***}
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Controls	yes	yes	yes	yes	yes	yes
State Fixed Effects	no	no	yes	yes	yes	yes
Time Fixed Effects	no	no	no	no	yes	yes
Observations	8,628	8,628	8,628	8,628	8,628	8,628
Adjusted R^2	0.135	0.136	0.371	0.371	0.320	0.562
Note:						*p<0.1; **p<0.05; ***p<0.01

Note: Regression models using benchmark OLS Estimation. Models 1 and 2 controls for several socio-demographics variables. Model 3 and 4 adds State fixed effects. Model 5 and 6 use electoral year fixed effect. The outcome variables uses the logarithmic of the vote share for law and order candidates, and the homicide data report total counts over months before the electoral campaign starts (January to July) in a given electoral year, and by 100.000 municipal population

However, I find strong and robust interactive effects for pre-electoral shocks conditional on each municipality's overall levels of violence. Interactive models between the homicide shocks and the homicide rate before the electoral campaign are positive and

statistically different from zero, in all the three models using local controls, state fixed effects, and time and state fixed effects.

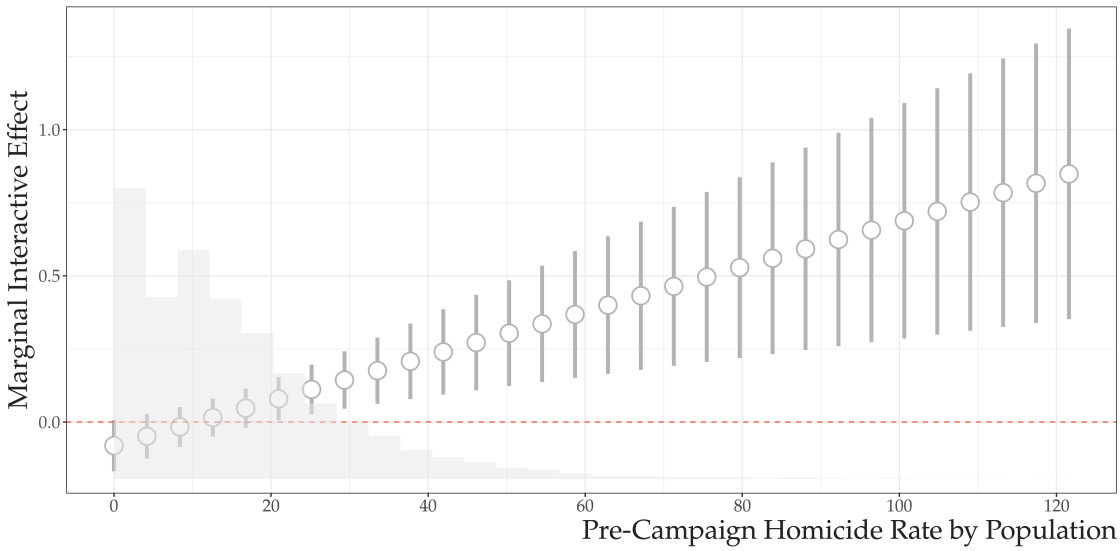
To give a sense of electoral crime shocks' substantive effect on more violent cities, let us consider an example. Consider a municipality with a homicide rate of 20 deaths per 1.000 people in the six months before the electoral campaign – this value, according to figure 1.2, has marginal effects of pre-electoral shocks that are distinguishable from zero, and represent third quartile (75%) of the moderator. For these violent municipalities, an electoral shock increases by 12% ((exp(0.115) – 1) * 100) the voter share of law-and-order candidates, on average. Considering the high level of competition for House Seats in Brazil, an increase of 12% of the vote share of a few candidates indeed represent the difference between winning or losing a seat.

To ensure robustness for the findings, in the appendix, I estimate models directly controlling for the alternative explanation positing that issue ownership explains how criminal violence makes some parties more competitive. Instead of using the vote share of law-and-order candidates, I model the log odds ratio between the vote share of law-and-order candidates and the House vote share of the front-runner conservative party [6], and evaluate how electoral shocks and violence affect support for law-and-order in comparison with their main conservative competitors. Results go on similar direction, and confirm the hypothesis that voters rely more heavily on occupational heuristics, and not party labels, when municipalities are affected by pre-electoral violence shocks.

In conclusion, these results indicate that an exogenous shock before an election is not

[6] I use the PSDB for the years of 2010 and 2014, and the PSL for 2018. These parties had both the front-runners in the Presidential elections and won the most House seats among conservative parties for the each respective electoral cycle

Figure 1.2: Marginal Effects of Pre-Electoral Homicide Conditional on Municipal Homicide Trends



Note: The plot shows marginal effects from model 2 presented in table 1.2. The figure presents marginal effects with 95% confidence intervals, and in the background the figures plots the density of the moderator variables.

enough alone to increase the support for law-and-order candidates. However, when such random variation occurs in a municipality with high levels of crime, there is a substantial increase in support for candidates who own the crime issue in Brazil. There at least two different explanations for why these effects are heterogeneous. On the demand side, in more violent places, crime is likely to be a greater concern for voters, and a random increase in violence right before the election makes voters more willing to support these candidates. Second, on the supply side, law-and-order candidates are also more likely to campaign and target campaign resources in places where crime rates are high, and then reducing the effort on the voters' side to pick a law-and-order candidate when a random,

and exogenous crime shock around the election occurs.

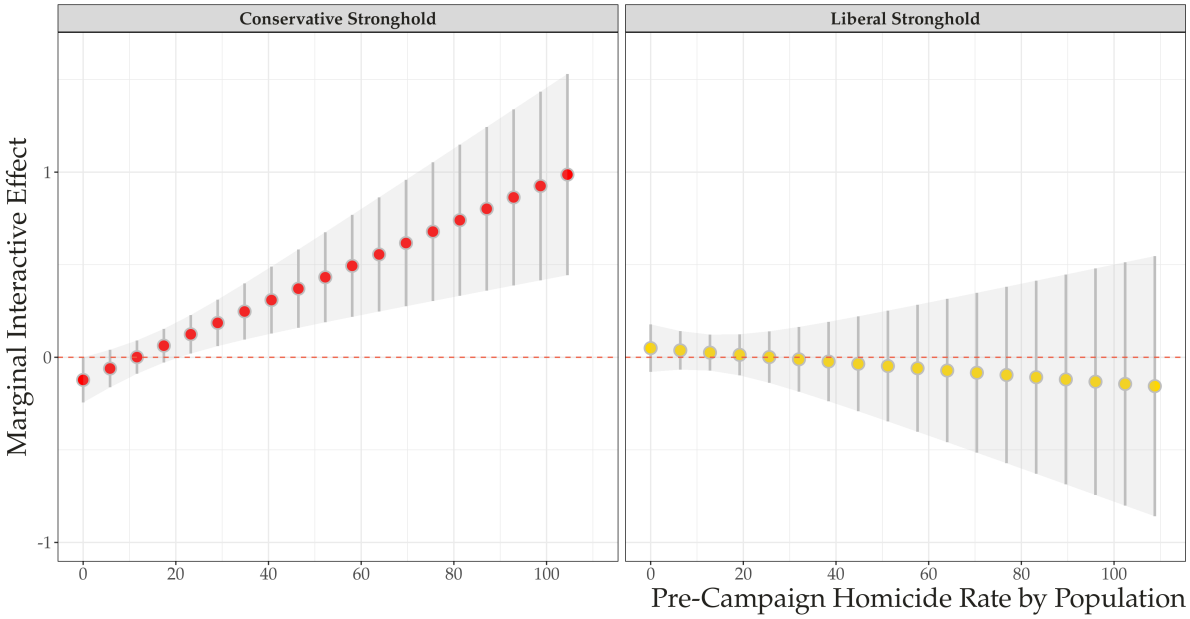
1.4.3 Who responds to law and order Heuristics? Violence as a Wedge Issue

I now analyze which voters more strongly activate law-and-order as an informational heuristics, and show strong evidence for my theory of security as an wedge issue. My first question is simply whether pre-electoral shocks have the same effects on electoral strongholds from conservative and liberal presidential candidates [7]. I estimate the same set of models from the previous section after splitting the data between municipalities where conservative/liberal presidential candidates between 2010-2018 performed above their state-level median vote share. Figure 1.3 presents the marginal interactive effects of the pre-electoral shocks.

Results in figure 1.3 depict substantial heterogeneity in the effects of pre-electoral crime shocks on voting for law-and-order candidates. In municipalities "won" by conservative presidential candidates, exogenous crime shocks push voters to use occupational heuristics and support former law-and-order officials in the ballots. Meanwhile, the effects disappear on municipalities dominated by the leftists' presidential candidates. Such heterogeneity suggests that law-and-order heuristics carry considerable information about policy preferences, becoming particularly attractive for politically conservative voters. This dynamic is therefore conclusive to the theory of security as a wedge issue: conservative voters are the ones increasing their support to more punitive candidates upon a

[7] In Brazil, presidential elections occur on the same day as House elections

Figure 1.3: Marginal Effects of Pre-Electoral Homicide Shock Conditional on Municipalities Political Alignment on Presidential Elections



Note:The plot shows marginal effects from model 1 presented in table 1.7 in the appendix. The figure presents marginal effects with 95% confidence intervals. I consider an municipality *i* in the state *j* to be a stronghold when the vote share of the front runner presidential candidates for each party in *i* is larger than their median vote share in *j*

crime shock, while voting patterns in leftist strongholds remain the same.

Then, to conclude, I assemble a unique dataset with voter information at the voting station level. I show how better-off voters display stronger support for these punitive candidates and how the effects of crime shocks are mostly driven by more significant electoral support, conditional on a pre-electoral crime shock, on voting stations located at wealthier neighborhoods in Brazil. Using information about levels of education at the moment of the voters' registration, I estimate a set of multilevel models identifying the between and within-effects of higher share of voters who attended college, and further examine how the occurrence of a pre-electoral shocks increase support at a greater rate

in more educated areas, where better off voters live. I estimate the following multilevel model:

$$\begin{aligned} y_{ivt} = \alpha_1 * City_i + \alpha_2 * Year_t + \beta_1 * \text{Shock}_i + \beta_2 * (X_{iv} - \bar{X}_i) + \\ \beta_3 * \bar{X}_i + \beta_4 * \text{Municipal Controls} + \\ \beta_5 * \text{Political Controls} + \epsilon_{ivt} + \mu_i + \mu_t \end{aligned} \tag{1.2}$$

Table 1.3 presents a summary of the results. Results are robust across all three models, and uncover a strong association between better-off voters and support for law-and-order candidates. More importantly, the results also indicate how crime shocks are perceived differently as we move towards voting stations located in wealthier neighborhoods. The interaction term between electoral shocks and the within-city variation on college voters is strong and positive, indicating that the greater support for more punitive candidates emerges mostly in wealthier neighborhoods due to a pre-electoral sudden increase in crime. This dynamic recover the social bases of security as a wedge issue, and not a valence concern: as crime increases, wealthier and more conservative voters show greater tastes for candidates campaigning on punishment.

Table 1.3: Regression Models: Effects of Crime Shocks on Better-Off Voters

	Dependent Variable: Log Law and Order Vote Share		
	(1)	(2)	(3)
Intercept	-0.338	3.037^{***}	3.236^{***}
	(0.439)	(0.669)	(0.665)
Pre-Electoral Homicide Shock	-0.037^{***}	-0.010^{***}	-0.019^{***}
	(0.002)	(0.003)	(0.003)
Mean College Voters (Voters)	0.805^{***}	1.796^{***}	1.837^{***}
	(0.032)	(0.036)	(0.037)
College Voters Within Effect	0.651^{***}	0.731^{***}	0.743^{***}
	(0.009)	(0.011)	(0.011)
Pre-Electoral Homicide Shock x College Voters Within	0.146^{***}	0.488^{***}	0.479^{***}
	(0.017)	(0.023)	(0.022)
Voting Station Variables	yes	yes	yes
Municipal Socio Economic Controls	no	yes	yes
Political Controls	no	no	yes
Observations	898,379	740,384	735,035
Log Likelihood	$-1,056,352.000$	$-875,311.400$	$-867,444.500$
Akaike Inf. Crit.	2,112,727.000	1,750,665.000	1,734,935.000
Bayesian Inf. Crit.	2,112,868.000	1,750,907.000	1,735,200.000

Note: *p<0.1; **p<0.05; ***p<0.01

1.5 Experimental Evidence: The Effects of Endorsement From law-and-order Politicians on Voters' Support to Messages about Public Security

Now I present results from an online factorial endorsement experiment to measure the effects of endorsement from law-and-order politicians on support for different messages about security policies. The experimental design provides individual-level evidence of the macro-dynamics highlighted using observational data. The effects discussed below show how partisanship, wealth and overt punitive preferences are key to explaining support for punitive preferences and law-and-order endorsement presented in the experimental task.

To make the experiment more realistic, its design measures support by replicating the format of social media messages, and ask respondents to answer which of two social media type of messages they would be more likely to share. The experiment was included in a national online survey in Brazil with 2.400 respondents. The survey was fielded by Netquest-Vanderbilt, with probabilistic samples drawn by the LAPOP team in Vanderbilt from users registered with Netquest. More details about the survey are provided in the appendix.

1.5.1 Experimental Design

The experiment uses a factorial design combined with an endorsement experiment on edited social media messages. During the survey, each respondent was exposed to a pair of edited tweets created solely for this experiment; and the messages replicate politicians talking about crime and public security in Brazil. The messages vary on four dimensions: the author of the tweet, the content of the message, an associated image, and the support of a law-and-order politician for the text. The latter feature is the primary variable of interest. In the appendix, I present the full combination and the images of the edited social media messages [8]

Each of the components varies as follows. The tweets' authors can be one of two news media outlets, one liberal, and another with conservative leaning. The content of the tweet simulates a message from news media broadcasting a speech about public security from a member of the Brazilian Lower Chamber; the text is either a punitive message, asking for harsh punishment against criminals and support for the use of violence by police officers, or a redistributive approach reinforcing the importance of investing in education and social policy as strategies to reduce crime. The author of the speech is either a Congressman with a military rank attached to his name, or one without a military rank; to increase the validity of the experiment, I use names of factual House Members elected in the last election. Lastly, the tweets' image rotate between three options: a kid going

[8] After Hainmueller et al. (2014), factorial designs have become a prominent methodological tool within the field of political science covering many different types of phenomena, such as immigration preferences (Hainmueller and Hopkins, 2015), bureaucratic behavior (Oliveros and Schuster, 2018), corruption (Mares and Visconti, 2020; Klašnja et al., 2020), and vote choice (Franchino and Zucchini, 2015; Kirkland and Coppock, 2018).

to school, a heavily armed police officer entering a slum, and a neutral image of police officers close to a school bus. Since the attributes are randomized independently for each candidate, causal effects can be simultaneously estimated using simple OLS regression models (Hainmueller et al., 2014).

The decision to use social media messages can be justified on several grounds. First, voters are constantly exposed to social media environments in their daily lives. In my sample, 97 % of respondents reported using at least one of the three largest social media platforms in Brazil (Twitter, Facebook, or Whatsapp) at least once a day, and 85 % reported using social media to learn about politics and keep themselves informed; Therefore, the experiment does not require subjects to make any strong cognitive effort when performing the experimental task. Besides, by using an experimental exercise mirroring a social media support, I can capture the treatment effects in a more realistic setting than other vignette's designs (Horiuchi et al., 2018; Knudsen and Johannesson, 2019).

It is important to note that the text and the politicians' names are not the same for each of the paired tweets. To avoid the possibility of subjects reading exactly the same text or the same politicians, the design varies the wording for the text and the endorsement, but keep the same punitive/redistributive or civil/law and order meaning. Although I reduce the external validity of the experiment by not using real tweets for our treatment conditions, I carefully chose the wording of the tweets based on actual public statements and social media activity to maximize the validity of the treatment conditions. The randomization procedures guarantee internal validity [9].

[9]The experiment received the approval of the University of Maryland Institutional Board Review 1552091-3

1.5.2 Results

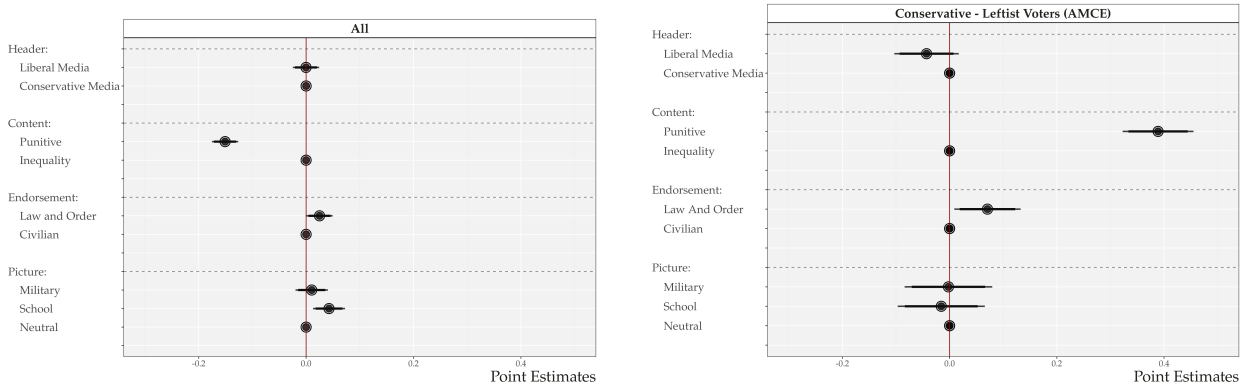
In this section, I present the main results for the factorial experiment. All the quantities are estimated with OLS models regressing respondents' decision to share a tweet to indicator variables for each of the four components.[10] Figure 1.4 presents the average marginal component effects (AMCE) in the entire sample of respondents in the first plot (left plot); the right-plot estimates the same model, but filtering the data conditional on voters' voting preferences between the actual, law-and-order president Jair Bolsonaro and the 2018 candidate from the leftist party, the Workers' Party (PT), which won all the four previous presidential elections in Brazil. I present the differences between these two samples to highlight the partisan dynamic behind the support for punitive proposals and law and order candidates [11]

First, regarding the overall sample, I find a positive AMCE for the endorsement of a law-and-order politician. In other words, on average, across all the features of the experiment, reading a message about security coming from a politician using his military rank increases by 2.5% percentage points the support for the message. Although small in magnitude, the effect is statistically significant, using 95% confidence intervals, and appears in a setting using a low-dosage treatment, i.e., only adding the military rank at the name of the politician. In addition, I find on average respondents are more willing of sharing messages with more redistributive proposals to reduce crime than more punitive speeches: a punitive message is 15 percentage points less likely to be shared than a more

[10] Standard Errors are not clustered because each respondent repeated only once the task

[11] We asked respondents to indicate whom they would vote for if in a runoff election to be held in the following week. We gave respondents the option to vote for the actual President Jair Bolsonaro, his contender from the Workers Party, Fernando Haddad, or to vote blank.

Figure 1.4: Average Marginal Component Effects of Tweets' Features on the Probability of Sharing the Message



Note: The left plot shows estimates of the randomly assigned attributes (Author, Content, Endorsement and Image) in the subject decision to share a edited tweet. The right plots shows differences in AMCE between Convervative and Leftists votes in Brazil. Estimates are based on the benchmark OLS model; we present point estimate with 95% and 90% confidence intervals. The points without bars represent the reference category for each attribute.

redistributive one.

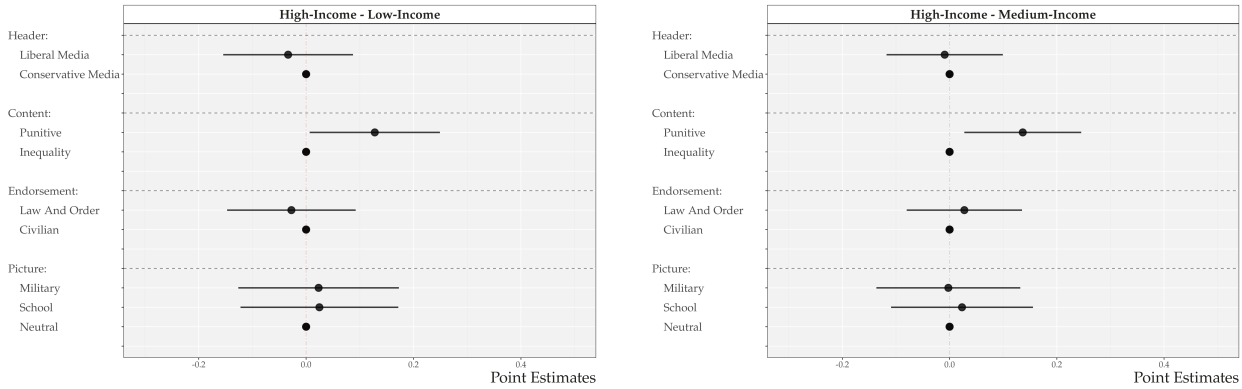
Beside, as in the electoral shocks models, more conservative voters in Brazil (supporters of the President Jair Bolsonaro) have a sizable difference compared to the entire sample in their support for more punitive tweets and messages endorsed by a law-and-order politician. These results provide strong support for the argument that conservative voters activate strongly the politicians' occupation as an heuristics shortcut; on average, Bolsonaro voters prefer to share content about public security policies sent by politicians with a military rank, than an otherwise, on average, equal politician without a military rank, and also proposing a more punitive approach.

Furthermore, I replicate with the experimental data the evidence discussed before about income dynamics explaining differences in support for punitive messages. Using pre-treatment variables asking respondents about their position in the countries income

distribution, [12] I separate the data in three groups (low, middle, and high-income), and compare the AMCE for these groups.

Figure 1.5 presents the differences in AMCE between the different income groups [13]. Results replicate clearly the insurance dynamic detected with observation data. High-income respondents are more likely to support messages arguing in defense of more punitive measure when compared to both low and middle-level income.

Figure 1.5: Average Marginal Interactive Effects on the Probability of Sharing the Message with Income



Note: The plot shows marginal effects from linear interactive models between the factorial endorsement and individual level survey information about income. The figure presents differences in Interative Marginal Component Effects with 95% confidence intervals calculated from benchmark OLS model.

To conclude, I explore how more punitive voters, a dynamic that as shown in figure 1.5 interacts with income and partisanship, strongly predicts the endorsement effects from the occupational heuristics in the experiment [14] Figure 1.6 presents the marginal effects for the quantities of interest extracted from the linear interactive models. Results indicate

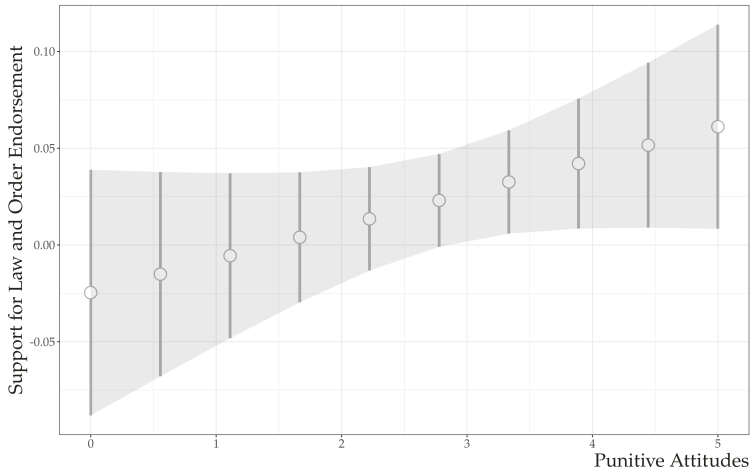
[12] The question asks: "Imagine a staircase with 10 steps. In the first step, people with lower income are located, and in step 10, people with higher income are located. Where would you be located". I split the data between three groups: low income (from 0-2), middle income (from 3-7), high-income (from 8-10)

[13] The numerical results are fully presented in the appendix

[14] To punitive preferences, I use a battery of five questions asking about support for punitive policies, such as gun control, militarization, use of violence by the police, the death penalty, and penal legal policy. I provide a full description of the questions and the distribution of answers in the appendix.

that respondents with stronger punitive preferences also show a positive and statistically significant likelihood of supporting a message endorsed by the law-and-order politician. Taken together, these results show that, as my wedge theory predicts, conservative and wealthier voters show greater support to more for harsh approaches on crime, which therefore leads to a higher likelihood of supporting statements sent by law-and-order candidates using their occupational heuristics to attract voters attention.

Figure 1.6: Average Marginal Interactive Effects on the Probability of Sharing the Message



Note: The plot shows marginal effects from linear interactive models between the factorial endorsement and overt measures for punitive preferences. The figure presents marginal effects with 95% confidence intervals calculated from benchmark OLS model.

1.6 Conclusion

This study presents a novel theory to explain the recent wave of law-and-order politics in Brazil. I show that as violence increases, security concerns enters in the electoral arena as a wedge issue, as support for more punitive proposals overlaps with income differences and partisan identities. I provide evidence showing that: i) an exogenous shock

on crime in the months right before the election substantively increases the vote share of law-and-order candidates in cities more afflicted by violence, ii) the shocks are particularly effective in conservative strongholds, and in polling-stations located in wealthier neighborhoods, iii) experimental results indicate that survey respondents more broadly support messages about public security endorsed by law-and-order candidates; iv) the endorsement is particularly attractive to more punitive voters.

This article presents three novel contributions for scholars interested in criminal violence and democratic politics. First, I contribute to the numerous recent studies on criminal violence and political behavior in Latin America (Krause, 2014; Malone, 2010; Carreras, 2013; Visconti, 2019; Garcia-Ponce et al., 2019; Ley, 2018). Although these studies reveal a wide range of attitudes that are affected by personal victimization and contextual exposure to violence, what we know about how these changes entered into the electoral arena is still rather limited. Using the Brazilian case, I show how candidates' occupation and professional experience working in public security help to explain who wins and who loses when crime becomes a crucial concern, and how these heuristics work differently from explanations based on valence shocks and issue ownership at the party levels.

The article also makes a contribution to the recent literature on spillovers of crime in Latin America. Recent studies show negative effects of crime on educational outcomes in Rio de Janeiro (Monteiro and Rocha, 2017), on wages and women's labor force participation (Dell, 2015), and human capital (Cerqueira and Soares, 2016). This article shows similar spillovers in elections: a growth in criminal violence makes candidates from police and military forces more likely to win elections. The majority of these candidates have a historical commitment to the adoption of more punitive policies, and a great deal

of work has found robust evidence that these policies are closely related to violations of human rights, mass incarceration, and racial bias in Brazil and elsewhere (Roberts et al., 2002; Davenport et al., 2011; Bueno, 2012; Brinks, 2007). More important, recent papers have provided robust causal evidence that law-and-order candidates and the adoption of *mano dura* policies have null effects on crime reduction, but render detectable increases on police abuses, and violence targeting social minorities (Novaes, 2018; Weintraub and Blair, 2020).

Years of growth on criminal violence combined with an weak and unstable partisan environment culminated on outsiders politicians advancing policy that makes the state more unequal and more repressive against certain socioeconomic and ethnic groups. Even more concerning, this paper shows the existence of endogenous incentives, coming from the electoral arena and behavioral changes on the voter side, pushing law enforcement officers, with a future career goal in mind, to be more punitive. This dynamic materializes on politicians trying to build around them a reputation of being tough-on-crime in order to gain electoral support from better-off, punitive and more conservative voters. This endogenous dynamic is a risk to the Brazilian democracy as its consequences are the adoption of policies where the evidence of crime reduction are at best mixed, but cases of abuse against social minorities are a given fact.

Voting for Violence Voting for Violence: Crime and the Election of Law-and-order Politicians in Brazil.

Supporting Information Files (SIF)

1.7 Appendix A. Validity for the Pre-electoral Shocks

The statistical models showing an effect of crime on the support for law and order candidates rests in the identifying assumption that electoral shocks – an increase in the crime rates before/after the House elections - occurs endogenously. In other words, the variation in the crime rates over the months around the elections are idiosyncratic, and cannot be explain consistently by factors also correlated with the dependent variable in the models. This subsection presents validation tests about the plausibility of this identifying assumption.

First, as introduced in the paper, I find no consistent difference in the distribution of crime over time. I use a variety of placebos for the time cutoffs, and compare the density of these distributions over all the years and municipality with our target period (three months before the election). The logic here is straightforward: if changes in the crime rate before the election were not exogenous, we would expect to find differences in their distributions when comparing our target distribution with some placebo examples. Figure 1.4 plots the distribution of crime rates for all possible three months interval over the course of a year, including the pre-electoral period. If the timing of homicides comes from strategic manipulation of the local incumbent, or if criminal organizations manipulate the use of violence around the elections, we would observe detectable differences between these

density distributions.

At a first sight, the average crime rate across ten distinct time periods all seem to emerge from a common distribution, reducing concerns of strategic manipulation of violence around the elections. I use Kolmogorov-Smirnov tests comparing the distribution of pre-electoral homicides, and all the other 3 months period, and fail to reject equality of distribution for every case.

I next show that pre-election homicide shocks are not systematically correlated with a wide variety of observable pre-treatment covariates. Table 1.4 presents results of a simple linear probability model regression the pre-electoral shock dummy on a set of municipal socio-demographics, and political variables. I also add state-level, and year fixed effects in the models. Only two, out of 45 parameters show a significant effect at the 5% level. Therefore, these results provide strong support for the validity of exogeneity assumption of the pre-electoral shocks. All the control variables are described in table 1.5

Table 1.4: Validity Checks: Examining Exogeneity of Crime Shocks

	Dependent variable:		
	(1)	(2)	(3)
Intercept	2.150***	2.084***	2.044***
	(0.308)	(0.346)	(0.348)
Gini	−0.063	−0.126	−0.131
	(0.148)	(0.163)	(0.162)
Income sm 1	0.134	0.127	0.100
	(0.108)	(0.126)	(0.126)
Income sm 20	−6.705	−6.308	−6.400
	(4.194)	(4.487)	(4.480)
Female	−1.398***	−1.256**	−1.241**
	(0.523)	(0.612)	(0.612)
Gdp pc	0.0004	0.0003	0.0003
	(0.0004)	(0.0004)	(0.0004)
Ed lit	−0.080	−0.020	−0.007
	(0.145)	(0.170)	(0.169)
Rural	−0.040	−0.023	−0.031
	(0.043)	(0.047)	(0.047)
Income pc	−0.170	−0.186	−0.115
	(0.151)	(0.157)	(0.157)
Deaths Pre Campaing	0.0003	0.0004	0.0003
	(0.0003)	(0.0003)	(0.0003)
Income tax	0.00000	0.00000	0.00000
	(0.00000)	(0.00000)	(0.00000)
Tax Returns	0.00002	−0.001	−0.001
	(0.004)	(0.004)	(0.004)
Left President	0.019	0.074	0.176*
	(0.077)	(0.087)	(0.096)
Right President	0.219**	0.292***	0.243**
	(0.088)	(0.104)	(0.106)
Right House	−0.082	−0.051	−0.003
	(0.057)	(0.061)	(0.062)
State Fixed Effects	no	yes	yes
Time Fixed Effects	no	no	yes
Observations	7,069	7,069	7,069
Adjusted R^2	0.004	0.005	0.008
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 1.5: Descriptive Information for the Control Variables

Label	Description
Gini	Gini Municipal
Income_sm_1	Share of Families Receiving one minimal wage
Income_sm_20	Share of Families Receiving 20 minimal wage
Female	Share of Female Population
Gdp_pc	GDP Per Capita
Ed_lit	Literacy Rates
Rural	Share of Rural Population
Deaths_Pre_Campaing	Deaths Before the Election
Income_pc	Income (Wages) Per Capita
Income_tax	Income (Tax Returns) Per Capita
Tax Returns	Share Population Who Declared Taxes
Left President	Vote Share Leftist Presidential Candidate
Right President	Vote Share Conservative Presidential Candidate (PSDB, PSDB, PSL)
Right House	Vote Share Conservative Party House (PSDB, PSDB, PSL)

1.8 Appendix B. Robustness Check: Law-and-Order versus Party Issue Ownership

To ensure robustness for the findings, in this appendix, I estimate models directly controlling for the alternative explanation positing that issue ownership explains how criminal violence makes some parties more competitive.

I modify the paper's main models using a distinct dependent variables that directly estimates the degree to which law and order candidates win more/less compared to the front runner conservative party for each electoral cycle. In these models, I use the log odds ratio between the vote share of law and order candidates and the House vote share of the front-runner conservative party and evaluate how electoral shocks and violence affect support for law and order. I use the PSDB for the years of 2010 and 2014, and the PSL for 2018. These parties had both the front-runners in the Presidential elections and won the most House seats among conservative parties for the each respective electoral cycle. Results go on the same direction as in the main paper.

Table 1.6: Regression Models: Robustness, Dependent Variable Ratio Vote Share Law and Order and Conservative Front Runner Party

	Dependent variable:					
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-8.189^{***}	-8.133^{***}	-5.519^{***}	-5.419^{***}	-539.632^{***}	-538.958^{***}
	(0.999)	(0.999)	(1.068)	(1.068)	(11.898)	(11.901)
Pre-Electoral Homicide Shock	0.059	-0.030	0.035	-0.075	0.004	-0.065
	(0.045)	(0.061)	(0.042)	(0.057)	(0.038)	(0.051)
Homicides Before Elections	0.012^{***}	0.009^{***}	0.012^{***}	0.008^{***}	0.003^{**}	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)
Pre-Electoral Homicide Shock x Homicides Before Electoral Campaign		0.007^{**}		0.008^{***}		0.005^{**}
		(0.003)		(0.003)		(0.003)
Controls	yes	yes	yes	yes	yes	yes
State Fixed Effects	no	no	yes	yes	yes	yes
Time Fixed Effects	no	no	no	no	yes	yes
Observations	8,493	8,493	8,493	8,493	8,493	8,493
Adjusted R^2	0.019	0.019	0.146	0.147	0.311	0.311
Note:						*p<0.1; **p<0.05; ***p<0.01

1.9 Appendix C. Regression Tables for Partisan Effects of Heuristics Processing

Table 1.7: Regression Models: Partisan Models

	Dependent variable:					
	Conservative Strongholds			Leftist Strongholds		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-9.660^{***}	-8.712^{***}	-479.638^{***}	-6.915^{***}	-8.916^{***}	-407.701^{***}
	(1.022)	(1.064)	(10.443)	(1.060)	(1.097)	(12.110)
Pre-Electoral Homicide Shock	-0.122^{**}	-0.102^{*}	-0.074	0.050	0.007	-0.032
	(0.062)	(0.056)	(0.046)	(0.065)	(0.058)	(0.051)
Homicides Before Electoral Campaign (t_{-9} to t_{-4}	0.007^{***}	0.012^{***}	0.004^{**}	0.009^{***}	0.009^{***}	0.004^{*}
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Pre-Electoral Homicide Shock x Homicides Before Electoral Campaign	0.011^{***}	0.009^{***}	0.005^{**}	-0.002	-0.002	-0.0003
	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)	(0.003)
Controls	yes	yes	yes	yes	yes	yes
State Fixed Effects	no	yes	yes	no	yes	yes
Time Fixed Effects	no	no	yes	no	no	yes
Observations	4,419	4,419	4,419	3,815	3,815	3,815
Adjusted R^2	0.186	0.340	0.550	0.096	0.286	0.446
Note:						*p<0.1; **p<0.05; ***p<0.01

1.10 Appendix D. Factorial Experiment

In this section, I present an example of the instruments used in the Factorial experiment. The experiment was included in a national online survey in Brazil with 2.400 respondents. The survey was fielded by Netquest-Vanderbilt, with probabilistic samples drawn by the LAPOP team in Vanderbilt from users registered with Netquest.

The experiment randomly assign respondents to one set of 2 messages. Each respondent sees two built tweets side by side. The conjoint design consists on random rotation of four features for each tweet: the header, the text (a statement about security in Brazil), the author of the statement, and an image below the tweet. Table 4.1 presents the variation in the levels for each of the four features above described. After seeing the tweets, I ask the respondents which one they would share in their wall.

Figure 1.7 provides an example of the conjoint task. This is just one of the 256 combinations between the four features that the factorial was rotating upon. The example below varies only the endorsement and the image of the tweet. The author and the message of the tweet, although not literally the same to avoid the respondent to read the same tweet, are the same.

Figure 1.7: Conjoint Experiment. In this example, the tweets have the same author, the same content for the text, an different endorsement by a politician, and a different image.

1.10.1 Numerical Results

The Table 1.9 presents the numerical results for the models discussed on figures 1.4 e 1.6 in the main paper.

Table 1.8: Factorial Experiment: Support for Punitive Messages and Law and Order

Feature	Choices
Header	
	Liberal Media (*Folha de Sao Paulo*)
	Conservative Media (*O Antagonista*)
Content	
	Punitive Message (More Punishment to Criminals + Harsher Laws)
	Redistributive Message (More Investiment in Education and Opportunities for Youth)
Endorsement to the Message	
	Civil Federal Deputy
	Law and Order (with military Rank) Federal Deputy
Image	
	Neutral
	School
	Military Intervention
	Independent

Table 1.9: Regression Estimates: Numerical Results of Factoral Experimental Design

	Dependent variable:			
	Model AMCE	Model AICE (Partisan)	Model AICE (High x Low Income)	Model AICE (High x Middle Income)
	(1)	(2)	(3)	(4)
Intercept	0.306***	0.492***	0.298***	0.325***
	(0.014)	(0.023)	(0.032)	(0.016)
Liberal Media	−0.0002	−0.010	0.006	−0.010
	(0.012)	(0.016)	(0.027)	(0.014)
Law and Order Endorsement	0.025**	−0.017	0.055**	0.010
	(0.012)	(0.024)	(0.027)	(0.014)
Punitive Content	−0.151***	−0.360***	−0.152***	−0.160***
	(0.012)	(0.024)	(0.031)	(0.015)
Image School	0.043***	0.004	0.041	0.037**
	(0.015)	(0.019)	(0.032)	(0.018)
Image Military	0.010	−0.005	−0.008	0.010
	(0.015)	(0.019)	(0.034)	(0.018)
Conservative Voter		−0.270***		
		(0.027)		
Law and Order Endorsement x Conservative Voter		0.071**		
		(0.031)		
Punitive Content x Conservative Voter		0.388***		
		(0.031)		
High Income vs Middle Income				−0.046
				(0.036)
High Income vs Low Income			−0.044	
			(0.042)	
Punitive Content x High Income vs Middle Income				0.140***
				(0.053)
Punitive Content x High Income vs Low Income			0.127**	
			(0.060)	
Observations	4,726	3,028	1,078	3,598
Adjusted R^2	0.031	0.073	0.021	0.031
Note:				*p<0.1; **p<0.05; ***p<0.01

1.11 Appendix E: Survey Human Objects

Human Subjects approval for the survey was granted by the IRB's University of Maryland, College Park, on February 17, 2020. The project approval is registered under the identification code [1552091-1]. Consent was requested at the beginning of the survey and a disclaimer provided respondents with information on how to contact the researchers or IRB if needed. Details of the application, recruitment, consent, and disclaimers follow:

1.11.1 Subject Selection

a. Recruitment: The survey respondents were recruited by Netquest for the on-line survey, from their panel of Brazilian respondents.

b. Eligibility Criteria: Participants were at least 18 years old of age and nationals from Brazil or Mexico.

c. Enrollment Numbers: A total of 2,400 respondents. The number of participants met national representative samples for each country and enough statistical power for the different experimental treatments in the survey.

1.11.2 Risks

We anticipate only minimal discomfort associated with this procedure in case participants do not agree with social media messages, or the topics covered by it. We mitigate this risk by allowing respondents to skip questions they do not feel comfortable answering, as indicated in the consent form.

1.11.3 Confidentiality

The PI and team receive a de-identified respondent ID number. No private identifying information was stored in the servers of the PI or any other member of the team. Thus for the full survey we will be able to adequately ensure the anonymity of all survey respondents.

1.11.4 Consent Process

The informed consent procedure provides participants explicit consent to proceed and informs of their right to skip questions and to discontinue the survey.

The online consent was granted by IRB by waiving written consent, given the following criteria: 1. Our research involves no more than minimal risk to the subjects. As we have stated, the only potential risk is minimal discomfort due to the nature of the questions asked, and we mitigate this discomfort by allowing participants to skip questions. 2. The waiver will not adversely affect the rights and welfare of the subjects. All subjects in these pre-test and survey will be fully informed about their rights as participants and the nature of the study, and they will have access to the consent form online to save and print for their records. 3. This research could not practicably be carried out without the waiver because it is entirely performed online. Therefore, none of the co-PIs could gather written consent forms for all participants. 4. Whenever appropriate, the subjects will be provided with additional information after participation. Participants will have access to contact information for both co-PIs and IRB, allowing them to reach out in case they have any further questions.

1.11.5 IRB Approval letter

The official approval letter is available upon request.

2 Preferences for Police Allocation on Violent Democracies: An Insurance Model

Abstract

In this paper, I propose a theory to explain preferences for public security goods as an insurance model with endogenous risk and income incentives. From the model, I derive three predictions: (1.) wealthier individuals are more willing to invest in public security; (2.) the higher an individual is at risk of being a crime victim, the higher will be that individual's willingness to pay for police protection; and (3.) the joint distribution of risk and income will be positive, and as concerns about security increase, the income effects will be more pronounced. The empirical implications of the model are assessed using a behavioral experiment designed to measure preferences for police allocations conditional on spatial information about crime, property prices, and population. One key result emerges from the experiment: wealthier voters with high fear of crime choose to allocate more police in high crime areas, as well as in low-income areas.

2.1 Introduction

Over the past two decades, criminal activity and violence in Latin America have grown exponentially. Survey data indicate that, on average, concerns about personal security have shown high salience among citizens across the continent (Muggah and Tobón, 2018; Pérez, 2015). In Brazil, one of Latin America's most violent countries, official data from the United Nations provide a worrisome evidence of the violent ecology of Brazilian Democracy. In 1998, two decades ago, Brazil had a homicide rate of 22.6 people per 100,000

population (38,442 people killed in a single year), a statistic higher than the general homicide rate for South America, the most violent continent in the world. Twenty years later, in 2018, the Brazilian homicide rate jumped to 27.4 per 100 population, and a raw count of 57,338 thousand people killed (Murray et al., 2013; FBSP, 2018).

This worrisome trend has prompted criminologists and political scientists to pay increased attention to political and behavioral consequences of experiences of personal victimization. Recent literature has shown evidence of how victimization affects a wide range of attitudes and behavior, such as institutional trust and democratic attitudes (Krause, 2014; Pérez, 2015; Merolla et al., 2013; Malone, 2010), political participation (Blattman, 2009; Ley, 2017b; Trelles and Carreras, 2012), and support for extra-legal penal policies (Visconti, 2019; Garcia-Ponce et al., 2019; Bateson, 2012; Singer et al., 2020).

This paper presents a novel theory integrating two distinct micro-level incentives as the main determinants of how citizens form their preferences for investment on personal security. Using economic models of welfare preferences on democratic politics as a foil, I propose a model that develops micro-level foundations to understand individual preferences for security and how crime exposure and income heterogeneity affect citizens' strategic decisions. Although I work on a general theory of preferences for protection, the empirical work focuses on Brazil, a textbook case of a violent democracy. I derive my hypothesis, which I pre-registered before running the experiments, based on my theoretical argument, and validate my expectation using a novel experimental design to measure preferences for police allocation.

I argue that the theoretical and methodological challenges of explaining individual-level decisions to support more protection from the State bear striking similarities to the

economic models describing welfare preferences. Economic models of welfare provisions assume individuals shape their choices by considering the redistributive and insurance effects of social policies. Existing models of welfare preferences argue that individuals decide their level of support for social systems considering: (i) the net impact between paying taxes and receiving social policies provision by the State (Meltzer and Richard, 1981; Romer, 1975; Rueda and Stegmueller, 2015; Lupu and Pontusson, 2011), and (ii) how much protection one needs from the State to counteract uncertainty of an exogenous income loss due to fluctuations in the labor market (Moene and Wallerstein, 2001, 2003; Iversen and Soskice, 2001; Rehm, 2016).

My framework expands on this logic behind welfare models to understand individuals' preferences for protection when concerns about crime affect their strategic decisions. Three predictions emerge from my theoretical model. First, income effects predict that wealthier individuals are more willing to invest on public security. Second, on the insurance side, I expect that the higher an individual is at risk of being a crime victim, the higher the individual's willingness to pay for police protection. Third, I expect risk-aversion among the wealthier to grow slower under conditions of high crime exposure. As a consequence, when concerns about personal security grow, I expect that the income effect will grow faster, prompting greater concerns about security among wealthier individuals.

I use a novel experimental design to examine the empirical implications of my theory. The design combines a framing experiment with a realistic behavioral exercise to measure individual level preferences for police allocation. The survey experiment is embedded on a national online survey in Brazil. The experiment measures respondents' sensitivity to

protection as a consequence of spatial information about crime, income inequality, and population. The survey presents the respondent with a short vignette and three maps varying the distribution of crime, income, and population in a hypothetical map. Faced with the three treatments, I ask the respondents to act as a social planners deciding the location of six police stations on one of these three maps. The survey measures the area in the map of the police stations under the three distinctive treatment conditions, which I use as a latent measure to understand how information about crime, income, and population shape how people make strategic decisions about police allocation.

The paper proceeds as follows. The next section introduces the theoretical model of security preferences as an insurance dynamic. In the following, I present the experimental design. Then, I derive my hypotheses, and present my measurement and modeling choices. Finally, the main results are presented. I conclude with general remarks about the contributions of the paper, and future steps on this research agenda

2.2 Preferences for Security as an Insurance Dynamic

How do voters form their preferences for security investments and police allocation on violent democracies? In this section, I develop a political economic framework with well-defined micro-level incentives which offer several falsifiable hypotheses to answer the above-mentioned puzzle. My most general argument states that the micro-level incentives and the costs associated with public provision of security follow a structure similar to those from models explaining preferences for welfare policies. Welfare models assume that income trade-offs from taxation schemes, market-insurance concerns at the individ-

ual level, and their interaction explains how much taxation an individual is willing to bear to finance social policies. I discuss how these three elements can also be used to explain citizens preferences for public investment on protection.

To summarize my argument, I contend that three mechanisms motivate my theoretical model: (i) income inequality in weak states generates increasing returns from protection in favor of the affluent; (ii) wealthy voters are more likely to disregard policy-oriented preferences for the sake of more protection; (iii) and because the poor and ethnic minorities are more likely to be targeted by iron-fisted policies, higher concerns about personal security make the rich less-risk averse. Therefore, these insecure affluent will grow more supportive of investments on public security.

Based on these mechanisms, three main predictions are formulated from my theoretical model. I show how income differences make top-income citizens more willing to invest in publicly funded personal protection, a dynamic I refer to as "redistributive/income effect". Similarly, individuals who show greater concerns about crime or are directly affected by crime victimization will also show increased sensitivity to invest in police protection. I refer to this dynamic as an pure insurance incentive. And, as crime becomes more salient and concerns about security increase, the redistributive effects will be more pronounced. This expectation is a consequence of the positive correlation between risk functions and income status. I advance this last expectation based on a broader discussion about the quality of police provision on violent societies and inequality; historical trends on police abuses against social and racial minorities will reduce the costs of an increase on police provision for high-income citizens because these citizens are less likely to be targeting by police abuses. In the following sections, I discuss further the predictions

and mechanisms of the model.

The Redistributive Dimension of Police Provision

The classic Meltzer and Richard (1981) economicmodel I build upon provides an elegant presentation of the micro-level incentives for social policy preferences and derives predictions for the amount of government provision for welfare policies in countries with open democratic competition. The model assumes that government finances some level of individual consumption through social benefits funded by the collection of taxes. Under a proportional income tax system, the higher the income, the higher the taxes one pays to the state, with the opposite holding for lower-income individuals. Thus, at the micro-level, the model predicts that income has a negative slope on preferences for redistribution. At the micro-level, the model predicts that income has a negative slope on preferences for redistribution.

This simple intuition makes predictions at the macro-level easy to derive. Considering political implications at the macro-level, assuming a system of universal suffrage in which voters weigh their decisions in a unidimensional space and have single-peak preferences, the model predicts that the median voter is pivotal in deciding the level of taxation, and consequently the amount of redistribution. When the median voter is far away from the mean income of society, the support is higher for government spending in redistribution. Applying the model to social policy, the models are thus-called redistributive because the wealthy voters finance the costs of welfare systems in which the poor disproportionately receive the benefits. Although macro-level empirical evidence

is somewhat limited, Meltzer and Richard (1981)'s mode has profoundly influenced the political science scholarship and generated a robust scholarship on comparative political economy. For example, the materialist engine behind the model has been extended to studies explaining macro-level redistributive effects of electoral rules and coalitions (Persson and Tabellini, 2003; Iversen and Soskice, 2006), costs of political participation (Franzese, 2002; Kenworthy and Pontusson, 2005), regime changes (Boix, 2003), and how tax systems and social policy design affects redistributive preferences (Beramendi and Rehm, 2015; Holland, 2018a).

The theory I propose to understand preferences for security investments follows a dynamic similar to materialistic explanations of redistributive economic models of welfare. However, due to differences in the costs and benefits between police provision and social welfare, I argue the incentives on preferences for security follow inverse incentives. In other words, in terms of security policies, the wealthy pay marginally lower costs and receive marginally larger benefits from protection. Two mechanisms explain this prediction: (i) heterogeneity of assets which generate increasing returns from protection for the rich; (ii) diminishing marginal returns from consumption, which increase the likelihood of affluent voters giving lower weight to policy-oriented preferences and investing more in protection.

The first mechanism is derived from the fact that rich voters have more assets to protect themselves from crime exposure. Therefore, even if we assume that the costs of protection are proportional to income, the same unit of protection renders larger benefits for the wealthier citizens. Let us discuss an example for the model. Consider a situation when the social planner has z units of protection to provide to n citizens and the assets

A_{rich} ¿ A_{poor}. If the social planner provides the same z to the rich and poor voter, and the returns of protection are proportional to the value of the assets, rich voters extract larger benefits of having an extra unit of protection. In a more intuitive setting, if a city mayor decides to place a police officer in front of a house in a gated community rather than in a poor neighborhood, this same unit of protection renders greater marginal benefits for the rich owner of that house.

At the same time, this dynamic is reinforced by a second mechanism derived from diminishing marginal returns in consumption, which makes the upper-class more sensitive to other type of preferences, such as security policies. Diminishing marginal returns assume that any extra unit of consumption brings lower utility. As a consequence, wealthier voters are more likely to give away one unit of consumption in favor of other policies which are not in their most immediate interest. To illustrate, assume a democratic context in which wealthier voters care more about the management of the economy, while poor voters care more about social policy [1]. Further, assume that a voter derives additional utility when supporting a policy converging with that voter's direct interests. Diminished marginal returns from consumption make wealthier voters more likely to support policies which are not in their direct interest, such as a more competent government managing the economy. These voters may also support other types of policies, which bring indirect gains to their personal utility.

When connecting both mechanisms, we find a logical explanation for why high-income voters usually align with parties which they perceive as being more competent in dealing

[1]This is not a hard assumption about voter preferences, as we can see from other examples in the scholarship (Calvo and Murillo, 2019)

with issues related to security and immigration (Petrocik, 1996; Egan, 2013; Boldt, 2019; Petrocik, 1996; Beckett, 1999). Building upon these two behavioral mechanisms, my theory argues that that incomes gains make voters more likely to change from their previous preferred policy choice, and bear some loss in consumption, in favor of candidates and policies with stronger security appeals. The wealthier the individuals, the stronger the appeals of protection are likely to influence their political behavior.

The engine behind this argument reassembles the model developed elsewhere to explain why the wealthy are more likely to support more redistribution when inequality increases (Stegmueller et al., 2017; Rueda and Stegmueller, 2015). In these models, income differences and diminishing marginal consumption patterns turn wealthier voters more altruistic, making them more willing to extract indirect benefits from redistribution. In my argument, I state that for upper-income sectors investing in security is as feasible a strategy as the options discussed in the altruistic models of policy preferences. What differentiates both strategies are the context where these voters are making decisions. Contextual variables and scope conditions in my theory play an important role in explaining why investment in security will be given greater weight.

Research in Latin America abounds with evidence showing that social expenditures are truncated, have done little to aid the poor, and have historically been developed to support middle-class and employed sectors (Díaz-Cayeros and Magaloni, 2009; Haggard and Kaufman, 2020; Garay, 2016; Santos, 1987; Kerstenetzky, 2012). In addition, more recent research shows how this dynamic affects the willingness of the wealthy to invest on welfare policies (Berens and von Schiller, 2017; Holland, 2018a). Because returns from investing on welfare are uncertain in returning a reduction on poverty and inequality,

in Latin America, the punishment option is a more feasible strategy for upper-income sectors. In this context, altruistic behaviors are less likely to drive citizens' decision.

The first micro-level incentive of my model can be summarized by the statement that wealthy citizens receive higher marginal benefits but pay relatively smaller costs for increasing investments in publicly funded protection. Consequently, my model predicts an inverted redistributive logic for individual levels of incentives regarding provision of protection in which wealthier voters are more inclined to support security policies and to vote for candidates with strong security agendas.

Security Risks: The Insurance Effects

An important theme in the literature on welfare models and their macro-level consequences considers how uncertainty about income affects citizens' preferences. Most of this rich literature focuses on such employment market-related issues as a source of uncertainty and incorporates these concerns into individuals' decisions about optimal levels of welfare taxation. The logic of the argument is as follows: beyond redistribution, social systems also work as a public source of insurance related to income losses, such as accidents, unemployment, economic crises, and other types of risk (Moene and Wallerstein, 2001; Rehm, 2016; Moene and Wallerstein, 2003; Dryzek and Goodin, 1987; Mares, 2003). In this argument, voters do not consider solely redistributive aspects, but also discount their uncertainty about future income by buying insurance from the government.

As a consequence, while heterogeneity in income explains the redistributive part of welfare policies, risks at the individual level explain emergence and adoption of insurance-

focused welfare policies. As with most political economy models, voters' micro-level preferences are the key starting point on these theoretical and empirical enterprises. Thus, a solid literature emerged mitigating the mechanical predictions from the Meltzer and Richard model and incorporating risk as a key predictor of micro- and macro-level consequences of welfare models. For example, Mares (2003) explains how the incidence of risk across groups and the importance of insurance for workers shapes national schemes of social provision and cross-class alliances. The seminal work of Iversen and Soskice (2001) seminal work finds evidence at the micro-level for a positive correlation between skills specificity and preferences for social policy. Rehm and co-authors argue that exposure to unemployment risk and the individual's relative position within the risk distribution are the primary sources of social policy preferences for heterogeneity in the United States and in an comparative perspective (Rehm, 2009, 2016; Hacker and Pierson, 2014). Finally, targeting dimensions of welfare policy adjudication between more or less universal (employed vs unemployed) and heterogeneous effects of inequality shocks have also been argued as crucial determinants on the insurance incentives of individual preferences (Moene and Wallerstein, 2001).

I use this literature to argue that concerns about personal security and crime victimization produce similar effects on citizens' willingness to invest in public funded security policies. Above all, being a crime victim produces a negative shock on citizens personal utility, both through direct income effects and psychological consequences. In other words, being a crime victim represents a loss of utility with dynamic consequences in the same fashion as the risk of losing one's job. Security risks are likely to produce similar micro-level incentives as job insecurity, in which citizens who feel more insecure are more

willing to invest in security policies.

Therefore, my theory that key micro-level implications for the effects of concerns about personal insecurity is intuitive: higher exposure to risk makes voters more willing to invest in protection. As in welfare models, the reason for this relationship is that citizens are risk-averse and prefer to invest more on security in conditions of uncertainty. Although a central component of such decisions can go to private markets providing public protection through the police is a crucial function of the governments. Thus, high exposure to criminal violence, a resilient characteristic of Latin American democracies (Arias and Goldstein, 2010; Yashar, 2018; O'Donnell et al., 2004), renders a higher disposition of voters to support more protection from the State. Thus, the second general prediction of the model expects that as crime increases, at the individual and aggregated level, the willingness to buy protection in forms of security policies grows.

The Correlation Between Income and Risk Effects: The Insecure Affluent

The previous two sections have focused exclusively on risk and income as two separate micro-level incentives. However, the reader can already anticipate how these two factors are likely to correlate both in terms of the original economic models for welfare, and more importantly, when considering the extension of these models to preferences for security.

While exposure to risk tends to be a standard predictor for the previously reviewed insurance models, s the intricate relationship between income and risk is a more controversial topic in the literature. For example, in the Moene and Wallerstein (2001, 2003)

model, insurance is a common good and the demand for insurance increases as income rises. The logic behind the model is that wealthier people have more to protect from income losses, leading them to buy more insurance from the public market. By contrast, several empirical papers on preferences for insurance policy have shown that when controlling for risk, income is actually negatively correlated to welfare preferences (Iversen and Soskice, 2001; Rehm, 2009; Hacker and Pierson, 2014). As Rehm (2016) argues, the joint distribution of income and risk is more like an empirical question rather than an assumption, and is likely to vary over time across countries, but may also be conditional on which policy area is being investigated.

A key contribution of my framework is that it precisely considers theoretically, and examines empirically, how income differences and perceptions about personal insecurity interacts when modeling preferences for investment in security. Previous scholarship shows evidence that historical trends of income inequality, state capture by economic elites, and legacies of authoritarian experiences affect the quality and overall coverage for policy provision by the state (Holland, 2018a; Diaz-Cayeros et al., 2016; Frantz, 2018; Trejo et al., 2018). Considering these well-documented historical dynamics at unequal and violent democracies, particularly its long-term effects on the quality of the police provision, my theory expects the existence of a positive joint distribution between risk and income, similarly to the insurance model described by wallerstein2001.

Police provision and the costs attached to inadequate provisions of police service is a crucial component of this family of government inefficiencies. Let us briefly consider the case of Brazil. Police in Brazil have been marked by excessive use of force, mainly targeting underprivileged neighborhoods and social and racial minorities (Bueno, 2012; Cano,

1997; Magaloni and Cano, 2016). Furthermore, previous research has shown how the police in Brazil use legal instruments to justify and hide their indiscriminate use of violence (Denyer Willis, 2015; Misse, 2011), taking advantage of weak vertical and horizontal mechanisms of oversight from other institutions (Brinks, 2007; Ahnen, 2007). Similar dynamics occur in other Latin America countries, as well as in the United States (Mummolo, 2018; Davenport et al., 2011; Lacey and Soskice, 2015; Brinks, 2007), which makes my theoretical argument broad enough to be extended to other contexts where bias towards police provision correlates with economic inequality.

Consequently, the costs of increasing provision of police in an environment where this public good is biased against minorities speeds-up the inverse redistributive incentives depicted in my theory. An increase in the provision of security, particularly in states where the quality of police forces is low, and historical trends in police abuse are present, usually results in greater punitiveness by the State, thus rendering citizens more vulnerable to violence by a state agent. Assuming police violence as an externality in the model, more provision of police in an unequal society, with low-quality services, on average, renders a higher chance that police violence will occur.

However, the chance of being caught in an arbitrary police intervention is not equal for all the diverse social and ethnic groups of the society. As previously stated, the poor and ethnic minorities are more likely to be targeted by iron-fist policies. This dynamic makes the rich more willing to risk (less risk-averse) when considering an increase in the provision of security as a solution for the rise in crime. This difference explains the main prediction of my model.

As crime in a particular society rises, both incentives–redistribution and insurance–

influence political behavior in the same direction; both incentives push the insecure affluent to be more receptive to promises of protection. Given that the costs of increasing the provision of security are not equally shared across income groups, a rise in crime makes affluent voters more willing to discount externalities from low-quality police provision and to buy more protection. In other words, the affluent pay marginally lower costs for an increase in police provisions and have higher incentives to support more protection by the State.

The implications of the model are summarized in Figure 2.1. I expect that income and levels of violence will be associated with support for police protection. The slope of both curves in Figure 1 captures the income effect, while the change on the intercept represents my hypothesis on the insurance component. For prediction three, the effects of positive marginal gains for protection to the wealthy and the effects of externalities from low-quality police provision render a different slope for both curves. Under high levels of crime, the income effect differs starkly from that under low levels of crime.

In the next section, I introduce a behavioral experiment designed to measure preferences for police allocation. The experiment's main focus is to separate the redistributive and insurance effects described in the theory section. I first introduce the experiment. I next present pre-registered hypotheses derived from the theoretical model. I then conclude with the modeling choices (also pre-registered) to test for the results.

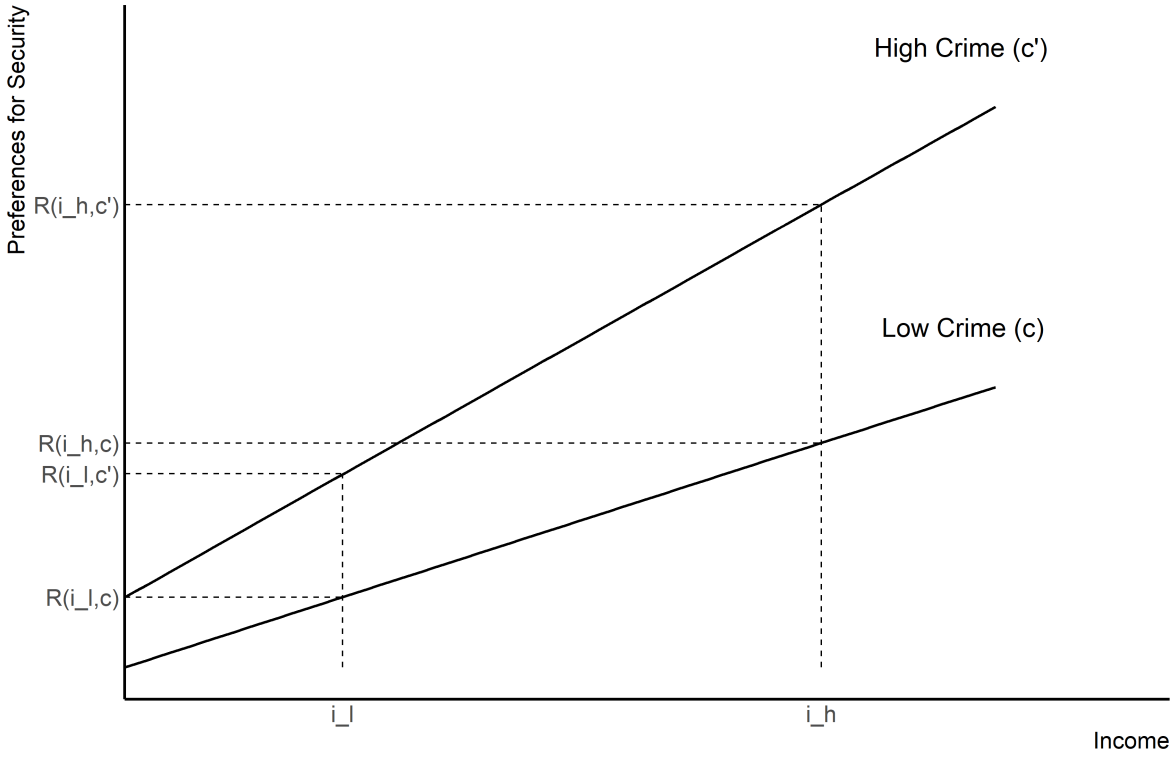


Figure 2.1: Income and Insurance Effect on Support for Tough-on-crime

2.3 Experimental Design

The experimental design is embedded in a national online survey conducted in Brazil. The survey uses a national probabilistic sampling, and collects information online. The survey recruited 2,100 participants, and it was fielded by Netquest-Vanderbilt, using a probabilistic samples drawn by the LAPOP team at the Vanderbilt University.

2.3.1 Experiment: Preferences for Police Allocation

My experimental exercise combines two components: a framing experiment and a behavioral exercise on police allocation. First, I design the framing to capture the micro-

level incentives explaining preferences for protection. The experiment initially exposes respondents to vignettes about these three incentives. Before the respondents start the behavioral exercise, the experiment provides a short text explaining the task. The respondents assigned the crime and property price conditions receive a framing vignette about the high incidence of crime in Brazil. By contrast, the respondents assigned to the income distribution condition read a vignette highlighting how income inequality works as an explanatory factor for the crime rate in Brazil. The population treatment group reads a vignette depicting only the instructions of the experiment.

After that, I analyze whether being exposed to information about crime, income inequality (property price), and population has had any effect on the respondents' sensitivity to the allocation of public security goods. I capture respondents' preferences using a behavioral exercise where respondents are asked to allocate police stations on a map colored with the same three factors: crime rate, income distribution, and population. The experiment uses the same map for all three conditions, only varying the description of the information depicted in the map in each treatment condition. The main assumption in the experiment is that the allocation of police stations works as a proxy for latent preferences at the individual level for investment on public security. Table 2.1 presents the wording, translated to English, for each condition.

After reading the vignettes, the respondents read the following statement: "On the map below, choose where to place six police stations. Choose by clicking the locations of police stations. Consider where policing is most necessary." Respondents are then assigned to the corresponding map depicted in the figure .

The respondents receive a fixed number of police stations to complete the task. I col-

Table 2.1: Map Experiment: Vignettes

Treatment Arm	Vignette
Treatment 1: Crime	In the last decade, violence in Brazil has skyrocketed. Brazilian cities have become some of the most violent cities in the world. In several polls, safety concerns appear as the main issue for the Brazilian population. Violent crime is a major economic, social, and political problem. In particular, it affects young people: their chances of going to school, finding a decent job, and having a better life. Scholars have argued that investing in policing is a solution to reduce crime. For this reason, in the following sections of this survey, we will ask you about your priorities regarding allocation of security.
Treatment 2: Income Inequality	Brazil is known worldwide as a nation with high levels of economic inequality. Brazilian cities have become portraits of places with substantial differences between rich and poor. In several polls, inequality appears as the main concern of the Brazilian population. Inequality is a major economic, social, and political problem that mainly affects young people: their chances of going to school, of finding a decent job, and of having a better life. Several studies point to the link between economic inequality and the high rate of violent crime in Brazil. For this reason, in the following sections of this survey, we will ask you about your priorities regarding allocation of security in Brazil.
Treatment 3: Population	In the following sections of this survey, we will ask you about your priorities regarding allocation of security in Brazil.

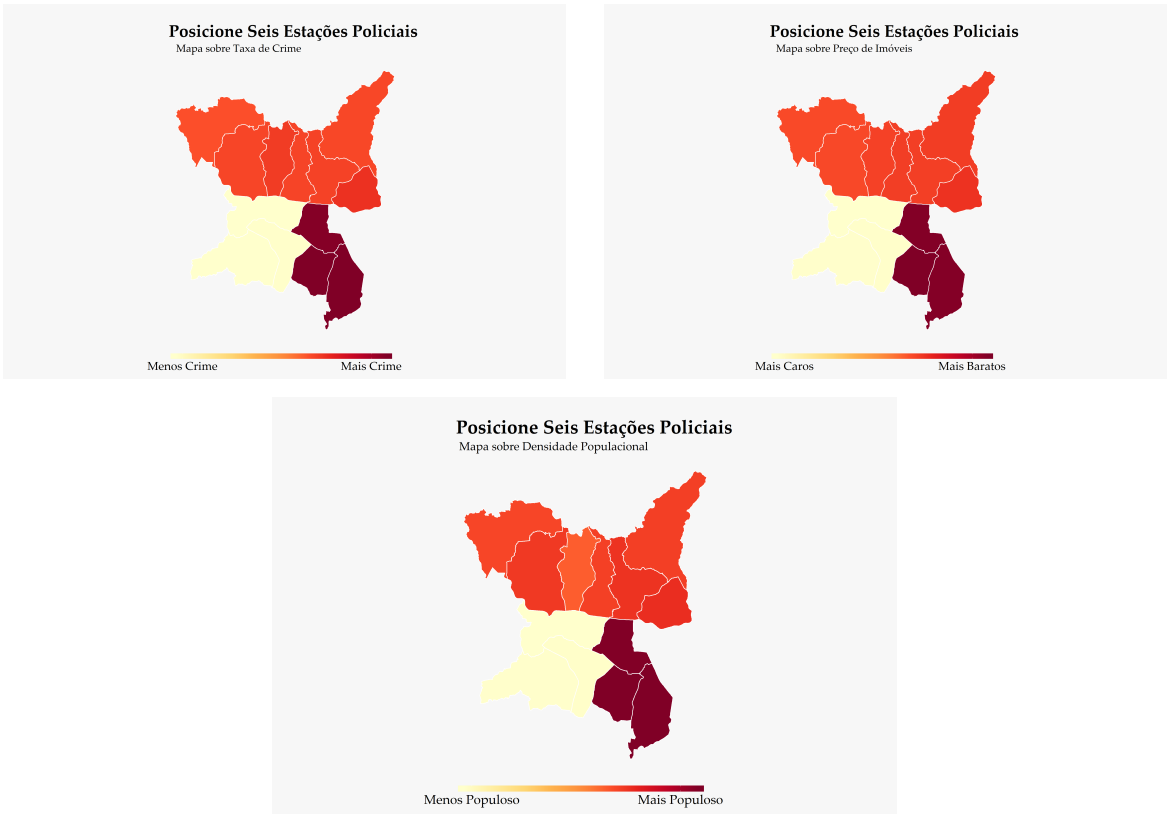


Figure 2.2: Map Experiment: Treatment Conditions. The top-left image shows information about the distribution of crime, and the top-right depicts the distribution of property prices, which works as a proxy for income. The bottom figures shows the population distribution, which works as a control baseline on my model.

lect the locations where respondents have placed stations, considering the distribution of crime, property price, and population. This quantity provides an approximation for the micro-level incentives depicted in the theoretical model. The outcome of interest for the experiment is the number of police stations placed in each of the three colored areas on the map.

Using the population map as a control group, the experiment measures the weight of information about crime and insurance aspects on the decision to increase police allocation in each area. The same logic can be extracted from the comparison between the income inequality maps and the population map. In other words, the experiment strives to approximate the extent to which considerations of insurance and income effects drive respondents' decisions about police allocation.

2.3.2 Hypotheses

n this section, I present how the experimental design allows testing the main predictions of my insurance model. The first two hypotheses allow me to differentiate between the two possible explanations for individual level incentives for protection. My theory argues police can work as a mechanism to (i) reduce risk (insurance), and (ii) to protect personal goods (income effects). These effects increase conditional on respondents concerns about crime, personal income, and their joint effects. Before testing for these heterogeneous effects, I investigate the average effect for the insurance and income effect. Therefore:

- *Hypothesis 1: Insurance effects:*
  - H1a: Respondents will allocate more police stations to areas with high crime

rates, compared to high population areas on the population map.

- *Hypothesis 2 - Income effects:*
  - H2a: Respondents will allocate more police stations to areas with high property prices, compared to high population areas on the population map..

These are general micro-level incentives, that are the main motivations of my model. In addition, the structure of my theoretical argument allows for several prediction for heterogeneous effects, particularly related to concerns about personal security, income and their interaction.

For the first, I measure the effects using both survey questions asking about self-reported crime victimization in the last twelve months, and respondents' fear of crime. My argument expects greater personal insecurity victimization to increase insurance concerns and to shape preferences for police allocation for high crime areas. Therefore:

- *Hypothesis 3 - Conditional Effects for Concerns about Personal Security*
  - H3a: Crime victimization and high fear of crime at the respondent level will increase the allocation of police stations in areas with a high crime rate, compared to high population areas on the population map.

Then, my theory's micro-level predictor expects the existence of redistributive concerns on preferences for police allocations. These emerge from the unequal distribution of costs and benefits for police allocation, and explain greater willingness among wealthier respondents to invest in the police. I expect the effect to appear in the maps for income

inequality and crime distribution. I predict that the former will show that wealthier individuals protect their assets, while the latter will show higher willingness to use police to target areas with high crime. I am agnostic regarding which effect will be larger. Therefore:

- *Hypothesis 4 - Redistributive Incentives:*
  - H4a: Wealthier respondents will increase the allocation of police stations in areas with high property prices, compared to areas with a high population in the population map.
  - H4b:Wealthier respondents will increase the allocation of police stations in areas with high crime rates, compared to areas with high populations on the population map.

Finally, following the model directly, I also expect income to increase conditional on the higher concerns about personal security:

- *Hypothesis 5 - The insecure affluent: Joint effects of income and risk:*
  - H5a: Wealthier respondents who show higher fear of crime will show positive and greater effects for the allocation of stations in high crime areas.

2.3.3 Statistical Model

Considering that assignment to the treatment is random, and the task respondents need to perform are precisely the same, the identification of the treatment effect is straightfor-

ward. The primary models presented in the results section will use the following specification:

$$Y_i = \alpha + \tau \mathbf{T} + \epsilon \tag{2.1}$$

Where Y_i represents the number of stations allocated by respondent i in the areas specified in each of the previous hypothesis. **T** is a factor variable indicating the treatment assignment at the respondent level. I estimate the equation using a standard ordinary-least-square models.

I assume that an unbiased distribution of public goods in a society should follow the distribution of its population; in other words, more populated regions should receive more public goods. Under this assumption, together with adequate randomization, the simple comparison between the outcomes for the crime and income map to the population map identifies the extent to which information about crime and wealth affects decisions on the allocation of security. Therefore for each model, I will perform a paired comparison between the treatment assignment (crime or income) to the population map. Thus, τ is the average treatment effect measured for each of the two treatment conditions **T**. β is a vector of coefficients for pre-treatment covariates **X** to be added into the model.

To estimate the conditional effects specified in hypotheses 3, 4, 5 and 6, I will add an interactive term for each treatment group using the survey items of interest. These items ask standard questions measuring experiences of crime victimization in the last twelve

months [2], latent measures for fear of crime [3], and personal income [4] The primary analysis will be based on the pre-specified statistical model. In the supplemental files, I present adjusted estimates and alternative regression specifications to increase robustness checks for the results.

2.4 Results

I start by presenting the overall average treatment effects (ATE) of the map experiment. From my theory, I expect respondents to allocate more stations to high-crime and high property price areas. The first expectation is driven by direct insurance risks; the second expectation is driven by income effects, with respondents' using the police to protect areas where wealth is higher. The experimental design provides a clean way to adjudicate between these two incentives.

Figure 2.3 presents the ATE for the crime and income inequality map. The population map is used as the baseline condition. In the supplemental files, I present the full regression table. I find strong support for the insurance incentives predicted by **H1**. The treatment effect for the crime map is positive, and statistically significant, as depicted in the first row on figure 2.3. Comparing with the baseline value (population map) for the number of stations, this effect indicates a increase by 13% in the number of stations on the crime map given, which in my argument is driven by insurance incentives. The effects

[2]The wording for the questions is as follows: "Could you tell me if, in the last 12 months, you have been a victim of any type of crime, such as assault, theft, or robbery"

[3]To measure fear of crime, I ask the respondents the three questions: "Could you answer how safe you feel with some of your day-to-day activities? Walking on a dark street alone (1) , Driving at night in your city (2) , Stay home alone (3) "

[4]The wording for the question is: "Imagine a staircase with 10 steps. In the first step, people with lower income are located, and in step 10, people with higher income are located. Where would you be located".

were null when comparing the number of station on the middle and low crime area.

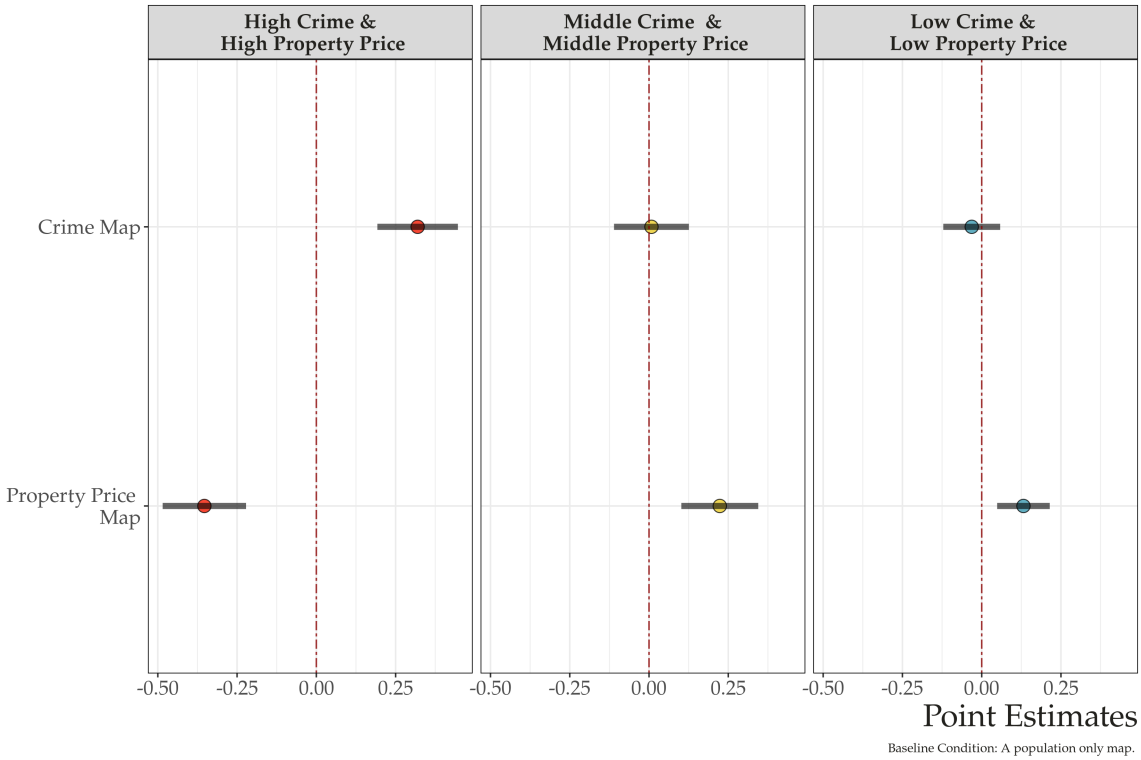
However contrary to my initial expectation, the income effect is negative for areas with high property prices, as depicted in the second row of figure 2.3. In other words, I find no evidence that respondents on average use the police to protect wealth; quite the opposite, police allocation seems mostly driven by concerns about crime, as the comparison with the crime treatment indicates. An unexpected trend emerges, however, in the property price behavioral exercise, that merits further discussion. On average, respondents allocate more police stations to middle level and low property price areas. This last finding, particularly the statistically significant effect for low property price, indicates support for over-policing in low-income areas, even when no information about crime is presented.

2.4.1 Insurance Effects: Concerns About Personal Security

I now proceed with the discussion of conditional effects on perceptions about personal insecurity. From my hypotheses, I expect greater concerns about crime to increase the willingness to allocate stations to high crime areas. Figure 2.4 presents the interactive models using fear of crime, while the results for direct experiences of victimization are discussed in the supplemental files.

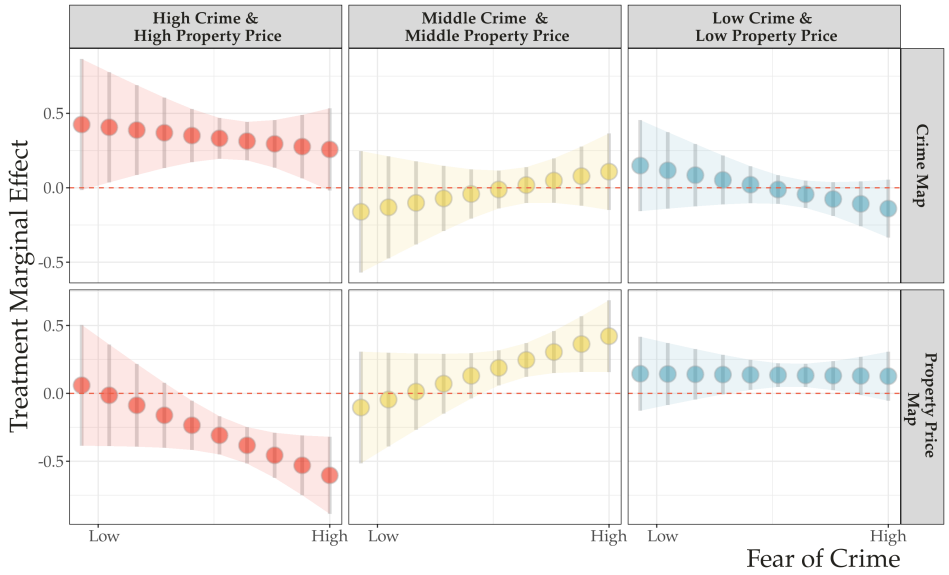
Results are mostly null. The upper-left plot on figure 2.4 shows a negative, but not statistically significant drop in changes in the treatment marginal effect, when comparing allocation of stations on high crime and high population areas between respondents who expressed higher levels of fear of crime. The same null finding appears when using direct experiences of victimization. Overall, the insurance effect discussed above seems strong

Figure 2.3: Map Experiment: Average Treatment Effects.



Note: The plot shows the average treatment effects of the crime and income map experiment. The dependent variable is the number of police stations allocated in each density area of the map. Estimates are based on the benchmark OLS model with 95% confidence intervals.

Figure 2.4: Map Experiment: Conditional Effects of Fear of Crime.



Note: The plot shows the marginal treatment effects of the crime and income map experiment conditional on the respondents' fear of crime and crime victimization. The dependent variable is the number of police stations allocated in each density area of the map. Estimates are based on the benchmark OLS model with 95% confidence intervals.

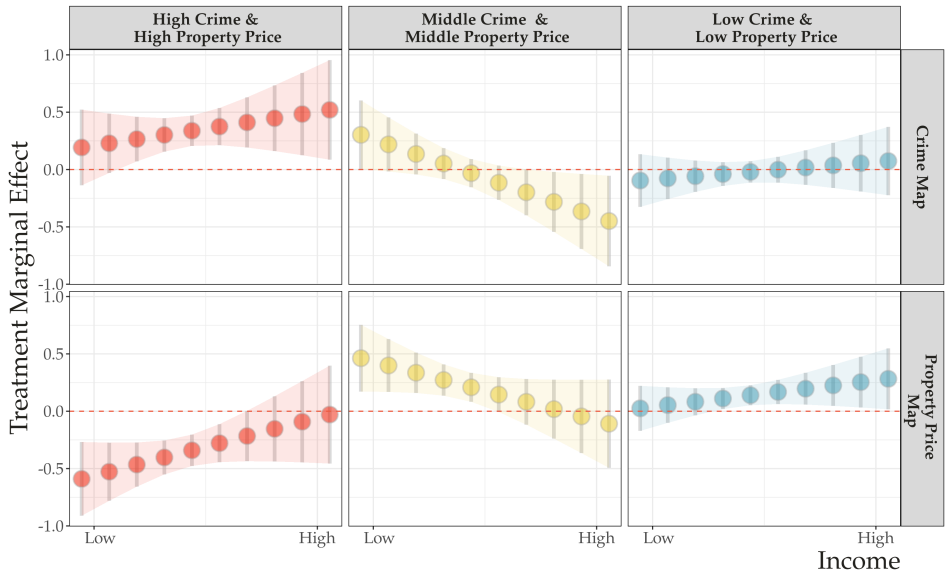
and not to change according to personal concerns or direct exposure to crime.

However, one more interesting pattern emerges on the property price map. Respondents with higher fear of crime significantly reduce the number of stations in wealthier areas, while they increase station numbers in areas with middle income levels. Explaining these inconsistent results poses a challenge. One possible explanation is that as is the case for the majority of Brazil's population (Neri, 2010), most survey respondents were from the middle-classes. Therefore, fear of crime increases the allocation of police towards areas where these respondents assume they would live in the hypothetical behavioral exercise. In other words, respondents become more protective as fear of crime increases.

2.4.2 Redistributive Effects: Conditional Effects of Income

In Figure 2.5, I present the marginal treatment effects conditional on respondents reported income. To remind the reader, the analysis assess the redistributive incentives on my model, which are summarized on H4a and H4b. The theory predicts that wealthier voters will allocate higher investments on police in the high crime and high property price areas of the behavioral exercise.

Figure 2.5: Map Experiment: Conditional Effects of Income.



Note: The plot shows the marginal treatment effects of the crime and income map experiment conditional on the respondents' income. The dependent variable is the number of police stations allocated in each density area of the map. Estimates are based on the benchmark OLS model with 95% confidence intervals.

Figure 2.5 provides support for both hypotheses, confirming a key empirical implication of the model. Considering both high crime and high property price areas, wealthier respondents allocate more police stations at high crime and high property price areas,

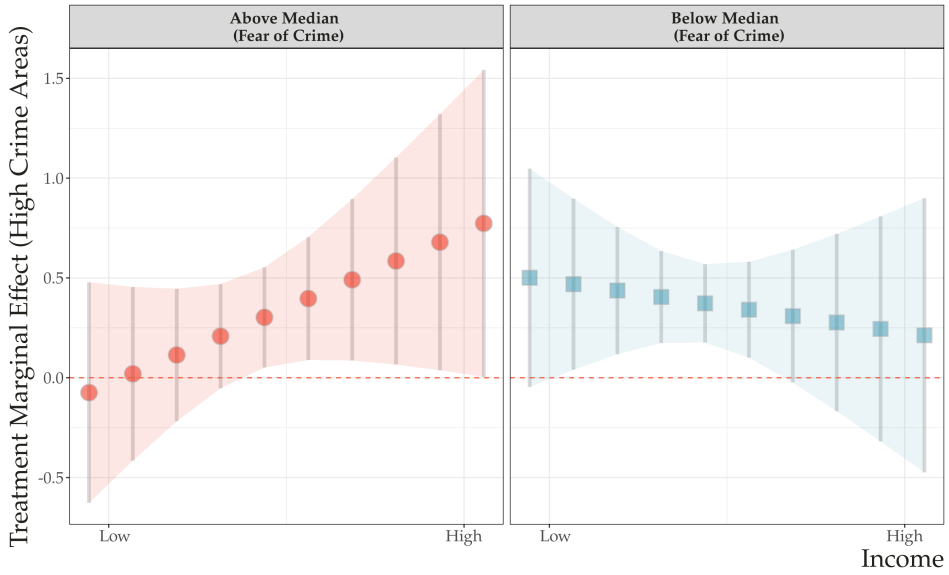
compared to the baseline population map. The interactive marginal effects are stronger on the property price map, but on both cases, there is a clear positive inclination. Results show that this positive effect occurs at the expense of a decline in police allocation to areas with middle levels of crime and middle range property prices.

In addition, an interesting pattern emerges on the bottom-right plot in figure 2.5.As income increases, the marginal effect for the allocation of police stations in areas with low property prices also increases, and becomes statistically distinct from zero. This conditional dynamic converges with the previous finding about average support for more police allocation in low-income areas. More importantly, it indicates that wealthy respondents are the subgroup strengthening this effect. In other words, the higher one goes on the income scale, the stronger is one's support for over-policing in low-income areas.

2.4.3 The Insecure Affluent: Joint effects of Income and Risk

To conclude, I present results analyzing the joint effect of income and risk perceptions on preferences for police allocation. To estimate this model, I divide the data between respondents who reported above/below the median fear of crime, and estimate the same interactive model between the treatment conditions and income at the respondent level. My theoretical expectation, discussed in *H5*, is that the joint distribution of income and risk is positive when dealing with security policies. As a consequence, wealthier respondents will be more or less risk averse as their concerns about crime increase. They will also show greater willingness to allocate stations in high-crime areas. I label this dynamic the *Insecure Affluent*

Figure 2.6: Map Experiment: Interactive Effect of Income Conditional on Fear of Crime.



Note: The plot shows the marginal treatment effects of the crime and income map experiment conditional on the respondents' income and fear of crime. The dependent variable is the number of police stations allocated in each density area of the map. Estimates are based on the benchmark OLS model with 95% confidence intervals.

Figure 2.6 presents the marginal effects conditional on the moderator income and fear of crime. The results show a strong confirmation for the *Insecure Affluent* hypothesis, and can be directly comparable to the figure , which presents my broader theoretical expectation. Among respondents with above median fear of crime, wealth is a positive and statistically significant predictor for the decision to allocate police stations to high crime areas in my behavioral experiment. By contrast, among those with below the median fear of crime, income has no heterogenous effects. In other words, as wealthy respondents become more concerned about crime, their willingness to invest in public security grows.

2.5 Conclusion

This paper develops and tests a novel micro-level theory to explain determinants for how citizens develop preferences for the allocation of public security goods. Building upon the literature on models for welfare policy preferences, I develop a theory where citizens have both income and risk incentives to support greater investment in security by the state. The model provides key empirical implications which I analyze relying on a behavioral experiment measuring preferences for police allocation using an on-line sample of Brazilian voters.

Results provide robust evidence confirming the insurance incentives discussed in model, with information about crime increasing by 13% the allocations of police stations in high crime areas. I find null effects for personal victimization or fear of crime increasing this insurance concern. However, income does show a robust effect on turning respondents towards greater investment in public security, and on pushing respondents who feel less safe to allocate more police to high crime and low-income areas in my experiment. This last empirical hypothesis has important broader implications. Several Latin American countries have seen an increasing share of their populations expressing greater support for more punitive approaches towards crime. At its core, These policies consist of using more police, who often have authorization to use extra-legal violence to reduce crime, thereby weakening more redistributive strategies. This paper's main result should a greater willingness of wealthier voters to be the main social groups in favor of these policy changes.

This essay presents several contributions. First, it develops a novel theory to explain preferences for investment in public security, in which clear micro-level incentives are fully described. Most previous work in political science and criminology has focused solely on the effects of victimization to measure support for penal policies, particularly more punitive approaches to reduce crime (Visconti, 2019; Garcia-Ponce et al., 2019; Krause, 2014; Baker et al., 2016b; Bateson, 2012). These studies lack a general model, where dynamics other than direct victimization or fear of crime, is considered. In developing my theory, I provide a general micro-level model to explain preferences for investment in security, and posit my work in connection with recent efforts in comparative political economy to model effects of concerns about security on policy preferences (Rueda and Stegmueller, 2015; Gingerich and Scartascini, 2018; Altamirano et al., 2020).

Second, this paper contributes methodologically to the emerging literature in the field of political behavior and crime. Most of the emerging literature on this field focuses on attitudes, rather than behavior, to measure political effects of crime (Visconti, 2019; Krause, 2014; Carreras, 2013; Ceobanu et al., 2011; Malone, 2010; Pérez, 2015). Although this literature has contributed significantly to our knowledge of the political effects of crime, its methodological choices, mostly using one-shot survey data and broadly conceived attitudinal responses, are prone to several threats related to causal identification and social desirability bias. As an alternative, my work develops a novel experimental design with a fundamental focus on measuring behavioral changes, rather than attitudes, and manipulating distinct incentives using a randomized assignment. My research design presents to the respondents a fixed budget (number of police stations), encouraging them to make behavioral decisions, and to consider trade-offs in their choices. This procedure is far su-

perior for previous exercises, and provides valid, more realistic inferences to understand behavior than asking attitudinal questions based on survey data, as most of the previous studies do.

Finally, the positive joint distribution between risk and income detected in my experiment has clear political implications. Contrary to arguments made elsewhere (Holland, 2013), my behavioral results and theoretical model show that income effects, and their interaction with fear of crime, are the main drivers for police allocations in high crime, and more importantly, low-income areas. In the broader Latin American context, where politicians advancing punitive policies with evident human and social costs have increased (Enns, 2016; Roberts et al., 2002; Davenport et al., 2011; Bueno, 2012; Brinks, 2007), my results indicates that mobilizing voters on the issue of security is a strategy likely to render higher electoral returns among the wealthy. These voters are at the same time less exposed to crime, but more willing to support harsh-on-crime policies with social and human costs paid by other social groups: lower-income, and racial minorities voters.

Preferences for Police Allocation on Violent Democracies: An Insurance Model

Supporting Information Files (SIF)

2.6 Appendix A: Numerical Results

In the main paper, all the results are presented using appropriate quantities of interest and graphical presentations. Here I present the numerical outputs for the figures presented in the paper.

Table 2.2: Regression Estimates: Average Treatment Effects

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.461^{***}	2.994^{***}	1.174^{***}
	(0.046)	(0.043)	(0.030)
Crime Map	0.319^{***}	0.008	-0.031
	(0.065)	(0.060)	(0.046)
Property Price Map	-0.353^{***}	0.223^{***}	0.132^{***}
	(0.067)	(0.062)	(0.042)
Observations	1,487	1,512	882
Adjusted R^2	0.063	0.009	0.015

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas. $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Table 2.3: Regression Estimates: Interactive Effects with Fear of Crime

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.167***	3.268***	0.954***
	(0.235)	(0.218)	(0.143)
Crime Map	0.481	−0.251	0.245
	(0.335)	(0.310)	(0.233)
Property Price Map	0.281	−0.279	0.151
	(0.339)	(0.313)	(0.208)
Crime Victims	0.102	−0.095	0.077
	(0.079)	(0.074)	(0.049)
Crime Victims x Crime Map	−0.056	0.090	−0.096
	(0.113)	(0.105)	(0.079)
Crime Victims x Property Price Map	−0.221*	0.175	−0.006
	(0.115)	(0.107)	(0.071)
Observations	1,484	1,509	879
Adjusted R^2	0.064	0.009	0.016

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas.*p<0.1; **p<0.05; ***p<0.01

Table 2.4: Regression Estimates: Interactive Effects with Respondents' Income

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.521***	2.735***	1.273***
	(0.117)	(0.104)	(0.074)
Crime Map	0.193	0.303**	−0.096
	(0.168)	(0.153)	(0.117)
Property Price Map	−0.590***	0.462***	0.025
	(0.164)	(0.149)	(0.100)
Income	−0.014	0.063***	−0.024
	(0.025)	(0.022)	(0.016)
Income x Crime Map	0.033	−0.075**	0.017
	(0.037)	(0.033)	(0.025)
Income x Property Price Map	0.056	−0.057*	0.026
	(0.036)	(0.032)	(0.022)
Observations	1,399	1,421	833
Adjusted R^2	0.066	0.014	0.013

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas.*p<0.1; **p<0.05; ***p<0.01

Table 2.5: Regression Estimates: Interactive Effects of Income with Respondents Above the Median of Fear of Crime

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.480***	2.872***	1.318***
	(0.194)	(0.166)	(0.103)
Crime Map	−0.074	0.049	−0.226
	(0.282)	(0.242)	(0.159)
Property Price Map	−0.646**	0.429*	−0.075
	(0.288)	(0.248)	(0.150)
Income	0.015	0.023	−0.032
	(0.042)	(0.036)	(0.023)
Income x Crime Map	0.085	−0.005	0.034
	(0.062)	(0.054)	(0.036)
Income x Property Price Map	0.035	−0.026	0.049
	(0.064)	(0.056)	(0.034)
Observations	452	453	272
Adjusted R^2	0.078	0.012	0.020

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas.*p<0.1; **p<0.05; ***p<0.01

Table 2.6: Regression Estimates: Interactive Effects of Income with Respondents Below the Median of Fear of Crime

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.540***	1.200***	2.676***
	(0.201)	(0.118)	(0.176)
Crime Map	0.501*	0.005	0.351
	(0.279)	(0.190)	(0.252)
Property Price Map	−0.402	0.139	0.314
	(0.263)	(0.151)	(0.235)
Income	−0.032	−0.018	0.089**
	(0.044)	(0.026)	(0.038)
Income x Crime Map	−0.029	0.001	−0.097*
	(0.060)	(0.040)	(0.053)
Income x Property Price Map	0.048	0.008	−0.057
	(0.057)	(0.033)	(0.050)
Observations	617	379	632
Adjusted R^2	0.047	0.016	0.006

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas.*p<0.1; **p<0.05; ***p<0.01

2.7 Appendix B: Conditional Effects of Crime Victimization

In this appendix, I present an additional analysis for the interactive effects of victimization using the experimental design. In the pre-analysis plan, I hypothesized that both fear of crime and direct victimization to increase the allocation of police stations on high crime areas. In the main paper, I focus most of the discussion on fear of crime. Here I present results using direct victimization. As in the fear of crime models discussed in the main papers, heterogeneous effects for crime victimization are null. Table 2.7 presents the results.

Table 2.7: Regression Estimates: Interactive Effects with Crime Victimization

	Model High	Model Medium	Model Low
	(1)	(2)	(3)
Intercept	2.462***	2.462***	2.462***
	(0.050)	(0.050)	(0.050)
Crime Map	0.313***	0.313***	0.313***
	(0.070)	(0.070)	(0.070)
Property Price Map	−0.338***	−0.338***	−0.338***
	(0.073)	(0.073)	(0.073)
Crime Victims	0.038	0.038	0.038
	(0.136)	(0.136)	(0.136)
Crime Victims x Crime Map	0.045	0.045	0.045
	(0.195)	(0.195)	(0.195)
Crime Victims x Property Price Map	−0.128	−0.128	−0.128
	(0.199)	(0.199)	(0.199)
Observations	1,465	1,465	1,465
Adjusted R^2	0.062	0.062	0.062

Notes: The baseline for all the three models is the map with information about the population distribution. Model 1 uses as dependent variables the number of police stations alocated by the respondent at high crime and high property price areas. Respectively, models 2 and 3 use the number of stations at medium and low crime and property price areas. *p<0.1; **p<0.05; ***p<0.01

2.8 Appendix C: Conditional Effects for Punitive Preferences

In this appendix, I present an additional analysis for the experimental design. This hypothesis was also pre-registered, however, I later decided to remove from the main paper in order to make results more straightforward. The analysis focuses on heterogeneous effects conditional on individuals' preferences for harsh-on-crime policies. Previous research has shown a strong correlation between victimization and preferences for punitive policies both using experimental and panel survey data (Krause, 2014; Visconti, 2019; Garcia-Ponce et al., 2019; Singer et al., 2020). This logic converges to the overall argument of my theory, and therefore, can be assessed with the behavioral map experiment. The pre-registered hypothesis is the following:

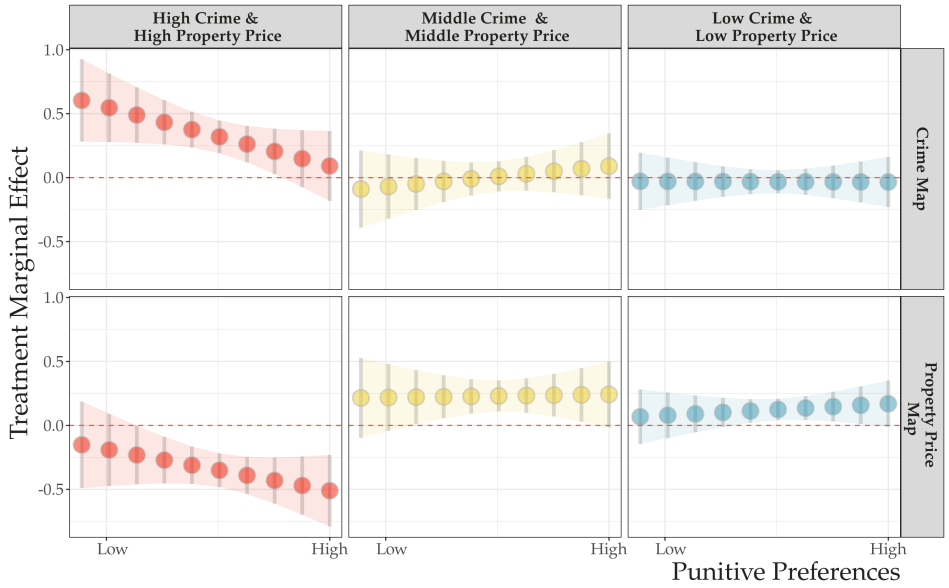
- *Hypothesis 4: Conditional Effects for Punitive Preferences:*
  - H4a: Respondents with more punitive preferences will increase the allocation of police stations in areas with a high crime rate, compared to areas with high population in the population map.

To measure support for harsh-on-crime policies, I use a battery of five survey questions capturing preferences for gun control, police militarization, support for the use of violence by the police, support for the death penalty, and other measures of extra-legal violence by the state. I average the answers for these questions, and use it as an interactive term in the statistical model presented in the main paper. Figure 2.7 presents the

marginal effects, as in the main paper, for bot treatments, and across all the three areas of the behavioral exercise.

Contrary to my expectations, I find no effect between increasing taste for punitive policies and willingness to invest in areas with high-crime (insurance) or high property price (income). However, a small, but statistically significant effect indicate the presence of a substitution dynamic on how more punitive voters form the preferences for police allocation. The willingness to increase the number of stations on areas with low property value (lower income) increases conditional on punitive preferences. This finding indicates that these individuals with stronger preferences for harsh-on-crime policies are more likely to over policing poor areas.

Figure 2.7: Map Experiment: Conditional Effects for Punitive Preferences



Note: The plot shows the marginal treatment effects of the crime and income map experiment conditional on the respondents latent preference for harsh-on-crime penal policies. The dependent variable is the number of police stations allocated in each density area of the map. Estimates are based on the benchmark OLS model with 95% confidence intervals.

3 Legislating for Violence: Issue Ownership and Occupational Heuristics in the Brazilian Congress

Abstract

How does politicians signal to voters about their issue advantages in democracies with weak party labels? The answer to this question is crucial for understanding partisan politics on newly democratized societies. This article uses the case of law-and-order politicians in Brazil to show how a candidate's professional background works as a crucial informational shortcut that politicians rely upon to signal to voters about their policy priorities and competence. I argue that a candidate's professional experience acts as the main mechanism through which issue ownership advantages works on democracies with fragmented party systems. To provide evidence for my theory, I use computational text analysis to analyze a large corpus of more than one hundred thousand congressional speeches spanning almost twenty years of legislative activity in Brazil. Results provide robust evidence that House Members' prior professional history explains work as a superior device explaining who talks about public security in the House, and report contrasting differences on how law-and-order representatives frame the issue of public security in their speeches.

3.1 Introduction

Political scientists have found ample evidence that voters use a variety of heuristics and cues to help them to make political decisions. Among those, partisan identity has long been offered as the most crucial source cue voters rely upon (Zaller, 1992; Green et al., 2004). For example,Several studies have shown evidence for partisan identity affecting a wide range of voters' attitudes, such as how voters evaluate candidates, their personal economic perceptions, support for democracy and authoritarianism, policy preferences, emotions and personal feelings towards those with a distinct partisan preference (Arceneaux, 2008; Druckman, 2001; Slothuus and De Vreese, 2010; Nicholson, 2012; Slothuus and De Vreese, 2010; Svolik, 2019; Evans and Andersen, 2006; Mason, 2018).

Partisan advantages on the voter side are commonly explained around the concept of party issue ownership (Petrocik, 1996; Kaplan et al., 2006; Adams et al., 2005; Budge and Farlie, 1983; Egan, 2013; Pardos-Prado and Sagarzazu, 2016). According to this theory, partisans from distinct colors care about different issues. As a consequence, parties build across time a particular association with issues that cater strongly to their voters, developing a certain reputation around these agendas. This reasoning predicts that the electoral fate of these parties becomes strongly connected with the salience of these issue: parties win more, sometimes crossing partisan lines, when an issue they own becomes more salient.

However, this is an expectation at odds with the our common knowledge about party labels and informational effects on democracies with weak partisan identities. In coun-

tries where partisan identities are more recent and relatively unstable, such as in Latin America (Samuels and Zucco, 2018; Lupu, 2017; Baker et al., 2016a), our understanding of what other types of information voters rely upon to make political decisions is limited. When party labels are weak, recent studies have shown that voters rely on a distinctive set of heuristics to make political decisions, such as gender, ethnicity, and race (Kristín Birnir, 2007; McDermott, 1998; Adida et al., 2017; Campbell and Cowley, 2014). A proper understanding of these different heuristics is crucial to the notion of who will win and who will lose when issues become more salient in fragmented democracies

This paper uses the case of law-and-order candidates in Brazil to show how a candidate's professional background works as a crucial informational shortcut that politicians rely upon to signal to voters about their policy priorities and competence. I argue that a candidate's professional experience acts as the main mechanism through which issue ownership advantages work on democracies with fragmented party systems. For example, former police officers, members of the army, and other law-and-order candidates are able to use their personal histories strategically to convince voters concerned with crime control about the credibility of their messages and their capacity and willingness to prioritize security while in office. I consider a law-and-order politician as actors who have previously held an occupation in police and/or military forces prior to entering politics [1]

To provide evidence for my theory, I use computational text analysis to analyze a large corpus of more than one hundred thousand congressional speeches spanning almost twenty years of legislative activity in Brazil. Using structural topic models (Roberts et al.,

[1]The candidates and politicians' occupation is retrieved directly from electoral data available at official sources. See the appendix for the details in the classification employed here.

2014b), I show the different ways that Federal Deputies talk about security in Congress, provide robust evidence that House Members' prior professional histories help explain who talks about security in the House, and report contrasting differences on how law-and-order representatives frame the issue of public security in their speeches.

My work contributes to an emerging literature in political science examining political dynamics of law enforcement (Cohen et al., 2019; Knox et al., 2020; Gunderson, 2021; Gunderson et al., 2021; Magaloni et al., 2020; Soss and Weaver, 2017; White, 2019). However, while most of this literature focuses on American Politics, I add a more comparative perspective to it. Brazil, the largest economy in South America, is an interesting case to understand how law enforcement occupational heuristics may supersede partisan heuristics. In the last decade, the public security caucus has become the largest caucus in the Congress, and several candidates from police forces, the military, or other enforcement agencies have been elected to political positions. More important, while these candidates have become more frequent in the menu of politicians in Brazil, the traditional conservative parties have completely eroded. Official data shows that 57,358 people were violently murdered in Brazil in 2019, and two-thirds of the victims of lethal violence are black or mixed-race (Cerqueira et al., 2019), which puts Brazil as one of the most violent democracies in the world. In this violent society, having a military rank has become a crucial asset for politicians.

The first contribution of this paper is to explain how former law enforcement agents use their occupations to advantage in political competition. More importantly, I show how this process occurs in a context where violence has become an increasing concern for voters (Bonner, 2019; Dammert and Malone, 2006; Holland, 2013; Muggah and Tobón,

2018; Pérez, 2015), and how these politicians not only talk about security while in congress, but actually use their political positions to propagate more punitive views about security policies. Occupational heuristics in a fragmented environment, as in the Brazilian system, has superseded at large traditional heuristics, which theoretical expectation usually connects to party labels in developed democracies.

A second contribution of this paper goes to the recent literature on behavioral changes driven by experiences of victimization on violent democracies. Recent scholarship on the intersection between criminal violence and political behavior has found that victims of violence are less trusting of democratic institutions (Krause, 2014; Pérez, 2015; Merolla et al., 2013) and criminal justice agencies (Malone, 2010), are less supportive of democratic attitudes (Fernandez and Kuenzi, 2010; Carreras, 2013; Bateson, 2012), and often develop a greater taste for iron-fist policies (Bateson, 2012; Visconti, 2019; Singer et al., 2020; Garcia-Ponce et al., 2019). By showing how occupational heuristics coming from law-and-order occupation matter, I provide a more credible explanation for how the greater salience of the crime issue, and in particular greater support for punitive security policies, is absorbed by the political system.

A final contribution of this piece goes to the literature of partisanship and party strategies on fragmented democracies, particularly in Brazil. After Brazil redemocratized in the 1980s, a significant scholarship saw Brazilian political institutions as dysfunctional (Ames, 2001; Mainwaring, 1999), with consequences for its party system (small-party bias, excessive party switching, weak partisan labels, among others) that would create barriers to the consolidation of strong parties and partisan identities at the voter side (Kinzo, 2005; Mainwaring and Scully, 1995; Desposato, 2005; Calvo et al., 2015a). As a reaction to this

pessimistic view, a vibrant scholarship emerged on executive-legislative relations and on the strategies presidents use to overcome the high levels of fragmentation in the Brazilian congress (Figueiredo and Limong, 1999; Melo and Pereira, 2013; Zucco, 2009). Only more recently, studies have focused on the voter side of this dynamic, giving more attention to which heuristics voters rely upon to make political decisions (Samuels and Zucco, 2018; Baker et al., 2016a). This paper is the first to argue the importance of occupational heuristics in Brazil and investigate how politicians use them to convey their policy preferences and competence to voters.

The rest of the paper is structured as follows: the next section introduces the hypothesis and positions the paper within the larger literature on behavioral heuristics, violence and law-and-order politics. The following section describes the Brazilian case and provides evidence about the growth of law-and-order politics. I then present the empirical sections of the paper. I conclude with a discussion of the main findings and contributions of the paper.

3.2 Issue Ownership, Occupational Heuristics and Law-and-Order Politicians in Brazil

Arguments using issue ownership theory have been deeply influential on studies of political behavior. Part of the appeal of this theoretical framework is its completeness: predictions from issue ownership theory work for both the supply side (politicians) and the demand side (voters) of politics.

On the supply side, issue ownership theory argues that some parties own certain policy issues. For example, in the United States, Democrats are considered to own the issue of health care, while Republicans are strongly associated with national security (Petrocik, 1996; Egan, 2013; Boldt, 2019). In some Western European countries, right-wing parties are believed to own the issues of immigration, while socialist parties are perceived to own welfare politics, and green parties are believed to own environmental issues (Budge et al., 2001). On the demand side, ownership theory assumes voters will perceive parties who "own" a particular issue as more competent and credible to legislate and act on this agenda (Calvo and Murillo, 2019; Adams et al., 2005; Budge and Farlie, 1983). When owning an issue, parties should argue to increase the salience of related topics among voters in expectation that voters will reciprocate with support.

Therefore, the observable implications of the model are straightforward. On the supply side, parties' best strategy f is to work on issues that they own. Several empirical studies have shown how parties use a variety of strategies, such as campaign ads(Kaplan et al., 2006), legislative speeches (Pardos-Prado and Sagarzazu, 2016), and even legislative committee meetings (Vallejo Vera, 2021), to increase the salience of their issues. On the demand side, voters are expected to cast their ballots for the parties that owns issues that are more salient in a particular context, as the literature has shown evidence (Bélanger and Meguid, 2008; Pardos-Prado and Sagarzazu, 2016; Boldt, 2019)

When considering the issue of crime and security, most of the literature argues in favor of a partisan advantage associated with conservative parties (Holland, 2013; Beckett, 1999; Beckett and Western, 2001; Cohen and Smith, 2016). This argument runs as follows. Because conservative voters tend to adhere to conformity and authority values (Gerber

and Jackson, 2016; Cohen and Smith, 2016), they commonly rank security and crime issues as a higher priority. As a consequence, to cater to these voters, conservative parties build a rhetorical history around the issue, talking more about and giving higher priority to, crime control policies, and thus owning the issue of security. In her seminal work on law-and-order politics in El Salvador, Holland (2013) synthesizes this logic arguing that:

> *conservative parties have a comparative advantage in touting their security credentials. Crime can be viewed as a valence issue in which parties advertise their unique competence to achieve shared security [...] They can draw on language, figures, and founding myths from periods of authoritarian control to lend credibility to claims that they will provide security at all costs* (Holland, 2013, pp.52)

The issue ownership framework has substantially shaped our understanding of political behavior and party strategies on advanced democracies. Yet, quite little is known about how issue ownership really works in newly democratized countries. As a matter of fact, the expectation about the informational values of party labels and the voter's ability to infer from labels the predictions of the issue ownership framework can be at odds with what we know about party labels and informational effects on cases where partisan identities are more fluid (Samuels and Zucco, 2018; Baker et al., 2016a; Lupu, 2017).

Consider, for instance, the Brazilian example. Brazil adopts a unique open-list multi-district proportional system for House elections [2]. This institutional setting is often blamed

[2]Brazil has a federal system organized at three levels: federal, state, and municipal. Elections in Brazil take place every four years. Local elections occur every two years after the national and state level elections. The Brazilian voter elects the chief of the executive on all the federal levels by direct voting in a plurality system with a run-off round when none of the candidates reaches an absolute majority. The legislative representatives are elected by open-list proportional representation with the municipalities as districts for local councilors and the states for the House of Representatives and state-level representatives.

for critical weaknesses of the Brazilian political system. Incentives to fragmentation and partisan majoritarian bias (Calvo et al., 2015b), progressive ambition in a context of candidate-centered incentives (Samuels, 2003), non-ideological formation of legislative coalitions in Congress (Amorim Neto et al., 2003; Zucco, 2009), extraordinary levels of party switching (Desposato, 2005), and the use of 'pork barrel policies' towards candidates' electoral bases (Ames, 2001; Ventura, 2021) are among the many findings of the specialized literature about the party system in Brazil. This environment contributes to the common description of Brazil as having a fragmented and weak party-system.

3.2.1 Occupational Heuristics and Issue Ownership

This paper presents a refinement on how predictions on the supply side of the issue ownership framework work in fragmented democracies. I argue that in an environment where partisan identity is an imperfect information shortcut, partisan advantages do not adequately explain how parties build ownership around policy issues. Instead, I propose that, in the absence of strong party labels candidates' personal characteristics are better predictors of politician's behavior.

Among such traits, I argue that the politicians' occupation, rather than party label, is often a more crucial heuristic in explaining the issues upon which politicians focus their agenda. Occupational heuristic signals to voters and other political elites the politician's competence and knowledge of a particular issue. In addition, particularly on more technical policy areas, such as public security, *in-the-field* experience can be also used to show a candidates' credibility. A police officer, for instance, might argue that having years of

experience patrolling the streets, interacting with criminals, or possessing an extensive network of contacts in criminal justice agencies makes one a more credible candidate to fight against crime. Therefore, using the case of crime and public security , I expect that Law-and-Order politicians will own the issue in the Congress.

Hypothesis 1. *Law-and-order Politicians will dedicate greater attention on their floor speeches to the issue of crime and public security.*

Moreover, because positions in criminal justice agencies in Brazil are all public careers, with lifetime tenure under law, such declarations commonly represent an entire lifetime's training and experience in militarized institutions, which previous research has suggested encourages higher punitive preferences (Navajas et al., 2020). Indeed, in most developing countries, officials emerging from the police and the military are historically committed to punitive practices. They usually campaign on such practices, and, once in office, defend the adoption of more punitive policies (Bueno, 2012; Cano, 1997; Denyer Willis, 2015; Brinks, 2007; Caldeira, 2002). Therefore, these law-and-order heuristics should go beyond the simple "talk more" prediction from issue ownership theory (Kaplan et al., 2006; Petrocik, 1996), and explain as well how these issues are framed in the Congress.

Hypothesis 2. *Law-and-order Politicians will be associated with a stronger punitive framing in their speeches about the issue of crime and public security.*

3.3 Police and Law-and-Order Representatives in the Brazilian Lower-Chamber

State-level authorities in Brazil have legal authority over most public security and policing responsibilities. The main Police Force is divided into civil and military forces. Although the police are not linked directly to the Brazilian Armed Forces, the police force is a ”militarized” institution working under military principles of hierarchy, discipline, and ceremony. The rules governing the civil and military police in Brazil were all created during the military regime (1964-1985). Thus, the police's current institutional organization is a legacy of the country's authoritarian experience.

Brazil's electoral and legal systems impose no restrictions on military members and police officers who decide to run for elected positions. Therefore, candidates with a professional experience in law-and-order agencies pay basically no costs to run for political positions. Only during the electoral campaign are these candidates forced to request a leave absence from work, losing access to the institution and other benefits momentarily; however, after the elections, all benefits are immediately reinstated for candidates who were not elected.

I start with some basic descriptive statistics about the presence of law-and-order politicians in the Brazilian Lower Chamber. Table 3.1 showcases consistent upward trend in the number of elected House Members with experience in the security forces. From 2002 to 2018, Brazil saw the number of former security agents increase from 5 to 35 members in the House. If unified in a single party, these candidates would represent the third-largest

party in the House. The large jump in 2018, representing the biggest presence of law-and-order politicians in legislative politics since Brazil's military dictatorship, and occurred in the context of the presidential election of law-and-order candidate, Jair Bolsonaro, to the Presidency.

Furthermore, in the last three electoral cycles, public security is among the top three most reported occupations by House candidates – behind only lawyers and businessmen. With growth in the number of candidates, electoral support has increased substantially over the years. In the last 2018 House election, 35 law-and-order candidates were elected for the House (6% of the total) This number gives security actors their biggest presence in legislative politics since the years of the military dictatorship.

Table 3.1 also indicates high levels of fragmentation across the parties these candidates decide to run. In total, in 2014 and 2018, twelve parties had at least one member of security forces elected as a House member. Most of these candidates and elected representatives are members of the center and the center-right parties in Brazil. In particular, in 2018 the PSL, the party of President Bolsonaro, was responsible for electing a large group of former security officers to the House. However, a detailed investigation shows that even leftist parties, such as the PSB, PDT and PSOL, have succeeded in electing law-and-order officials to the House. Overall , as expected, small conservative parties, with basically no strong party labels, have been the favorite choice of law-and-order candidates.

Table 3.1: Descriptive Statistics for the Law and Order Candidates for the House Elections in Brazil (2002-2018)

House Election	# Elected	Total Votes	Share of Votes	Number of Parties (Only Elected)
2002	5	1,188,900	1.5%	5
2006	5	1,457,570	1.7%	4
2010	6	2,055,477	2.3%	6
2014	16	3,370,487	3.8%	12
2018	35	8,884,020	9.7%	12

3.4 Analyzing Congressional Speeches: Examining Issue Ownership among Law-and-Order Representatives

This paper theoretical framework is built upon the assumption that candidates from police and military force backgrounds supersede weak partisan heuristics in fragmented democracies. To substantiate this argument, my empirical work shows how these law-and-order candidates, rather than traditional conservative parties, control the agenda of public security over a span of twenty years of legislative work in the Brazilian Congress.

To show evidence of my argument, the paper uses computational text analysis on a large corpus of data from congressional speeches for House members. The speeches are publicly available and were collected through the Congress API [3]. I retrieved data from all the speeches made on the plenary floor, made between 2003-2019, resulting in a total of

[3]The API is available here https://dadosabertos.camara.leg.br/

147,584 speeches. My analysis is limited to the section called Pequeno Expediente, which consists of five-minute speeches that typically occur before the beginning of a parliamentary session. By limiting the analysis to this section, I avoid discussing speeches in the plenary related to voting justifications or other daily issues in Congress, and focus mostly on House Members own decisions to address issues of their interests and signal to voters their policy priorities (Moreira, 2020) [4]

Congressional speeches constitute a unique source for measuring the attention candidates and parties give to a particular issue. These speeches differ from other types of data commonly employed for similar purposes, such as expert surveys, news report, campaign ads, and party manifestos (Petrocik, 1996; Kaplan et al., 2006; Benoit, 2007; da Silva Tarouco, 2011; Power and Zucco Jr., 2012). Congressional speeches "run" continuously over time and are less constrained by other pressures from electoral incentives. Similar data have been used to discuss a huge variety of issues in legislative politics, such as news methods for ideological scaling (Proksch and Slapin, 2010), how representatives communicate with their constituencies (Grimmer, 2010), the effects of speeches on voters' economic perceptions (Pardos-Prado and Sagarzazu, 2016), and gendered differences in legislative participation (Vallejo Vera and Gómez Vidal, 2021).

3.4.1 Modelling Strategy

I estimate a Structural Topic Model (STM) (Roberts et al., 2014a) to identify the prevalence of security as a policy issue in Congress. Then, I use multilevel modeling to explain

[4] More information about the Data Collection and Processing steps in the data analysis are provided in the Appendix.

determinants of these issues across the speeches, particularly how law-and-order representatives, and not conservative parties, dedicate more attention to security and crime in their House speeches.

Structural Topic Models use probabilistic modeling in a non-supervised setting to maximize the co-occurrence of words in a particular corpus (**?**Grimmer, 2010). In simpler terms, these models look for words that frequently occur together across documents, and detect clusters of words. These clusters of words are defined as topics. Unlike other strategies, structural topic models maximize the co-occurrence of words while allowing topics to have a common correlation structure and covariates to be added in the priors of the likelihood function.

Before fitting the model, I adopted standard pre-processing techniques in the corpus. I removed punctuation, capitalization, numbers, and symbols, and stop words in Portuguese that are common and generally uninformative. Using this corpus, I fit a Structural Topic Model with 60 topics. I also estimated models with different numbers of topics, and the results for the security topics were relatively stable, without any substantive change in the words associated with these topics.

3.4.2 Labelling the Topics

For each of the five topics in table 3.2, I present the most prevalent words, including those with the highest frequency-exclusivity scoring (FREX) (Wallach et al., 2009; Roberts et al., 2014a). To label the topics related to the issue of public security, I adopted standard steps recommended by the literature on text analysis (Grimmer, 2010; Roberts et al., 2014a).

First, I read the most frequent and FREX words for all the topics, then I read at least ten random speeches for each topic. Finally I analyze how some reference-politicians, who historically act on a particular policy issue, are associated with their expected topics. To provide to the reader more transparency about the five topics, I add in the appendix excerpts from the congressional speeches for each topic.

Five topics out of the sixty address issues related to violence and security. Two topics are more directly connected with crime and public security; the first focuses on policy issues related to the police and the army (Topic 9: Police and the Military), and the speeches are focused on better wages, retirement, and investment in security, among others. The second topic (Topic 37: Crime) frequently includes words such as "crime," "violence," "drugs," "victim" and often refers to speeches discussing the context of violence in Brazil. The other three topics deal with minorities (Children, Women, and Brazilian Afro-descendants) and violence. Some of the speeches on these topics address episodes and statistics of violence against these minorities, while others are more general about social inequalities and minority rights in Brazil.

3.5 Validating the Security Topics

In any type of statistical modelling employed to identify latent dimensions on complex data structures, validation is key. Table 3.2 and the speech excerpts in the appendix already provide some validation for the five topics labelled as public security. However, more is needed to validate my labelling decisions. Therefore, in this section, I provide one more piece of evidence for the substantive fit of the model. As in Grimmer (2010)

Table 3.2: Violence and Security on Congressional Speeches in the Brazilian House (2003-2020)

Topics	Most Likely Words	FREX Words
Topic 9: Police and Military	milit,seguranc,políc,polic,forc, policial,armad,públic,exército,civil	polic,milit,armad,bombeir,policial, seguranc,exército,civ,forc,políc
Topic 11 : Gender and Violence	mulh,violênc, homens,contr,lut,tod,feminin,direit,aind,gêner	mulh,homens,violênc, feminin,gêner,igualdad, lut,comemor,internacional,contr
Topic 25: Children and Violence	crianc,jovens,adolescent,anos,idad, menin,sexual,infantil,explor,jov	crianc,adolescent,jovens,menin,sexual, idad,infantil,infânc,jov,adult
Topic 37: Crime	crim,violênc,pres,seguranc,crimin,penal, organiz,armas,combat,públic	crim,crimin,armas,pres,penal,criminal, homicídi,assassin, violênc,tráfic
Topic 45: Race and Violence	pobr,negr,popul,fom,pobrez, desigualdad,social,viv,ric,misér	negr,pobr,desigualdad,pobrez,misér, fom,ric,branc,igualdad,rac

Note: Results are estimated using a Structural Topic Model with 60 topics, in a corpus of 133,485 speeches from Representative in the Brazilian Lower Chamber. The table presents only the five topics addressing issues of violence, crime, and public security. For each topic, I present the word with i) highest probability to be part of the topic, and ii) highest FREX (Frequency and Exclusivity) (Roberts et al., 2014a))

and Quinn et al. (2010), I explore the daily number of speeches generated by each of the five topics about security. I then map these distributions with certain nationally-relevant events to show that topics are substantively meaningful. Then, I explore differences between the topics distribution across two reference-politicians which are clearly associated with different views for security policies.

Figure 3.1 presents the results. I consider only congressional speeches from the year 2006. This is a crucial year in the history of security policies and criminal violence in Brazil. In May 2006, Brazil's *Primeiro Comando da Capital (PCC)*, the most powerful Drug-Trafficking Organization in the Country, launched a series of attacks in São Paulo, while also organizing simultaneous riots in over 90 prisons across the country. This series of attacks has been described as the largest and most organized attack on a criminal organization against state forces in Brazil (Feltran, 2018; Biondi, 2016; Willis, 2015).

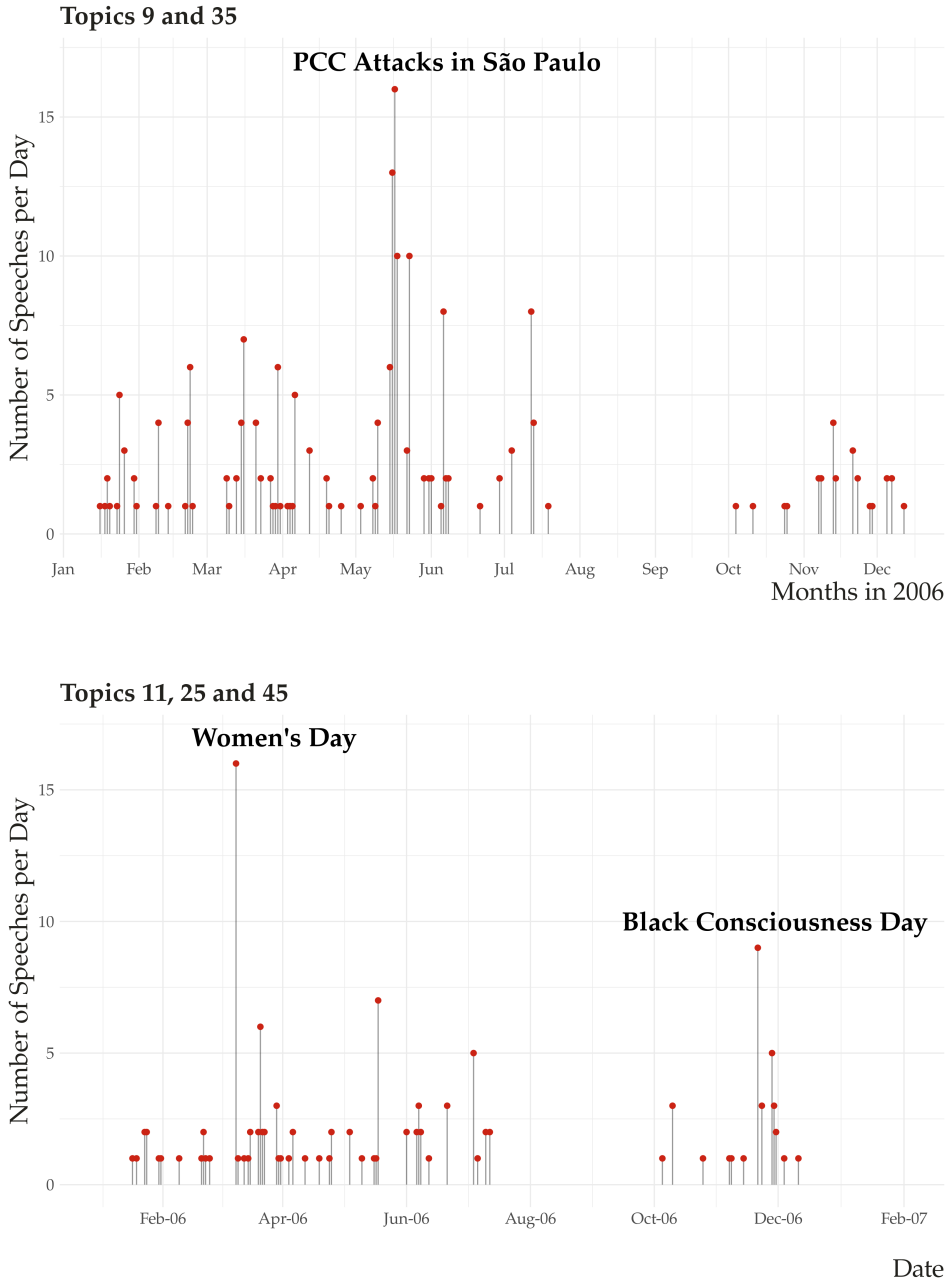
Speeches classified on topics more related to public security and crime (9 and 35 as in table 3.2) saw a huge spike in early May, as shown on the upper plot of figure 3.2. I keep the year constant to analyze the prevalence of the other three topics, which focus on violence and minorities. One can check how speeches on these issues increase in two special national events: International Women's Day in early March and Brazilian Black Consciousness Day in November. Grassroots organizations often mark both commemorative dates with protests and, as we detect, politicians bring these issues to Congress in their speeches. Indeed, these spikes in March and November appear on most of the years under analysis in this paper.

The qualitative analysis of the words and documents, as illustrated in Figure 3.1, demonstrates that the topic model is able to retrieve a diversity of Congressional Speeches raising issues related to security and violence in Brazil.

3.6 Modelling Issue Attention

To understand the degree to which law-and-order members of the House strategically give greater attention to crime and security issues in the speeches, I use the outputs from the STM to classify the most prevalent issue in each of the 133,485 speeches. Out of the entire corpus, 8,872 documents were classified as being about security. With this classification in hand, I estimate a set of multilevel generalized logistical models using the speeches' classification from the STM as the dependent variable. The main independent variable in the models is whether or not the House member is a law-and-order candidate, which I measure using the same classification previously described. I add to the model

Figure 3.1: Validation Checks for the Topics About Security and Violence.



dummies for six specific parties to show how occupation differs from partisan effect, as well as the vote share at the state-level for each of the speakers.

A critical issue in modelling this type of data is dealing with overdispersion in the

number of speeches. In other words, the probability of a speech i_1 being about security is hardly independent from speech i_2 if they occur for example at the same legislature, or among representatives from the same electoral district. To deal with this challenge, I add three families of random intercepts to the model: at the speaker level, at the legislature, and the electoral district for each House member (Zheng et al., 2006b). The statistical model is represented in the equation below:

$$\begin{aligned} y_{its} = \alpha_j + \beta_1 \text{law-and-order}_i + \beta_2 PT + \beta_3 PSDB + \beta_4 + DEM + \\ \beta_5 PMDB + \beta_6 PSL + \beta_7 PP + \beta_8 \text{Vote Share}_i + \sigma_t + \tau_i + \Sigma_s \end{aligned} \tag{3.1}$$

3.6.1 Results

Table 3.3 presents the results. The models provide support for the main assumption of the paper: candidates with a history in criminal agencies rely more heavily on security and crime issues in their public statements in the House. On average, law-and-order House members are more than two times more likely ($exp(1.154) = 3.16$) than their non-law-and-order peers to use the floor to make a speech about public security and violence. This effect is positive when pooling all the topics, and stronger when considering only the topics dealing with Public Security and Crime (topics 9 and 37).

The effect of being a law-and-order House membeThe effect of being a law-and-order House member is negative for speeches about social inequality and violence against minorities. In other words, law-and-order House members give more attention in their speeches to public security and crime issues. However, these same politicians give less at-

Table 3.3: Regression Models: Issue Attention, Public Security, and Law-and-Order House Members

	Dependent variable: House Speeches about Crime and Violence		
	All	Public Security/Crime	Minorities/Violence
Intercept	-2.932^{***}	-3.506^{***}	-3.599^{***}
	(0.059)	(0.079)	(0.085)
Law-and-Order Representative	1.154^{***}	1.681^{***}	-0.882^{***}
	(0.150)	(0.149)	(0.230)
Vote Share	-2.129^{***}	-2.407^{*}	-2.338^{***}
	(0.774)	(1.370)	(0.742)
PT	0.052	-0.236^{***}	0.249^{***}
	(0.082)	(0.091)	(0.089)
PSL	-0.101	-0.276^{*}	0.152
	(0.133)	(0.147)	(0.203)
PSDB	-0.546^{***}	-0.524^{***}	-0.351^{***}
	(0.102)	(0.112)	(0.118)
PFL-DEM	-0.273^{***}	-0.301^{***}	-0.111
	(0.089)	(0.103)	(0.105)
PMDB-MDB	0.038	0.041	-0.059
	(0.075)	(0.087)	(0.098)
PP	-0.411^{***}	-0.492^{***}	-0.074
	(0.131)	(0.147)	(0.146)
State Random Effects	yes	yes	yes
Representative Random Effects	yes	yes	yes
Legislature Random Effects	yes	yes	yes
Observations	131,125	131,125	131,125
Log Likelihood	$-28,821.230$	$-19,433.120$	$-19,663.770$
Akaike Inf. Crit.	57,666.460	38,890.250	39,351.550
Bayesian Inf. Crit.	57,783.860	39,007.650	39,468.960

Notes: All the models use Generalized Multilevel Logit Models benchmark estimation. Model 1 uses all the speeches classified as addressing issues of violence, crime, and public security. Model 2 uses only the topics 2 (police and military) and 5 (crime), while the model 3 uses the other topics addressing issues of violence and social minorities. All the models uses random intercepts at the speaker, state, and legislature level.

tention to how some social and ethnic minorities are the main victims of violence, including abuses from state forces. This finding is substantively relevant because it shows how security, rather than a valence issue as most of the literature argues (Holland, 2013; Calvo and Murillo, 2019; Kaplan et al., 2006; Visconti, 2019), actually is rather divisive among Brazilian politicians. Those who "own" the issue of security focus on speeches catering to their professional corporation and usually calling for more punitive penal policies. At the same time, they are silent about other dimensions of violence, in particular, when violence targets social and ethnic minorities.

The effects across the parties deserve an extended discussion. Before Bolsonaro, Brazilian electoral politics was polarized between PT, on the left, and PSDB and PFL-DEM on the right. Results from all the three models in table 3.3 show how the conservative parties do not explore security issues in their public stances in the House. The PP, the heir to the civil-military party which ruled Brazil during the years of dictatorship in the 1960s, also appears with a negative and statistically significant coefficient in the regression models. Finally, the party more closely connected to President Bolsonaro also shows no positive coefficient.

In conclusion, former members of enforcement agencies, who were elected to the House, prioritize crime and security. Indeed, they make public efforts to signal their law-and-order commitment. Therefore, these results provide evidence for both hypothesis of the paper. Occupational heuristics at the candidate level are the main determinant explaining who owns the issue of security in the Brazilian Congress. Moreover, these former security officials also evince a stronger association with a stronger punitive framing of their speeches on the issue of crime and public security.

3.7 Conclusion

Most of the previous work on issue ownership theory has failed to differentiate between party level and candidate level dynamics, as noted elsewhere (Kaplan et al., 2006; Kaufmann, 2004).The lack of attention to how candidates build and use their reputation on issues is particularly concerning considering studies on political behavior in democracies with fragmented party systems. This paper is the first to show how occupational heuristics, for the issue of security and violence, is a superior determinant of who "owns" an issue in the Brazilian Congress.

The results indicate that, rather than conservative parties, candidates with a professional experience in law-and-order, spread among a variety of party labels in Brazil, own the issue of crime and security. Using novel methods in computational text-analysis, the paper depicts several robust results. I first show that law-and-order candidates dedicate greater attention in their speeches to public security. Then, I show that no more traditional conservative party, those that in other contexts have been described as owning the issue of security (Holland, 2013; Petrocik, 1996; Beckett, 1999; Beckett and Western, 2001), have a robust association with the issue of security in the Congress. To conclude, I explore distinct framing strategies among the speeches, and find that, not only do law-and-order candidates talk more about security, but they also are more likely to be associated with more punitive topics.

Connecting issue ownership theory and occupational heuristics for the case of public security provides an important substantive contribution to studies about quality of

democracy in Latin America. As concerns about crime and violence have become a key social and political dilemma in most Latin America countries (Pérez, 2015; Yashar, 2018; Arias and Goldstein, 2010), several countries have watched an array of law-and-order politicians becoming more and more competitive at the pools. These politicians typically promise to be tough on crime. When in power, they frequently become a threat to individual civil and political rights, as the most recent case of Nayib Bukele in El Salvador suggests.

This paper indicates a clear causal mechanism explaining this phenomenon. The emergence of populist, law-and-order politicians is not merely a consequence of voters developing greater taste for iron-fist policies in a context of high violence (Visconti, 2019; Garcia-Ponce et al., 2019; Holland, 2013). It is also a result of changes in the supply side of the political game. As voters become more concerned about crime, those who are trained in delivering violence, see an opportunity to make their way into politics, and use their occupational advantages to win votes, defeating their traditional conservative opponents.

Legislating for Violence: Issue Ownership and Occupational Heuristics in the Brazilian Congress

Supporting Information Files (SIF)

3.8 Appendix A: Classification of Law-and-Order Candidates

To classify a law and order candidate, I use two main criteria. First, I define as a law and order all the candidates who reported as their main occupation being a member of police and military forces in Brazil. Together with their occupation, I use information from their ballot names to search for candidates whom send a explicit signals to voters about any type of previous occupational experience o law enforcement agencies.

To identify their occupation, I rely on two different data sources. Information for all the candidates is extracted directly from the Electoral Court data. This data includes detailed self-reported information for all the candidates to the House elections from 2002 to 2018. Using this huge dataset, I search for candidates who reported being members of the state-level military and civil police, members of any type federal police, military fire-fighters, and officers from the armed-forces (active-duty and reserved).

However, the occupation data from the electoral court have one crucial shortcoming. Candidates can change their self-reported occupation over time, which means, several candidates, in particular after being elected, report being a ”politician” as their occupation . The case of the Brazilian President is emblematic on this regard. On his first two elections

to the House, Jair Bolsonaro reported being a reserved military officer; however, in his last few elections, Bolsonaro changed his occupation to congressmen. Therefore, to remedy this limitation, I use information from the House API from 2002-2018 to search for elected members of the House who at some point of their career reported being a member of security forces. I merged both datasets, the electoral data and the House API using the candidates social security number (CPF). In this combine dataset, I use the same search criteria to identify candidates who reported in the House, after being elected, being a member of law enforcement agencies.

In the sequence, I search over the ballot names for all the candidates to identify explicit references to their occupation on security forces. In Brazil, it is common for candidates to change their ballot names to send a message to voters about their professional experience or policy priorities. For example, several candidates run with the labels ”Professor”, ”Teacher”, ”Educator” as a prefix to their ballot names. For law and order candidates, I search for references to occupation on security forces using a common list of portuguese words that refer to these professions. [5]

[5]See the list of word here: ”soldado”, ”soldada”, ”inspetor”, ”inspetora”, ”soldada”, ”cabo” , ”sargento”, ”sargenta”, ”sgt”, ”tenente”, ”major”, ”coronel”,”general”, ”comandante”, ”delegado”, ”delegada”, ”capitão”, ”capitã”,”capitao”, ”policial”, ”civil”, ”pc”, ”investigador”, ”investigadora”,”inspetor”, ”sub-tenente”, ”subtenente”, ”sub tenente”,”pm”, ”xerife”, ”sub-oficial”, ”suboficial”, ”sub oficial”, ”bombeiro”, ”detetive”, ”protetor”, ”comandante”, ”guarda”, ”insp”, ”policia”

3.9 Appendix B: Topic Models

In this appendix, I provide a in-depth discussion about the modelling choices for the computational text analysis performed on the legislative speeches. Results reported in the paper rely on unsupervised machine learning techniques to detect the association of words in the corpus of congressional speeches. Among this family of models, I use a probabilistic topic model. Topic models are used to uncover hidden dimensions in text documents, and have been used on a variety of data sources, such as academic publications, open-ended survey data, congressional documents, social media data, among others (Blei, 2012; Blei et al., 2003; Grimmer, 2010; Quinn et al., 2010; Huff and Kruszewska, 2016; Lucas et al., 2015). In the following paragraphs, I provide a succinct exposition of probabilistic topic models and some applications.

Topic models arise from a family of unsupervised machine learning algorithms. The output of the models - the topic - is estimated rather than assumed a priori. Hence, topic modeling does not require any input from the researcher about where, how, and for which words/sentences/tokens the algorithm should look for the topic (See Grimmer and Stewart (2013) for a review of machine learning methods for text data). The intuition behind topic models is that the text corpora comes from a data generating process in which each document emerges as a mixture over latent topics, where each topic is characterized by a set of words.

Consider a concrete example of the intuition behind topic models. Imagine a topic model for the collection of tweets sent by the President of the United States. The model

estimates topics such as: immigration, economic issues, and attacks against the Democratic Party. For each of these topics, the model estimates the words that appear together most frequently. The model relies on the idea of co-occurrence to reveal the hidden dimensions of the generative model. For example, for the first topic, the model is likely to give us words such as *travelban, mexicans, crime, border*, while for the latter, one might expect to observe words like *pellosi, mueller, clinton, hoax*. While hypothetical, this exercise elucidates the use of the model. Most importantly, this example illustrates how the process of labeling the topics is a theoretically-driven enterprise.[6]

I use the Structural Topic Model (STM) developed by (Roberts et al., 2014b) in the paper. The STM has important theoretical and empirical advantages relative to other topic model. First, the STM allows the inclusion of covariates of substantive interest through a prior distribution of topics over the corpus (prevalence) and the association of words with topics (content). Second, by adjusting the priors of the generative model, the STM allows for joint estimation of the topics and the effects of covariates. Third, it allows for the topics to be correlated by adding a covariance matrix to the prior.

The data generation process of the STM model for each document works as follows:

1. Draw the document-level distribution of topics from a logistic-normal generalized linear model based on a vector of document covariates X_d and a covariance matrix Σ

    - $\theta_d \sim logisticnormal(X_d\gamma, \Sigma)$

2. For each word (n, Draw a topic based on the document-specific multinomial distri-

[6]We direct the reader to (Boyd-Graber et al., 2017) for a broader overview of different topic models.

bution over topics

- $z_{d,n}|\theta_d \sim Multinomial(\theta_d)$

3. For each word, conditional on the topic chosen for $z_{d,n}$ and the probability distribution of the $v-th$ word for topic k in the vocabulary (β_k), [7], draw a word from a multinomial distribution parametrized by $\beta_{d,k}$.

- $w_{d,n}|z_{d,n}, \beta_{d,k} \sim Multinomial(\beta_{d,k})$

Compared to the classic latent Dirichlet allocation model (LDA) developed by Blei (2012), the STM's central innovation is the addition of a separate prior over the distribution of topics; or making a reference to the label of the model, add more structure to the estimation of the topics. The new structure of the STM switches the global Latent Dirichlet non-informative prior for the distribution of topics employed on LDA models by a logistic normal prior distribution parameterized by a linear prediction of the covariates and a covariance matrix. The first explains changes in the parameter θ for the topic distribution per document due to covariates, the latter allows the topics to be correlated. Finally, model estimation proceeds via the Expected-Maximization algorithm, using the spectral method for initialization, as suggested by Roberts et al. (2014b).

[7] $\beta_{d,k}$ is drawn from a exponential distribution with covariates determining the topical content, or in other words, how covariates affect the use of words in each topic. In our case, we do not use covariates for topical content in the models we estimate; therefore, we omit the full description of this parameter.

3.9.1 Preparing the Data and Choosing the Number of Topics

I first collected the Congressional Speeches using the Brazilian House API. I collected all the congressional speeches made between 2003 and 2020, resulting in a total of 147,584 speeches, and 252,038 different words. I limited the analysis to speeches on the *Pequeno Expediente* which consists on five minutes statements made by the Members of the House before the beginning of a parliamentary session. As described by Moreira (2020), Members of the House use these speeches to address a variety of policy issues going way beyond the legislative debates in each particular session. As a matter of fact, most of the representative use this opportunity to address issues of their interests and signal to voters about their policy priorities.

To pre-process the data, I first extract a set of functions words, such as names, legislative jargons, among others. Then, I adopt a set of procedures which are standard pre-processing steps in text analysis (Manning et al., 2010); I removed punctuation, capitalization, numbers, and symbols, and stop words in portuguese which are common and generally uninformative. Since topics models are unsupervised learning algorithms, beyond standard values for hyper-parameters for the statistical model, the number of topics - dimensions in the corpus - to be searched should be set by the researcher.

As suggested by Grimmer and Stewart (2013) and Roberts et al. (2014b), there is no "right answer" for the number of topics; each corpus, depending on the amount of information in each document, the size of the corpus, the granularity of the data, requires a different strategy. Therefore, I use a model with 60 topics, which in my view capture a reasonable balance between coherent and exclusive topics. More important, since my

goal is only to identify speeches related to to public security, the total number of topics are less important as soon as these topics are clearly detected.

To provide a more quantifiable measure for the model fit, I estimate ten different STM models varying the number of topics from 10 to 100, and discuss the commonly used trade-off between the exclusivity and the semantic coherence for each model to corroborate the decision to work with 60 topic. Semantic Coherence is a measure that is maximized when the most probable words in a given topic frequently co-occur together, and it has been shown to correlated well with human annotated topics(Mimno et al., 2011), and exclusivity measure how exclusive the words are to a given topic. Figure 3.2 provides the visual results. We conclude that gains on exclusivity are pretty much marginal on models with more than 60 topics, therefore, providing evidence that this number a good choice for the trade-off between these two measures.

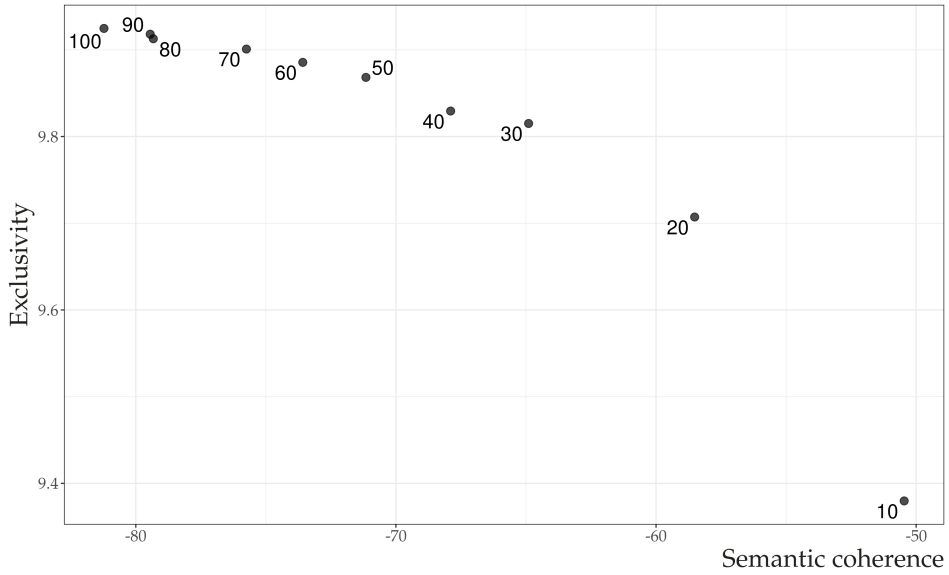
3.10 Appendix C: Additional Results

The paper presents and discusses with greater attention the five out of the sixty topics that I classified as addressing issues related to the violence and security issue. Here, I present information for all the 60 topics estimated by the STM model.

Tables 3.4 and 3.5 presents the most likely words and the FREX words for all the topics. In blue, one can find the topics I label as being about violence and security. However, it is worth to explore the results a bit more in order to get a complete picture of the substantive performance of the model.

Let's see some examples. Topic 1 and Topic 30 are clearly about legislative proceed-

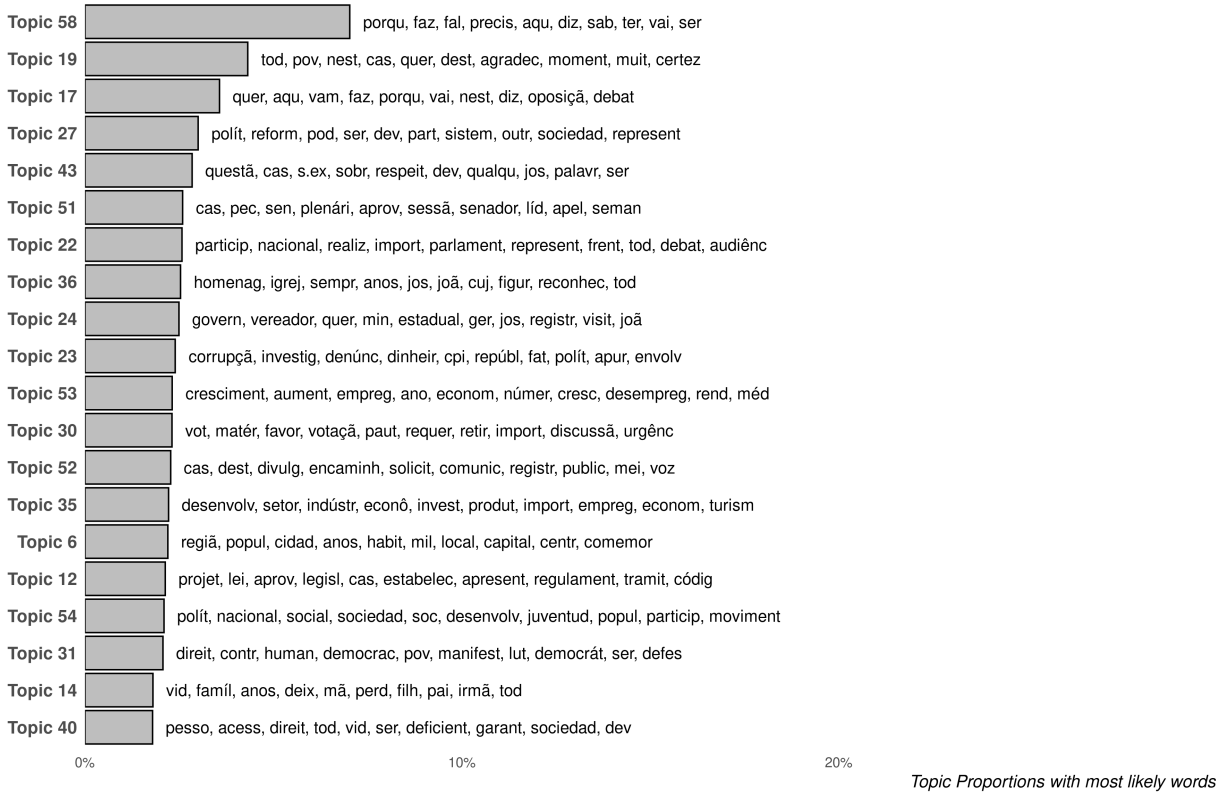
Figure 3.2: Comparing Exclusivity and Semantic Coherence on STM Models



Note: The results are extracted from 10 distinct Structural Topic Model fitted on a corpus of Congressional Speeches in the Brazilian House. The models vary the number of topics from 10 to 100

ings, with the former more focused on constitutional changes and the latter on regular roll-call voting issue. Topic 18 has clear connection with native communities issues, particularly indigenous people in Brazil. On some other broader issue, Topic 20 relates to Health, Topic 23 is about corruption, Topic 16 talks about Energy Policy and Topic 21 on Oil, Topic 33 on Rural Policies and 34 on Welfare policies. Overall, the results indicate that fitting the model with 60 topics produce several topics with an interesting balance between substantive coherence and exclusivity, providing a substantive evidence about the performance of the STM model. In addition, I present the overall distribution of topics across the corpus of congressional speeches. Figure 3.3 present the ten most prevalent topics with their respective most likely words as reported on tables 3.4 and 3.5.

Figure 3.3: Top Twenty Topics on Congressional Speeches



Note: The results are extracted from a Structural Topic Model fitted on a corpus of Congressional Speeches in the Brazilian House. The model if fitted with sixty topics

Table 3.4: Topics on Congressional Speeches in the Brazilian House (2002-2019)

Topics	Most Likely Words	FREX Words
Topic 1	emend,constitucional,constituiçã,parec,nacional execut,orçamentár,legisl,previst,pod	emend,orçamentár,constitucional,incis,resolu disposit,emit,previst,parec,constitucion
Topic 2	saúd,sistem,áre,agent,sus popul,comunitári,públic,plan,servic	saúd,comunitári,agent,sus,plan sistem,regulament,áre,básic,atençã
Topic 3	med,provisór,pod,relev,edit trat,cas,urgênc,dess,ser	med,provisór,edit,relev,urgênc extraordinári,urgent,ediçã,crédit,prorrog
Topic 4	salári,mínim,previdент,aposent,anos aposentador,reajust,reform,servidor,aument	aposent,previdент,salári,aposentador,mínim reajust,previdenciári,pension,inss,servidor
Topic 5	públic,administr,servidor,servic,gestã órgã,control,fiscaliz,cont,concurs	administr,públic,servidor,concurs,defensor gestã,fiscaliz,transparent,control,órgã
Topic 6	regiã,popul,cidad,anos,habit mil,local,capital,centr,comemor	habit,cidad,bairr,baian,regiã inaugur,local,morador,interior,emancip
Topic 7	trabalh,lut,sindicat,categor,grev condiçõ,hor,reivindic,sindical,jorn	sindicat,trabalh,grev,categor,sindical escrav,reivindic,hor,lut,jorn
Topic 8	univers,estud,curs,pesquis,ciênc tecnolog,federal,superior,técnic,institut	univers,curs,ciênc,pesquis,estud tecnológ,faculdad,tecnolog,prof,superior
Topic 9	milit,seguranc,políc,polic,forc policial,armad,públic,exército,civil	polic,milit,armad,bombeir,policial seguranc,exército,civ,forc,políc
Topic 10	ministr,ministéri,secret,port,pesc fazend,pescador,licenc,dess,past	ministr,pesc,ministéri,secret,pescador port,past,licenc,fazend,convêni
Topic 11	mulh,violênc,homens,contr,lut tod,feminin,direit,aind,gêner	mulh,homens,violênc,feminin,gêner igualdad,lut,comemor,internacional,contr
Topic 12	projet,lei,aprov,legisl,cas estabelec,apresent,regulament,tramit,códig	lei,projet,aprov,códig,regulament tramit,legisl,estabelec,decret,leis
Topic 13	comissã,constituiçã,especial,justic,membr instal,mist,analis,recorr,cidadan	comissã,constituiçã,membr,mist,recorr especial,analis,justic,instal,extern
Topic 14	vid,famíl,anos,deix,mã perd,filh,pai,irmã,tod	pai,falec,irmã,filh,mã vid,pes,amor,morr,perd
Topic 15	assoc,event,esport,entidad,realiz futebol,organiz,catarinens,club,jog	esport,futebol,event,assoc,club catarinens,prêmi,entidad,jog,torc
Topic 16	energ,consumidor,agênc,elétr,prec tarif,servic,telefon,usin,cust	energ,elétr,consumidor,tarif,agênc usin,telefon,prec,energét,regul
Topic 17	quer,aqu,vam,faz,porqu vai,nest,diz,oposiçã,debat	vam,oposiçã,aqu,quer,vai posiçã,porqu,debat,democrat,obstruçã
Topic 18	indígen,terr,áre,comun,índi pov,territóri,conflit,ocup,demarc	indígen,terr,índi,demarc,conflit territóri,regulariz,quilombol,comun,hect
Topic 19	tod,pov,nest,cas,quer dest,agradec,moment,muit,certez	agradec,pov,certez,parabéns,apart honr,mandat,nest,companheir,orgulh
Topic 20	médic,atend,hospital,saúd,hospit profission,servic,pacient,medicin,unidad	médic,hospital,hospit,atend,pacient medicin,profission,leit,clínic,unidad
Topic 21	petrobr,petról,dól,explor,gás pré-sal,refin,bilhõ,produçã,prec	petról,petrobr,refin,gás,pré-sal dól,óle,explor,miner,combust
Topic 22	particip,nacional,realiz,import,parlament represent,front,tod,debat,audiênc	audiênc,particip,front,parlament,reuniã seminári,debat,tem,convid,realiz
Topic 23	corrupçã,investig,denúnc,dinheir,cpi repúbl,fat,polít,apur,envolv	corrupçã,investig,cpi,denúnc,acus apur,desvi,escândal,denunc,dinheir
Topic 24	govern,vereador,quer,min,estadual ger,jos,registr,visit,joã	vereador,govern,min,estadual,visit espírit,joã,sexta-feir,vitór,jos
Topic 25	crianc,jovens,adolescent,anos,idad menin,sexual,infantil,explor,jov	crianc,adolescent,jovens,menin,sexual idad,infantil,infânc,jov,adult
Topic 26	empres,contrat,servic,privatiz,pequen funcionári,empreg,empresári,priv,terceiriz	empres,privatiz,contrat,terceiriz,funcionári empresári,licit,demit,negóci,concorrent
Topic 27	polít,reform,pod,ser,dev part,sistem,outr,sociedad,represent	reform,partidár,polít,list,part campanh,mudanc,individual,opiniã,mandat
Topic 28	jornal,imprens,inform,comunic,rádi internet,notíc,revist,televisã,glob	jornal,rádi,internet,imprens,televisã glob,reportag,emissor,s.paul,revist
Topic 29	águ,sec,regiã,problem,nordestin saneament,situaçã,abastec,integr,esgot	sec,águ,nordestin,esgot,transposiçã saneament,hídric,bac,abastec,irrig
Topic 30	vot,matér,favor,votaçã,paut requer,retir,import,discussã,urgênc	vot,matér,paut,votaçã,favor requer,retir,discussã,urgênc,mérit

Table 3.5: Topics on Congressional Speeches in the Brazilian House (2002-2019)

Topics	Most Likely Words	FREX Words
Topic 31	direit,contr,human,democrac,pov manifest,lut,democrát,ser,defes	democrac,ditadur,golp,democrát,tortur protest,direit,esquerd,human,desrespeit
Topic 32	doenc,drog,caus,tratament,cânc uso,problem,risc,pesso,acident	doenc,cânc,drog,tratament,medic prevençã,beb,acident,uso,risc
Topic 33	produtor,produçã,produt,agricultur,agrícol export,produz,cooper,tonel,setor	produtor,safr,agrícol,soj,tonel produçã,cooper,pecuár,produt,agronegóci
Topic 34	social,famíl,segur,idos,benefíci assistent,rend,anos,bols,morad	idos,segur,social,morad,assistent benefíci,bols,famíl,rend,beneficiári
Topic 35	desenvolv,setor,indústr,econô,invest produt,import,empreg,econom,turism	indústr,turism,industrial,comérci,desenvolv potencial,competit,setor,incent,empreend
Topic 36	homenag,igrej,sempr,anos,jos joã,cuj,figur,reconhec,tod	igrej,padr,cearens,dom,figur catól,homenag,ilustr,solen,trajetór
Topic 37	crim,violênc,pres,seguranc,crimin penal,organiz,armas,combat,públic	crim,crimin,armas,pres,penal criminal,homicídi,assassin,violênc,tráfic
Topic 38	rural,famili,camp,rur,agricultur aliment,reform,agricultor,assent,agrár	rural,rur,famili,agrár,camp assent,agricultor,aliment,agricultur,mst
Topic 39	federal,distrit,políc,brasíl,trânsit oper,veícul,feder,motor,rodoviár	distrit,trânsit,federal,brasíl,rodoviár veícul,motor,políc,deleg,oper
Topic 40	pesso,acess,direit,tod,vid ser,deficient,garant,sociedad,dev	acess,deficient,pesso,inclusã,físic cidadã,necess,cidadan,portador,assegur
Topic 41	ambient,amazôn,mei,ambiental,preserv sustent,desenvolv,áre,natur,regiã	ambient,ambiental,amazôn,desmat,preserv florest,sustent,natur,cerr,mei
Topic 42	recurs,municípi,estad,feder,uniã fund,federal,destin,tod,orçament	municípi,recurs,estad,uniã,royalti fund,feder,rep,pact,municip
Topic 43	questã,cas,s.ex,sobr,respeit dev,qualqu,jos,palavr,ser	questã,s.ex,regiment,esclarec,palavr chinagl,inocênci,intern,president,qualqu
Topic 44	banc,dív,econô,financeir,jur cris,crédit,financ,caix,tax	dív,jur,banc,caix,bndes financeir,cris,econô,crédit,bancári
Topic 45	pobr,negr,popul,fom,pobrez desigualdad,social,viv,ric,misér	negr,pobr,desigualdad,pobrez,misér fom,ric,branc,igualdad,rac
Topic 46	acord,relator,text,relatóri,apresent destaqu,entend,feit,parec,negoc	relator,relatóri,acord,text,destaqu original,entend,negoc,acat,apresent
Topic 47	educ,escol,professor,ensin,alun qualidad,médi,fundamental,básic,públic	educ,professor,escol,alun,ensin médi,educacional,aul,fundamental,qualidad
Topic 48	país,unid,estad,internacional,amér naçõ,europ,exterior,internacion,relaçõ	unid,europ,país,amér,latin chin,naçõ,norte-american,argentin,exterior
Topic 49	milhõ,rea,mil,invest,bilhõ ano,recurs,valor,orçament,aeroport	rea,milhõ,aeroport,mil,bilhõ invest,milhã,bilhã,pac,orçament
Topic 50	impost,tributár,receit,pag,fiscal sobr,arrecad,aument,gast,tribut	impost,tributár,receit,fiscal,arrecad tributári,tribut,cpmf,icms,alíquot
Topic 51	cas,pec,sen,plenári,aprov sessã,senador,líd,apel,seman	sessã,sen,líd,pec,plenári vet,senador,convoc,extraordinár,apel
Topic 52	cas,dest,divulg,encaminh,solicit comunic,registr,public,mei,voz	divulg,solicit,voz,public,encaminh document,comunic,ana,lid,registr
Topic 53	cresciment,aument,empreg,ano,econom númer,cresc,desempreg,rend,méd	cresciment,desempreg,cresc,méd,índic empreg,pib,econom,númer,domést
Topic 54	polít,nacional,social,sociedad,soc desenvolv,juventud,popul,particip,moviment	juventud,polít,desafi,fortalec,soc conferent,articul,constru,agend,consolid
Topic 55	mund,tod,mundial,cop,inteir ser,grand,viv,tud,mostr	mund,cop,mundial,inteir,planet prepar,tud,escolh,modern,grand
Topic 56	transport,obras,rodov,obra,quilôetr trech,estrad,construçã,ferrov,infraestrutur	rodov,transport,ferrov,obras,trech dnit,estrad,obra,duplic,quilôetr
Topic 57	cultur,histór,livr,cultural,conhec outr,sécul,anos,tod,ser	cultur,cultural,músic,livr,artist histór,bel,sécul,portugues,belez
Topic 58	porqu,faz,fal,precis,aqu diz,sab,ter,vai,ser	fal,cois,porqu,vou,sab nad,ninguém,vej,acontec,gent
Topic 59	justic,tribunal,federal,suprem,process decisã,judiciári,pod,advog,juiz	tribunal,suprem,judiciári,advog,juiz julgament,juíz,justic,julg,decisã
Topic 60	funcion,permanent,comissõ,cas,encerr inic,nest,pod,tod,determin	funcion,comissõ,permanent,encerr,inic determin,cas,iníci,acompanh,assunt

The main result in the paper presented on table 1.3 uses a multilevel logistic models to establish the effects of occupation heuristic on who ”owns” the issue of security in the Brazilian Lower Chamber. Here, we estimate the same models however using the Linear Multilevel Models. Therefore, instead of using a binary classification for when each speech had one of the five security topics as its most prevalent theme, we use the raw output from the STM model: the proportion of each security topic in the document. Results are robust using this new specification, and go on the same direction as the main result discussed in the paper.

Table 3.6: Regression Models: Issue Attention, Public Security, and Law-and-Order House Members

	Dependent variable:		
	(1)	(2)	(3)
Intercept	0.053^{***}	0.027^{***}	0.026^{***}
	(0.002)	(0.002)	(0.001)
Law-and-Order Representative	0.062^{***}	0.074^{***}	-0.010^{***}
	(0.005)	(0.003)	(0.003)
Vote Share	-0.053^{**}	-0.020	-0.033^{**}
	(0.021)	(0.015)	(0.013)
PT	0.005^{***}	-0.001	0.007^{***}
	(0.002)	(0.001)	(0.001)
PSL	-0.003	-0.013^{***}	0.011^{***}
	(0.004)	(0.003)	(0.002)
PSDB	-0.008^{***}	-0.003^{**}	-0.005^{***}
	(0.002)	(0.001)	(0.001)
PFL-DEM	-0.004^{**}	-0.004^{***}	-0.001
	(0.002)	(0.001)	(0.001)
PMDB-MDB	0.001	0.002	-0.001
	(0.002)	(0.001)	(0.001)
PP	-0.008^{***}	-0.006^{***}	-0.001
	(0.003)	(0.002)	(0.002)
State Random Effects	yes	yes	yes
Representative Random Effects	yes	yes	yes
Legislature Random Effects	yes	yes	yes
Observations	131,125	131,125	131,125
Log Likelihood	148,286.700	190,306.900	207,278.400
Akaike Inf. Crit.	$-296{,}547.400$	$-380{,}587.800$	$-414{,}530.700$
Bayesian Inf. Crit.	$-296{,}420.200$	$-380{,}460.600$	$-414{,}403.500$

Notes: All the models use Linear Generalized Multilevel Models estimation. Model 1 uses all the speeches classified as addressing issues of violence, crime, and public security. Model 2 uses only the topics 2 (police and military) and 5 (crime), while the model 3 uses the other topics addressing issues of violence and social minorities. All the models uses random intercepts at the speaker, state, and legislature level.

4 Voting for Law and Order in Mexico: A Network Approach to Crime Victimization *

Abstract

In this article, we present the results of an original survey experiment designed to explore the formation of policy preferences against crime. We focus on three short-cuts through which voters process and filter information and, consequently, make decisions: (1) voter experience of crime victimization, (1) non-policy advantage from candidates occupation; and (3) partisan advantages and voters' partisan identities. To assess the role of these different channels, we model voters' decision to support candidates campaigning over a variety of security proposals using a conjoint experimental design within a national online survey in Mexico. We use recent developments on network models to measure the effects of victimization on voters' preferences. Our main results indicate that victimization explains higher support for more punitive policies as well as for candidates with a background in law and order enforcement agencies. Although we find null effects of partisan advantages, we show other relevant ways through which voters distinguish credible security policies.

[1]This chapter is based on co-authored ongoing work with Sandra Ley (Centro de Investigación y Docencia Económicas - México) and Francisco Cantú (University of Houston). I am the first author of the article

4.1 Introduction

As violence and insecurity expands in Latin America, citizens across the region have demanded new and effective approaches to control crime (Holland, 2013; Krause, 2014; Visconti, 2019). In particular, there seems to be a growing taste for iron-fist policies—ranging from the constriction of due process to the militarization of the police (Holland, 2013; Krause, 2014; Visconti, 2019; Flores-Macías and Zarkin, 2021). About eight out of ten Latin Americans agree harsher punishment of criminals will reduce crime (Price et al., 2019), and the approval rates for the intervention of the armed forces to combat crime are above 60% for all countries in the region (Pion-Berlin and Carreras, 2017).

We would expect that candidates and parties respond to such policy demands by offering more punitive approaches against insecurity. However, the way in which the demand for punitive policies interacts with the actual proposals offered during elections remains unknown. Are some security policies electorally more attractive for voters afflicted by violence? Do citizens value all *mano dura* policies in a similar way? Do certain profiles of parties and candidates gain more support when associated with more punitive policies?

In this paper we examine the logic of voters' strategic choices on security policies in the context of violent democracies. Our theory and empirical model emphasises two interactive dimensions. On the *demand* side for security policies, we consider what makes some security policies more attractive to voters, paying special attention to behavioral effects of crime victimization and partisanship. On the *supply* side of policy options, we explore how candidates' backgrounds and party reputation affect the credibility of iron-fist

policy proposals. Exploring both dimensions simultaneously allows us not only to delve into the role of victimization experiences on voters' electoral and policy preferences, but also to explore the process through which voters assess candidate profiles amid security concerns.

To evaluate our argument, we combine a candidate-choice conjoint experiment with a survey design that estimates exposure to crime victimization as a continuous, repeated process, using information from the respondents' personal friendship network. The conjoint allows us to understand citizens' preferences for security policies under different candidate and party profiles. Additionally, we use information from the respondent's friendship network to estimate their exposure to victimization. This approach allows us to collect more reliable and fine-grained information about the exposure of survey respondents to criminal violence.

Our research design addresses two key empirical limitations in the existing literature about preferences for iron-fist policies. First, extant works on security policy preferences —both experimental and observational— face important measurement challenges. These studies commonly rely on abstract or purely attitudinal measures of support for *mano dura* to identify the extent to which the demand for weak procedural policies is affected by experiences of crime victimization (Visconti, 2019; Holland, 2013; Cohen and Smith, 2016; Gerber and Jackson, 2016; Singer et al., 2020; Krause, 2014; Garcia-Ponce et al., 2019). This approach is both vulnerable to social desirability bias and, at the same time, has limited generalization when thinking about more realistic settings where policy decisions are made. To mitigate these concerns, our conjoint experiment measures changes in voters' behavior through a candidate-choice task, approximating both voters behavior, pref-

erences for real world options on security policies, and varying candidates' profiles in multiple dimensions.

Second, a major concern in recent studies investigating the effects of violence on policy preferences refers to the actual measurement of an individual's exposure to criminal violence. Measuring actual victimization through survey data is difficult, prone to both survey sampling error and underreporting bias. To address this challenge, we take advantage of multilevel modelling strategies from social network analysis, and use indirect survey questions to build a contextual measure of exposure to crime victimization (Zheng et al., 2006a; Calvo and Murillo, 2019, 2013; McCarty et al., 2001). This novel strategy for the study of crime victimization, combined with the conjoint estimates, allows us to deliver precise and higher externally valid estimates for how citizens update their preferences for security policies amid violence.

Our paper presents three main findings. First, higher exposure to crime victimization significantly increases the support for iron-fist policies, such as the death penalty. This effect is observable even after controlling for other features as the party, gender, and occupation of the candidates. Second, higher exposure to crime also increases the support for candidates previously employed in the local police forces. Therefore, victimization does not only have a policy effect, but also shapes which candidates become more attractive among voters more exposed to violence. Finally, we do not find partisan effects among Mexican voters' preferences for security polices. When comparing leftists and more conservative voters, we do not observe statistically significant differences in their respective support for more harsh-on-crime policies or other candidates' profiles.

The paper proceeds as follows. First, we present an overview of the literature on the

logic of individual support for punitive security policies. Next, we develop our demand-and-supply argument on individual preferences for iron fist policies and subsequently present pre-registered hypothesis.[2] The fourth section introduces the Mexican case, on which we evaluate our proposed hypotheses. Then, we describe our empirical strategy in detail, including our network model. In the sixth section, we present the main results of our analysis, including the discussion of interesting features of victimization networks in Mexico. Finally, in our concluding section, we derive relevant theoretical and empirical implications of our findings.

4.2 On Individual Security Policy Preferences

Our work seeks to contribute to a growing literature on the effects of violence on policy preferences, with a focus on security-related policies, which have been largely addressed by criminologists and political scientists alike. In this section, we briefly examine the main findings of these two disciplinary approaches and frame our theoretical contribution, given this research.

Within criminology, various works have assessed public support for punitive *vis-á-vis* rehabilitative policies. This group of works consistently finds that fear of crime and perceptions of insecurity decrease the support for rehabilitative policies. However, the evidence on the effect of victimization is mixed. For example, while Baker et al. (2016b) find that victimization experiences cannot predict crime policy preferences, Cohen et al. (2006) find that prior victimization is associated with higher support for prevention poli-

[2]Pre-registration available at https://osf.io/r7vah/

cies.

Political scientists have likewise examined the role of individual encounters and reactions to violence in policy preferences for public security (Krause, 2014; Visconti, 2019; Garcia-Ponce et al., 2019). Overall, these studies have consistently found that victims exhibit a higher support for *mano dura*. Victims are more likely than non-victims to approve the use of state repression (Visconti, 2019) and extrajudicial means (Garcia-Ponce et al., 2019). Beyond the individual victimization status, reactions towards crime can also affect policy preferences. In this regard, fear of crime is not automatically associated with higher support for authoritarian crime control (Krause, 2014), but anger is an alternative response to insecurity that has been associated with higher support for punitive justice (Garcia-Ponce et al., 2019).

The expansion of militarized approaches to address crime in the Latin American region has led scholars to examine public support for such policy. Recent work by Flores-Macías and Zarkin (2021) shows that the appearance of the armed forces can serve as a low-information heuristic that people rely on to form opinions about their effectiveness in the control of crime. The authors find that military weapons and uniforms enhance perceptions of effectiveness and respect for civil liberties, which could ultimately affect the support for militarization—a common example of a punitive policy.

Another set of studies within political science has moved away from the effect of short-term reactions to crime and focused on longer-term political features that also condition voters' preferences for security policies. Such explanatory factors include ideology, partisanship, and political regimes. Two main findings of these studies stand out. First, conservative voters are more likely to support harsh criminal policies (Cohen and Smith,

2016; Gerber and Jackson, 2016). Second, conservative parties who own the issue of security are more likely to win voters' support when crime issue becomes more salient (**?**).

Although criminologist have addressed the role of perceptions of insecurity and victimization on security policy preferences, this group of studies has disregarded the political logic behind such preferences. Within political science, extant research—either considering short- or long-term factors—only accounts for the demand for iron-fist policies as an outcome variable. As a result, these works are unable to consider a more complete picture of the electoral arena, the diverse policy alternatives that parties and candidates may offer, as well as how such options interact with voters' priorities, perceptions, and underlying characteristics. By capturing only a part of the wide variation on policy approaches to crime, these studies are unable to delve into the concurrent paths through which victimization and perceptions of insecurity might shape policy decisions and voters' behavior. The theoretical argument and the subsequent research design that we propose here account for these interactive dimensions between voters, parties, and candidates. We seek to address the politics of security policy preferences that criminologists have omitted. Furthermore, we expand the analysis beyond voter demand for punitivism and examine its interaction with policy supply in the context of an election.

4.3 Voting for security

Our goal in this paper is to understand the logic of individual support for security policy proposals. We claim that such analysis must consider the interaction between voters' preferences and candidates' security policy offers. We further contend that this demand-

and-supply dynamic largely depends on voters' informational short-cuts through which citizens process policy alternatives and choose among them. Two dimensions are particularly relevant for voters to make such decisions: (1) their own personal experiences with violence and (2) candidates' profiles.

4.3.1 Violence and Victimization Experiences

Previous studies have documented the relationship between crime victimization and citizens' policy preferences in Latin America. Recent comparative studies have found that victims of violence show lower levels of trust in democratic institutions (Fernandez and Kuenzi, 2010; Carreras, 2013; Krause, 2014; Pérez, 2015) and criminal justice agencies (Malone, 2010; Blanco, 2013). The effects of violence on security policy preferences have also been documented. Victims of urban violence usually become more supportive of tough-on-crime security policies in Latin America (Visconti, 2019; Garcia-Ponce et al., 2019).

While the previous literature focus mostly on personal experiences of victimization, we argue in favor of a broader notion of exposure to crime. In contexts permeated by organized crime activity in which criminals and state agents both interact and overlap, violence magnifies even further. Therefore, being a victim of criminal violence is neither a one-time violent act nor an exclusively individual experience, but a continuous interactive and collective process among victims, criminals, the state, and society at large (Moncada, 2020).

We contend, therefore, that considering the social bonds among victims can lead to

a more grounded understanding of individual exposure to crime and crime victimization, which subsequently affects perceived policy needs and preferences. As Villarreal and Silva (2006) show, information exchanges through networks of individuals experiencing and perceiving crime can have profound attitudinal consequences and lead to a heightened sense of insecurity, which recent works have shown to greatly affect policy preferences (Visconti, 2019; Altamirano et al., 2020; Flores-Macías and Sánchez-Talanquer, 2020). Therefore, we propose that:

Hypothesis 3. *Respondents that have faced crime victimization within their network are more likely to support punitive policies.*

4.3.2 Candidate Profiles and Perceptions of Party Competence on Security Policies

Although voters' characteristics and experiences with violence are likely to shape an initial demand for punitive policies, such preferences must ultimately confront the actual proposals offered by candidates and their parties. These policy preferences interact with the characteristics of candidates and parties, informing and shaping citizens' strategic decisions. It is necessary, therefore, not only to consider the demand, but also the supply side of this dynamic game to understand the conditions under which some candidates might benefit when campaigning on security as a policy issue.

A way to explore who gains and who loses when public security policies increase salience is to consider the heuristics voters use to infer about those who make policy offers. Previous studies have shown how these heuristics —or non-policy advantages

(Calvo and Murillo, 2019)— can be observed from multiple paths, such as candidate's occupation, their local experience, personal credibility, or reputation and issue advantages from their political parties (Botero et al., 2015; Campbell and Cowley, 2014; McDermott, 2005; Kaplan et al., 2006; Petrocik, 1996). These advantages on the supply side can emerge both at the candidate or party level, and are crucial to understand voters' strategic decisions.

At the individual level, some candidates might have attributes that help voters make inferences about their credibility (Ferejohn, 1986; Przeworski et al., 1999; Besley, 2006). Such credibility helps voters to distinguish between an empty promise and a credible policy proposal (Iyen, 2000; Botero et al., 2015; Lupia, 2002). An important credibility signal is the candidate's professional experience in a given bureaucracy or policy area is a way to signal about this credibility advantage (McDermott, 2005). As recent evidence shows, the image of an individual in military uniform increases her perception of effectiveness in law enforcement Flores-Macías and Zarkin (2021). Therefore, we expect that police forces and candidates with a previous experience on public security agencies use their professional experience as an informational heuristic signaling to voters about their competence, commitment, and credibility to prioritize security when elected. Accordingly, we propose that:

Hypothesis 4. *Candidates profiles whose work experience is unrelated to public security are less likely to be selected.*

At the party level, non-policy advantages are commonly described in the literature as party issue ownership (Calvo and Murillo, 2019; Kaplan et al., 2006; Petrocik, 1996).

According to this argument, conservative parties tend to have a stronger association with crime control policies, therefore, "owning" the issue of security (Kaplan et al., 2006; Petrocik, 1996). The valence advantage of conservative parties as more competent and credible to fight against crime allows them to benefit from the the growth of *mano dura* policies in the region. In El Salvador, for example, the increasing demand for punitive policies allows conservative parties to "draw on language, figures, and founding myths from periods of authoritarian control to lend credibility to claims that they will provide security at all costs" (Holland, 2013, p. 52). Therefore we expect that:

Hypothesis 5. *Candidates profiles affiliated with more conservative parties are more likely to be selected.*

Occupational and party heuristics also supply voters with information about a candidate's policy preference, consequently helping voters to choose candidates more aligned with their own policy positions (Nicholson, 2012; Lau and Redlawsk, 2001; Arceneaux, 2008). For the specific case of public security in Latin America, police forces, candidates emerging from security agencies, and more conservative parties are usually associated with more punitive security policies (Frantz, 2018; Bueno, 2012; Cano, 1997; Magaloni et al., 2020) and these heuristics are appealing to voters' with more punitive preferences. As a result, beyond non-policy (valence) advantages, conservative candidates and those with criminal justice system experience are more likely to be chosen when associated with more punitive policies. We, thus, expect that:

Hypothesis 6. *Conservative parties and candidates with professional experience on public security will be more likely to be selected when associated with more punitive policy proposals compared*

to other more crime prevention policy approaches.

To summarize, we argue that voter support for punitive policies is determined through an interactive process between voters and candidates. Among voters, their shared victimization experiences affect their security policy preferences. Among candidates, we argue that candidate profiles—regarding both their professional backgrounds and party affiliations—are crucial heuristics that help voters make their final decision.

To test the proposed hypotheses, we use data from a conjoint experiment embedded in a nationally representative survey in Mexico. The goal of our experiment is to assess the electoral value of candidates' personal attributes and campaign promises. As noted, we focus on those features related to public security that may shape voters' preferences for candidates in local elections and evaluate their interaction with voters' experiences and subsequent concerns. Below we provide a brief description of the context of our case study.

4.4 Contextual Background: Crime Victimization in Mexico's Local Elections

Violence and crime took over Mexico's national agenda after President Felipe Calderón declared war on drug cartels in late 2006. The confrontation of the army against drug trafficking organizations intensified inter-cartels conflict and drug-related violence skyrocketed (Trejo and Ley, 2020). The sudden rise of violence was followed by citizens' concern about safety. The share of Mexicans considering public security as the most im-

portant problem in the country went from 21% in March 2004 to 49% in June 2007.[3] By 2019, insecurity was considered Mexico's most important problem for about 67% of the citizens in the country.[4]

The concerns about public security raised in importance not only at the national level but also at the local level. In 2019, 79% of citizens considered insecurity as the most important issue in their state, standing as the most mentioned problem in 31 out of 32 states in the country.[5] Moreover, 73% of citizens in Mexico's seventy largest urban areas felt unsafe in their community, and only a minority of them perceived the state police (48%) and municipal police (40%) as effective.[6]

Citizens' growing demand to improve public security provided a solid ground for tough-on-crime campaign promises in state and municipal elections, where candidates often position themselves by announcing whether they align or not with the security policies implemented by the federal government (Ley, 2017a). Anecdotal evidence suggests the popularity of such policies, with several candidates and elected officials discussing extreme measures to crub crime, such as the creation of death squads to hunt down criminals,[7] or the official adoption of physical injuries against criminal suspects.[8] In the next

[3]See Mancillas, María Antonia and Alejandro Moreno "Destacan alternancia como mayor logro," *Reforma*, September 1, 2004 (p. 9A); Moreno, Alejandro and María Antonia Mancillas "Ven voluntad presidencial," *Reforma*, December 1, 2008 (p. 6).

[4]"Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública (ENVIPE) 2019" Instituto Nacional de Estadística, Geografía e Informática, 2019.

[5]*Ibid*

[6]"Encuesta Nacional de Seguridad Pública Urbana (ENSU), 2020" Instituto Nacional de Estadística, Geografía e Informática, 2020.

[7]Cedillo, Juan Alberto "Crime-Fighting Mexican Mayor Sends Family Abroad for Safety" *Latin American Herald Tribune*, November 17, 2020. (http://www.laht.com/article.asp?ArticleId=347489&CategoryId=14091)

[8]Daniel, Frank Jack "'Cut off hands': Mexican presidential candidate's plan to deter thieves" *Reuters*. April 22, 2018. (https://www.reuters.com/article/us-mexico-election-bronco/cut-off-hands-mexican-presidential-candidates-plan-to-deter-thieves-idUSKBN1HU0DZ)

section, we further discuss how we map these policy proposals into our conjoint design; we provide examples of actual security policy proposals local elections in Mexico and which resonate with the options in our experiment.

Approaches to public security also represents an important campaign issue among parties. The clearest example is Mexico's Green Party, which endorses life imprisonment and death penalty.[9] Among the three largest parties in the country, the last presidential campaign marked a clear divide between the public security proposals from the Revolutionary Institutionalized Party (PRI) and National Action Party (PAN), on the one hand, and the National Regeneration Movement (MORENA), on the other. During the first presidential debate, MORENA's Andrés Manuel López Obrador proposed amnesty for those caught up in the illegal drug trade. This proposal was part of his campaign proposal summarized in one of his campaign slogans: "hugs, not bullets." The proposal was severely opposed by the PAN and PRI, who suggested that would put the state "on the side of criminals."[10]

Taken together, the circumstances surrounding contemporary local elections in Mexico—the rise of drug-related violence, citizens' concerns about public insecurity, and local candidates' emphasis on an iron fist approach to crime—provide a good basis to explore which campaign promises on public security are most relevant in shaping voters' prefer-

[9]Tuckman, Jo "Mexico's Greens: pro-death penalty, allegedly corrupt—and not very green" *The Guardian* April 21, 2015. (https://www.theguardian.com/world/2015/apr/21/mexico-green-partylL\unhbox\voidb@x\bgroup\let\unhbox\voidb@x\setbox\@tempboxa\hbox{o\global\mathchardef\accent@spacefactor\spacefactor}\let\begingroup\def{}\endgroup\relax\let\ignorespaces\relax\accent19o\egroup\spacefactor\accent@spacefactorpezObradora-corruption-claims-environment)

[10]*NBC News* April 23, 2018. Mexico presidential debate: Front-runner Lopez Obrador defends amnesty to fight drug violence (https://www.nbcnews.com/news/latino/mexico-first-presidential-debate-front-runner-lopez-obrador-defends-amnesty-n868306); NPR July 23, 2020. As Mexico's Dominant Cartel Gains Power, The President Vows 'Hugs, Not Bullets' (https://www.npr.org/2020/07/23/893561899/as-mexicos-dominant-cartel-gains-power-the-president-vows-hugs-not-bullets).

ences for candidates, and whether these preferences vary according to individual exposure to crime and candidates' profiles.

4.5 Empirical Strategy

4.5.1 Conjoint Experiment: Measuring Support for Mano Dura in Realistic Settings

Our goal is to explore the trade-offs voters face in real-life settings when security policies across distinct candidates differ. Therefore, we designed a conjoint experiment that exposes respondents to different candidates' profiles and security policies campaign proposals (Hainmueller et al., 2014).[11]. In particular, respondents are faced with the profiles of two hypothetical candidates for a municipal election. Given that our argument revolves around the effects of candidates' backgrounds, each candidate's profile is a random selection of characteristics along four dimensions: work experience, policy proposal for public security, gender, and political party (see Table 1). Then we asked the respondent: "Imagine that the mayoral election is between these two candidates. Which one would you vote for?" Respondents repeated this exercise for one additional pair of hypothetical candidates.

This experimental design offers several advantages. First, the respondents are exposed to a wide set of policy proposals for public security, which range from rehabilita-

[11]The experiment was included in a national online survey in Mexico with 2.400 respondents. The survey was fielded by Netquest-Vanderbilt, with probabilistic samples drawn by the LAPOP team in Vanderbilt from users registered with Netquest. The experiment received the approval of the University of Maryland Institutional Board Review 1552091-3

tive policies to more punitive approaches to deal with crime. Our proposal, therefore, stands out by measuring behavior considering a broad and realistic set of policies that voters can choose from in a given election.[12] The choices of policy proposal considered in our experiment resonate with those that mayoral candidates have actually presented in their campaigns. Crime prevention approaches in local electoral campaigns vary, from attention to the youth [13] to community centers.[14] In the most recent 2021 mayoral campaign in Zapopan, Jalisco—a municipality with active presence of Jalisco New Generation Cartel—nine candidates proposed to increase the number of police officers and improve their training and equipment.[15] Investment in local police forces is a frequent proposal among mayoral candidates across Mexico.[16] Furthermore, over the last decade, a growing number of mayors have appointed members of the military as heads of their municipal police forces.[17] Following this trend, in recent years, several mayors have requested the appointment of members of the armed forces as heads of the municipal police.[18] Finally,

[12]Previous studies on preferences for punitive policies in Latin America rely mostly on abstract or purely attitudinal measures of support for *mano dura* (Visconti, 2019; Holland, 2013; Krause, 2014; Garcia-Ponce et al., 2019) to identify to which degree the demand for weak procedural policies is affected by experiences of crime victimization

[13]Rosales, Paulina. "Enrique Vega propone rescatar a jóvenes de las adicciones." *Diario de Querétaro*. April 21, 2021. https://www.diariodequeretaro.com.mx/local/enrique-vega-propone-rescatar-a-jovenes-de-las-adicciones-6626889.html

[14]Among the main initiatives by Sonia Villarreal Pérez, PRI candidate to the municipal presidency in Piedras Negras, Coahuila, in the 2021 election, is the creation of a crime prevention policy, with a focus on young people. See http://www.candidatotransparentecoahuila.org.mx/vp2/candidatos4.php

[15]Blanco, Sergio. "Seguridad, primer tema que abordaron candidatos a Zapopan en foro de Iteso." *El Informador*, April 15, 2021. (https://bit.ly/2ReOaXm).

[16]Cubero, César. "Inseguridad, reactivación económica y otros retos en Monterrey...Esto dijeron candidatos en ForoMETA21." *Milenio*, April 20, 2021. https://www.milenio.com/politica/elecciones-2021/monterrey-candidatos-alcaldias-propuestas-foro-meta21-envivo

[17]See "México: Asesinatos, desapariciones y torturas en Coahuila de Zaragoza constituyen crímenes de lesa humanidad." Informe de la Federación Internacional por los Derechos Humanos al Fiscal de la Corte Penal Internacional. No. 695e, June 2017. (http://www.cmdpdh.org/publicaciones-pdf/cmdpdh-comunicacion-coahuila.pdf)

[18]El Sol de Hermosillo. "Mando militar podría encabezar la Policía Municipal en Hermosillo." *El Sol de Hermosillo*. August 13, 2019. (https://www.elsoldehermosillo.com.mx/local/mando-militar-podria-encabezar-la-policia-municipal-en-hermosillo-4034099.html)

some parties in Mexico have openly supported the death penalty and such policy has become a trademark for the Mexican Green Party.

Second, our design pays attention to the extent to which partisan identities and information cues shape and inform voters' preferences for iron-fist policies. Beyond varying policy proposals, our experiment also rotates the candidates' previous professional background, gender, and party affiliation. Again, our choices for work experience resonate with actual cases in recent Mexican elections. Former Tijuana police chief in Tijuana, Julián Leyzaola, was a mayoral candidate in the 2019 election.[19] In the 2021 election cycle, Hipólito Mora, a former self-defense leader, was appointed as a party candidate in the state of Michoacán. An owner of a private security company in Acapulco, Guerrero was also selected as the mayoral candidate of the Labor Party (PT).[20]

Given that all of our policy proposals relate to security, our design allows for simple identification of how heterogeneity on a valence issue can, nonetheless, give some advantage depending on the candidates' profile and partisan identification and affect voters' preferences when considering security concerns. Consequently, third, by exposing voters to a multidimensional behavioral choice, our conjoint experiment works as a useful resource for reducing social desirability bias—a concern particularly present in delicate issues as preferences for crime policies and victimization.[21]

Our quantity of interest is the marginal effect of each of the candidates' attribute on

[19]El Sol de Tijuana. "Elecciones 2019...Conoce a los candidatos." *El Sol de Tijuana*. May 27, 2019. (https://www.elsoldetijuana.com.mx/local/elecciones-2019...conoce-a-los-candidatos-3680956.html)

[20]Gómez Baray, Katyana. "¿Quiénes son las candidatas y candidatos a la presidencia municipal de Acapulco de Juárez?" *El Economista*. March 11, 2021.

[21]By dealing with the challenges of social desirability bias, and simulating a more realistic setting, our conjoint provides more reliable estimates when compared with simple framing designs commonly used in the related literature on attitudinal effects of crime victimization and punitive preferences (Garcia-Ponce et al., 2019; Krause, 2014).

Table 4.1: Candidate Profile Features and Choice Levels

Feature	Choices
Work Experience	
	Chief of police
	Owner of Private Company of Security
	Human Rights Activist
	Leader of Self-Defense Group
	Public Employee
Policy proposal for Public Security	
	Death Penalty for the criminal
	Militarization of the police forces
	Building a welfare center to help victims of violence
	Increase the number of police officers, improve their training, and increase security cameras in the streets.
	Offer more job opportunities for the Youth
Gender	
	Male
	Female
Political Party	
	MORENA
	PAN
	PRI
	Independent

vote choice. We estimate it by quantifying the premium or the penalty that each candidate's attribute has on the voter's choice (Hainmueller et al., 2014). In a nutshell, conjoint experiments allow researchers to examine the weight that each attribute (and its levels) has on the choice or preference of products. Within the field of political science, conjoint design has been applied to the study of policy preferences (Bechtel et al., 2014), immigration preferences (Hainmueller and Hopkins, 2015), bureaucratic behavior (Oliveros and Schuster, 2018), and vote choice (Franchino and Zucchini, 2015; Kirkland and Coppock, 2018).

To estimate each attribute's relative weight, we calculate the marginal effect of each attribute against a baseline, or the Average Marginal Component Effect (AMCE). AMCE is obtained by regressing the dependent variable—in this case, whether the hypothetical candidate was selected by the respondent—on a battery of dummy variables, each of them representing a specific attribute level. The regression excludes the estimation of one level per attribute, which works as the baseline category. Since each profile's attributes are fully randomized, the AMCE should be interpreted as the average difference in the probability that a profile is chosen when it includes the listed attribute value in comparison with the baseline attribute value.

All of our hypotheses are related to subgroup effects or interactions across the features. We then estimate the models using interactive terms between our moderators and the feature of interest. We present the numerical results in the Appendix and keep the graphical presentation in the paper for the marginal effects for each comparison (Brambor et al., 2006). Finally, we investigate the presence of carryover and profile order effects (Appendix F). Our graphical analysis and the joint significance F-tests do not indicate a

violation to these two key assumptions for a conjoint design.

4.5.2 The Political Effects of Crime Victimization: A Network Approach

A growing literature in political science has explored the effects of crime victimization on policy preferences, mainly relying on survey data (Visconti, 2019; Garcia-Ponce et al., 2019; Altamirano et al., 2020). However, there are several challenges in the measurement of crime victimization, such as: i) social desirability bias, resulting from respondents refusal to share their victimization experience; ii) rare occurrence and serial correlation of victimization experiences, yielding a small percentage of victims captured in survey samples; and iii) high over dispersion of violence, concentrating victimization among some people and regions more than others.[22] Facing these constraints, some studies on the political effects of crime have instead relied on measures of fear of crime as a proxy for victimization (Rueda and Stegmueller, 2015; Gingerich and Scartascini, 2018; Gingerich and Oliveros, 2018). While it is reasonable to assume that crime affects fear of crime and perceptions of insecurity, such approach has other additional limitations. First, several other variables might explain the heterogeneity of fear of crime, such as economic anxiety (Singer et al., 2020), which is also correlated with policy preferences. Second, the correlation between individual victimization and fear of crime is likely to depend on overall exposure to violence and risk acceptance.

Given the methodological challenges in the measurement of crime victimization, we

[22]See (Visconti, 2019) for a similar discussion of making causal claims of behavioral effects of crime victimization using survey data. While Visconti's solution is to use panel data and matching algorithms to deal with these challenges, we take a different route by using fine-grained information from the respondents' friendship network to build a more detailed measure of contextual exposure to crime.

develop a novel measure using respondents' information from their friendship network (Zheng et al., 2006a; McCormick et al., 2010; McCormick and Zheng, 2013; Calvo and Murillo, 2013). We build the network using information from survey questions framed as: "How many X's do you know, that also know you, and that you have interacted with in person, by phone, or by some other media in the last year?" The X's represents a vector of eighteen indirect items about the size and structure of our respondents' friendship network. Respondents then answered about how many people they know who, for example, are called Silvia, work as physicians, or work as teachers. Within this battery of questions, we inquired about the respondent's exposure to crime and violence by asking how many people she knows that were victims of crime.

This network approach allows us to address several challenges initially identified in the measurement of crime victimization. First, because we are not directly asking about personal experiences of victimization, our approach reduces challenges related to social desirability bias in survey responses. Second, we use the network information to augment the survey data, therefore, reducing concerns about sampling error, and serial correlation of victimization. In other words, our survey design, based on exposure to criminal violence in the respondents' network, provides a measure that goes beyond the idea of a one-time an and individually-experienced violent act (Moncada, 2020), while simultaneously capturing the degree of surrounding violence.

4.5.3 A Network Model for Crime Victimization

In this section, we summarize our modeling strategy to identify the prevalence of victimization in the respondents' network. [23] Our survey asked a battery of eighteen indirect questions about the size and structure of our respondents' friendship network. We model the responses using the overdispersed multilevel estimation, as follows:

$$y_{ik} \sim \text{Negative-Binomial}(e^{\alpha_i+\beta_k+\epsilon_i k}, \omega_k) \tag{4.1}$$

The α_i parameter measures the size of the respondents i network. β_k estimates the relative prevalence of each group k in the population. And the parameter ω_k controls the overdispersion of the groups k. In this case, higher values of ω_k indicate more variation among the respondents in the prevalence of group k than would be expected under a null model, as well as a more dense network for the group k.

Previous works use β_k to identify the size and network structure of hard-to-reach population, such as those with HIV/AIDS, injection drug users, or the homeless (Killworth et al., 1998; Salganik et al., 2011; Bernard et al., 2010). In our measure, for the case of crime victimization, we are more interested in the capacity of the model to capture how each respondents is more/less exposed to crime victimization using variation from ones' friendship network. This substantive parameter is captured by the standardized residuals of the model, as stated below:

[23] For a complete exposure of the model, we direct the readers to Zheng et al. (2006a) and chapter five in Calvo and Murillo (2019) for a political science application.

$$r_{ik} = \sqrt{y_{ik}} - \sqrt{e\alpha_i + \beta_k} \tag{4.2}$$

The residual r_{ik} provides critical and intuitive information. For our purposes, these quantity indicates to which degree individual i for each group k deviates from the overall group mean prevalence, given her personal network (how many people the respondent knows) as well as the group prevalence (how many "Silvia's" are in Mexico). In other words, a higher/lower residual indicates that a survey respondent is more/less exposed to criminal violence in their network of friends. By incorporating indirect responses and modeling the respondents' network, we have a richer and augmented information about how much criminal violence each respondent in our survey is exposed. Besides, we can model which individual-level information explains crime exposure and the correlation across different groups k.

The Appendix A provides two descriptive analyses about the characteristics of crime victimization in the respondents' network. First, Figure 7 illustrates the overall association between the social groups estimated through the subject's friendship network. The most important finding in the dendogram is the strong correlation between crime victimization and police violence. The fact that respondents who know more victims of crime also reported to know more victims of police violence confirms previous evidence of specific social groups being simultaneously under-protected and over-policed (Gelman and Hill, 2007; Edwards et al., 2019; Mummolo, 2018).

Second, Table 2 in the Appendix presents the results of regressing the residuals for crime victimization on a battery of covariates from our survey. The results show a lower

degree of victimization for the networks of wealthier respondents. Moreover, confirming previous evidence on the topic, exposure to crime is positively correlated with fear of crime, considering security as a top policy priority, and support for punitive policies (Visconti, 2019; Cohen and Smith, 2016; Gerber and Jackson, 2016; Singer et al., 2020).[24] Finally, higher exposure in the friendship network to crime victimization is negatively correlated with trust in the police. This finding is substantively important since lower trust in the police is likely to affect citizens' willingness to report crime and police abuse cases, therefore affecting accountability and the quality of democracy in Mexico (Gingerich and Oliveros, 2018; Malone and Dammert, 2020; Malone, 2010).

Overall, the descriptive analysis confirms the robustness of our measure of crime victimization networks and its resonance with prevalent findings in the literature on the correlates of exposure to crime. The following section presents the results of our experimental design, emphasizing the effects for the friendship network on security policies' preferences and other relevant features of our conjoint design.

4.6 Results: Voting for Security in Mexico

We start by presenting the overall average marginal component effects (AMCE) of the conjoint experiment. Figure 4.1 presents the AMCE for all the components, and sets the reference groups to zero for each of the profile's features. The first relevant outcome is the strongest support in our sample for candidates with experience in human rights activism.

[24]For fear of crime, we average across three different survey questions asking about: i) fear of being alone at home, ii) walking on a dark street, iii) driving by oneself at night. For punitive preferences, we use an ordinal scale from the question: "In Mexico, too much importance is given to the rights of criminals."

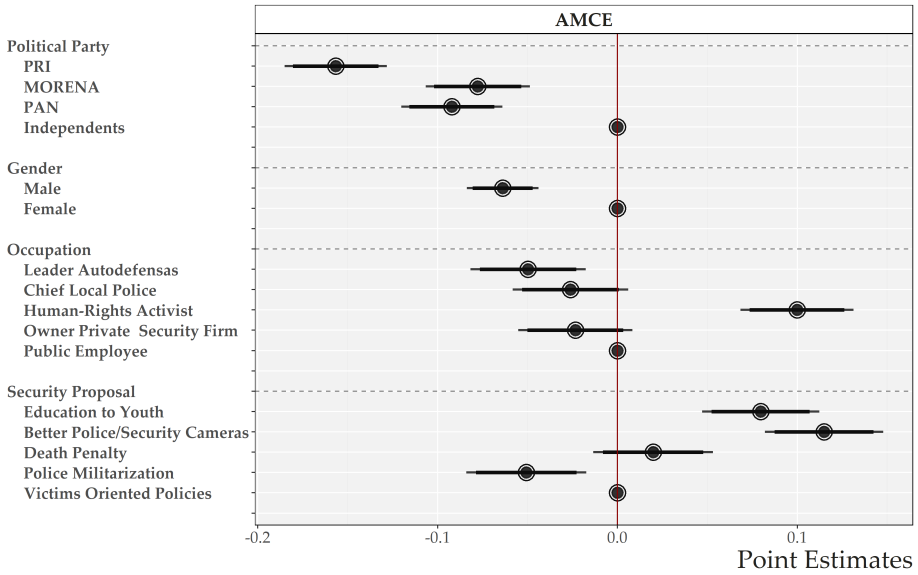
In comparison to a public employee, human rights activists are about 10% more likely to be selected by the respondents. In contrast, leaders of *autodefensas* organizations were the least likely to be selected from all the profiles related to experience with public security. In comparison to the baseline, *autodefensas* leaders are about 5% less likely to be selected by the respondents.

The AMCE results by themselves provide no support for our expectation on the direct effects of candidate profiles on the voter decision. The occupation that more directly indicates that the candidate had previous experience with public security—the chief of local police—does not show a positive statistically significant effect, as we expected, and more conservative parties do not show a positive marginal component effect. Furthermore, against conventional wisdom, there is a weak support for iron fist policies in the general population. In particular, a candidate campaigning on police militarization is about 5% less likely to be preferred over another candidate promoting victim oriented policies. Our second tough-on-crime policy, death penalty, shows a weak and non-significant AMCE for the overall population. In contrast, our results show positive and significant values for the prevention policies in the experiment—i.e., youth education and police cameras. Together, these findings are at odds with the increased militarization of security forces in Mexico and Latin America.

Conditional Effects of Crime Victimization

Now, we discuss our hypotheses regarding the effects of crime victimization on selecting candidates proposing more punitive policies. We estimate models using a linear interac-

Figure 4.1: Conjoint Estimates: average marginal component effects of attriftasbutes on the selection of hypothetical candidates

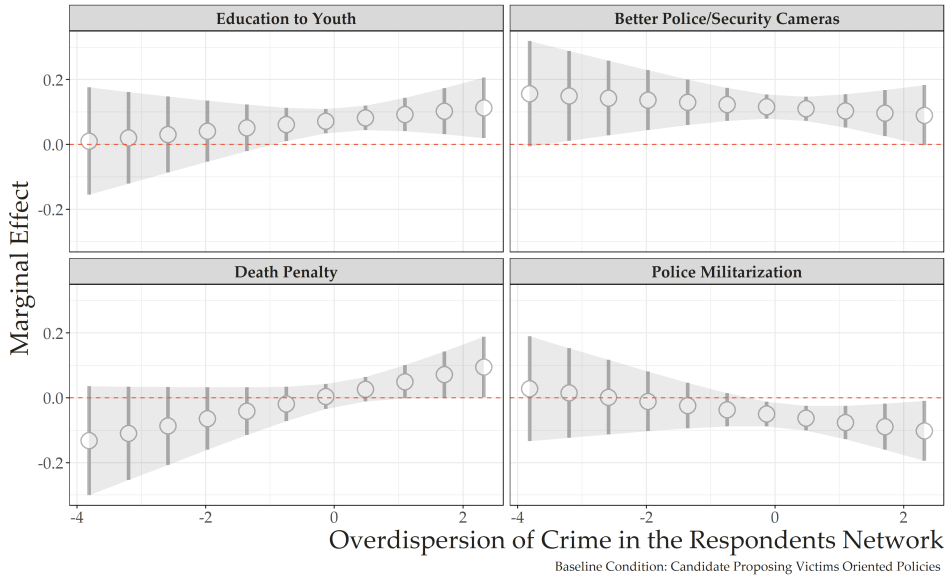


Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% and 90% confidence intervals. The points without bars represent the reference category for each attribute.

tion between the public policy proposals' feature and our network measures for victimization. The numerical results for the models are presented in the Appendix B, and figure 12 presents the marginal effects for interaction terms.

Confirming our initial expectation, the results in the upper plot on Figure 4.2 suggest that higher exposure to victimization is positively correlated to support for death penalty. In other words, when respondents have more friends in their immediate network who were victims of crime (positive values), support for a candidate campaigning on more punitive policies increases. Although the militarization of police forces is also considered a punitive policy, we find an opposite relationship with victimization. Following

Figure 4.2: Conjoint Estimates: average marginal interactive effects



a) Security Policy X Crime Victimization

b) Occupation X Crime Victimization

Note: The plot shows marginal effects from linear interactive models between the residuals from the network models and the Security Policy feature. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Flores-Macías and Zarkin (2021), this result could be related to perceptions of increased effectiveness and respect for civil liberties by military personnel.

We see no robust change for the other security policy choices. In this sense, our results speak in the same direction of the findings in Gingerich and Scartascini (2018), suggesting that victimization and crime make punitive policies more attractive. However, it does not affect support for crime prevention policy approaches.

Given our theoretical argument, we expect that candidates from law enforcement and militarized agencies will receive greater support from respondents more afflicted by violence, due to their association to the implementation and support to tough-on-crime policies (Flores-Macías and Zarkin, 2021; Navajas et al., 2020; Trejo et al., 2018)[25]. To asses this hypothesis, the bottom plot on Figure 4.2 presents interactive effects of crime victimization with the occupations' feature. We find that voters more exposed to violence on their friendship network increase substantively their support for the chief of police's candidate, while all the other AMCEs remain basically unchanged.

The statistical significance of the differences can be assessed by comparing the effects over the x-axis. For the death penalty and chief of police features, we observed a upward trend for the probability that the respondent would choose a candidate with these properties. To properly assess the statistical differences between these interactive effects, we present in Appendix C the AMCE differences when one moves from the first to the fifth quantile on the crime victimization moderator.

Moving from the first to the fifth quantile on crime victimization increases the like-

[25] Although this hypothesis is post-hoc to our pre-registration, we believe its logic follows straight from our theory

lihood to vote for a candidate proposing the adoption of the death penalty by 8.5% (*p-value = 0.78)*, while the likelihood of supporting a former police chief increases in 9.5% *(p-value=0.06)*. These results are robust to different choices of the quantiles, as the more transparent continuous model on Figure 4.2 already suggests. It is important to emphasize that our conjoint task had only two repetitions per respondent. Since conjoint designs are based on high number of possible profile combinations, the statistical difference of these subgroup analysis are worth noting.

Conditional Effects of Partisanship and Candidates' Profiles

In Figure 4.3, we present the average component interactive effects between the features political party and security proposal. Our main goal here is to assess to which degree the supply of politicians interacts with voters' demands for security policies. From our theory, we expect candidates from more conservative parties and having a professional experience with law enforcement would receive greater support when associated with more punitive proposals.

We find no support for the hypotheses regarding the partisan advantage for conservative parties (PAN) or law and order officials (chief of police) when proposing more punitive measures. As Figure 4.3 shows, no party benefits from proposing police militarization. Also, MORENA and the PRI candidates—instead of those from PAN, the Mexican rightist party—benefit from campaigning death penalty. Experimental data fails to support our partisan hypothesis and a growing literature on issue ownership and crime (Holland, 2013; Beckett and Western, 2001; Kaplan et al., 2006).

For the case of occupation, we find mostly null effects between the occupations—when holding the proposals constant. The main finding, which runs in the opposite of our initial expectation, relates to a positive effect of a self-defense group when associated with death penalty. In other words, a vigilante leader is more likely to be chosen by our respondents when shown in the conjoint together with the adoption of death penalty as an security policy. A possible explanation is that members of a self-defense group can credibly propose death penalty, given their engagement in extralegal justice, including the killing of criminals.[26]

In the supplemental files, we present several additional analysis. First, we consider the interactive effects with the network measure of exposure to police violence. Results are similar to those presented in the paper, with more victimized respondents growing greater taste for punitive policies. In addition, following previous studies (Rueda and Stegmueller, 2015; Gingerich and Scartascini, 2018; Gingerich and Oliveros, 2018), we also assess the interactive effect with fear of crime. As in the other models, we find an substantive increase for the death penalty proposal.

Finally, we examine interactive effects driven by personal direct victimization. The differences are not statistically significant for support to iron-fist policies or the chief of police, as we found when using contextual exposure. This difference is important to highlight, and converges with recent arguments by Moncada (2020) about the importance of theorizing victimization as a repeated and interactive process, and not as a one-shot event.

[26]BBC News. "Mexico vigilantes in deadly shoot-out in Michoacán." *BBC News*. December 17, 2014. (https://www.bbc.com/news/world-latin-america-30512544)

To summarize, we find evidence that respondents more exposed to crime victimization significantly increases the support for iron-fist policies, such as the death penalty, confirming our hypothesis 1. In addition, as an extension of hypotheses 1 and 4, we find that higher exposure to crime also increases the support for candidates previously employed in the local police forces. In this sense, exposure to violence within the respondents' network does not only have a policy effect, but also shapes which candidates become more attractive among voters. Finally, our other hypotheses about direct partisan and occupational advantages were not confirmed.

4.7 Conclusion

This paper explores the electoral supply and demand factors for punitive security policies. We argue that the implementation of such policies depends on voters' personal experiences with violence and candidates' platforms on public security, whose credibility depends on their relevant experience. We have drawn insights from the literature on experimental public opinion and social networks to mitigate concerns on social desirability, limited generalization, and under-reporting bias. Using original survey data from Mexico, we provided robust evidence showing that the demand for punitive policies in the country is largely conditional on citizens' victimization experience. Despite voters' limitation in assessing security policy proposals, our findings indicate different ways through which policy approaches and candidate profiles are perceived, pointing to the need of capturing this interaction between voters and candidates.

To assess the effects of victimization, we propose a novel friendship network approach

that addresses previous measurement challenges to estimate citizens' exposure to victimization, our findings confirm previous findings on the relationship between crime victimization and support for punitive policies. Victimization seems to be the main driving factor through which voters express higher support for the death penalty as a policy proposal. This is an important result because it lends robustness to the observational evidence provided in the existent literature.

Contrary to our expectations, we find that the demand for punitive policies is inelastic with respect to the party that offers and that such policies do not give a premium to candidates with professional experience in public security. The lack of empirical support for our partisan hypotheses is likely to respond to the undergoing recomposition of the Mexican party. The former major parties fell victims to their internal conflicts and the lack of solutions against the low economic growth, crime, and rampant corruption in the country (Greene and Sánchez-Talanquer, 2018; Prud'homme, 2020). As a response, López Obrador and his recently formed MORENA ran a personalistic campaign based on valence issues that appeal to a heterogeneous electorate whose support is far from stable (Aguilar, 2019).[27] At the same time, parties have converged to offer very similar public security policies, while President López Obrador contrasting less punitive strategy against crime during his campaign (see section 4) radically shift once in office with the creation of a new security force operated by the military.[28] Therefore, respondents at the time of the survey could be unsure about the platform each party proposed. It will most

[27] Among those who identify with MORENA, two-thirds of them feel closer to López Obrador than to the party. Moreno, Alejandro. "De minorías y megáfonos. *El Financiero*. February 26, 2021. https://www.elfinanciero.com.mx/opinion/alejandro-moreno/de-minorias-y-megafonos

[28] Gaytan, Victoria. "The many messages of AMLO's first address to the nation." *Global Americans*. December 7, 2018. (https://theglobalamericans.org/2018/12/the-many-messages-of-amlos-first-address-to-the-nation/).

likely take a few more elections to see the results of the party system reconfiguration.

Despite the negative findings for our partisan hypotheses, our evidence nonetheless shows that voters are not necessarily blinded by iron-fist policies and can distinguish between credible and non-credible proposals. Candidates who have a human rights background or experience in private security are electorally benefited when proposing crime prevention policies. In contrast, we do not find consistent evidence on the relevance of candidates' past public security experience and conservative profiles to boost their electoral support. The lack of evidence for the electoral support on police militarization in Mexico is something worth noting and at odds with both previous research and the overwhelming rates of approval that this policy has in the country.[29] Our results may suggest that the high support for this policy does not reflect citizens' direct support towards this policy but rather an endorsement to the incumbent party that proposed it.

This study provides important implications to the literature about preferences for iron-fist policies. The existing studies have mainly focused on the demand for such policies and the amplifying effect of victimization. The findings here suggest that, despite the raising support for punitive policies, voters are still more likely to support more preventive security policies. These patterns of electoral behavior can determine the proposals made by candidates and the future policies against crime in the region.

[29]In early 2019, 80% of the population agreed with the new military force, and 68% of them preferred the army over the police to combat insecurity. Moreno, Alejandro. "El 80% aprueba militarizar el combate contra la inseguridad" *El Financiero*. February 18, 2019. (https://www.elfinanciero.com.mx/nacional/el-80-aprueba-militarizar-el-combate-contra-la-inseguridad)

Voting for Law and Order: A Network Approach to Crime Victimization

Supporting Information Files (SIF)

4.8 Appendix A: Descriptive Results for Victimization Using a Network Approach

In this section, we provide descriptive results from our network model. At first, we examine the correlation between the groups k in the population using information from the network model. This quantity examines the correlation between the individual level residuals, according to equation 2 in the main paper, and compares whether individuals who know more victims of criminal violence, on average, also know more people who are in prison, suffered from police violence, or lost their jobs due to the COVID-19 pandemic in Mexico, etc...

The dendrogram presents the clustering algorithms in which more similar groups/units are plotted together. A simple visual inspection from the dendrogram provides empirical evidence from several intuitions about the characteristics of personal networks in Mexico.

Second, we explore further the results from our network model of crime victimization. We provide a set of OLS regression models using the residual for crime victimization in the subjects' network as dependent variables, and a set of relevant covariates from our survey as explanatory factor. Then, our models compare the results with the traditional

measure of self-reported survey victimization. Although we do not explore results for police victimization in the paper, we also present the network information and its correlates for this quantity in the table. Results provide some interesting insights about the dynamics of victimization in Mexico that we briefly discuss here.

As a refresh, the residuals are extracted directly from the predictions of the multilevel models estimated using the network questions from our survey. Their interpretation are fairly straightforward; a higher/lower residual indicates that some surveys respondents know more/less people who is a member of a particular group – in our case, who suffered from crime and police violence in the last year. These estimate parse out two crucial information from the respondents' network: the size of the respondent personal network and the size of the group k in the overall Mexican population. In other words, the residuals tell us which respondents have more friends on a particular group considering how many people she knows overall and how many people there is to be known in this group. Using the residuals in a regression model, therefore, provide critical information on the social and political determinants of - in our application - crime and police victimization in Mexico. The table 4.2 presents the results:

Models 1 and 3 present results using the network's residuals as dependent variables, while models 2 and 4 present the same models but using direct survey questions about victimization and police violence. We discuss in the paper the main findings from this table.

Table 4.2: Regression Estimates: Correlates of Contextual and Individual Victimization

	Dependent variable:			
	Crime Victimization (Network Residuals)	Crime Victimization (Survey Questions)	Police Violence (Network Residuals)	Police Violence (Survey Questions)
Intercept	-0.381^{*}	0.819^{***}	-0.386^{*}	1.170^{***}
	(0.228)	(0.100)	(0.223)	(0.072)
Income (Middle)	-0.135^{**}	0.023	-0.033	-0.021
	(0.059)	(0.026)	(0.059)	(0.019)
Income (Top Quartile)	-0.155^{**}	0.004	-0.005	0.010
	(0.070)	(0.031)	(0.069)	(0.022)
Employed	0.114^{**}	0.013	0.119^{**}	0.005
	(0.049)	(0.022)	(0.049)	(0.016)
Age	-0.009	-0.025^{***}	-0.023	-0.019^{***}
	(0.016)	(0.007)	(0.016)	(0.005)
Education	0.013	-0.007	-0.002	-0.006
	(0.026)	(0.011)	(0.026)	(0.008)
Female	0.083	-0.047^{**}	-0.077	-0.083^{***}
	(0.051)	(0.022)	(0.050)	(0.016)
Crime Victim	0.372^{***}		0.044	0.140^{***}
	(0.055)		(0.054)	(0.018)
Police Violence Victim	0.064	0.273^{***}	0.680^{***}	
	(0.077)	(0.034)	(0.072)	
Punitive Preferences	0.025^{**}	0.010^{**}	0.012	0.003
	(0.010)	(0.004)	(0.010)	(0.003)
Fear of Crime	0.158^{***}	0.150^{***}	0.148^{***}	0.034^{**}
	(0.045)	(0.019)	(0.043)	(0.014)
Trust in the Police	-0.012	0.006	-0.040^{***}	-0.015^{***}
	(0.010)	(0.004)	(0.009)	(0.003)
Security Top Priority	-0.028^{***}	0.001	0.005	-0.003
	(0.011)	(0.005)	(0.011)	(0.003)
Observations	1,434	1,598	1,257	1,598
Adjusted R^2	0.073	0.092	0.125	0.092

Note: *p<0.1; **p<0.05; ***p<0.01

4.9 Appendix B: Conjoint Interactive Effects with Crime Victimization and Police Violence (Network Models)

Other than the four hypothesis presented and discussed in the main paper, our pre-registration also presented an hypothesis related to the behavioral effects of police violence. In an effort to unpack different processes of victimization, we argued that experiences with violence committed by police forces, however, are likely to have the opposite effect of criminal violence. Because, as comparative evidence shows, from the United States (Desmond et al., 2016) to Brazil (Caldeira, 2002), police violence tends to generate distrust in police forces, we expected that such change would result also on lower support for punitive policies. Our pre-registered hypothesis then:

Hypothesis 7. *Respondents that have faced police violence—either personally or in their immediate social network—are less likely to support punitive policies.*

In this appendix, we present the numerical results from figure 4.12, including the interactive effects of police violence. We then replicate figure 4.12 considering exposure to police violence on the respondents' network.

Contrary to our expectations, we find no support for Hypothesis 2. Being more exposed to police violence does not decrease support for *mano dura* policies; quite the opposite, respondents with more friends than expected who suffered from police violence also exhibit a higher support for the adoption of the death penalty. As the bottom left plot of Figure 2b shows, the marginal effect for the support of death penalty increases with the overdispersion of police violence in the respondent's network.

As our network model shows – see figure – the correlation between crime and police victimization is substantive. Therefore, our results indicate that this overlap likely makes voters to become more punitive even though some of them suffer from violence directly from the police, and probably as a consequence of the adoption of harsh-on-crime policies.

Our decision not to include these results in the main paper is motivated by two main reasons. First, space limitations on the paper. Second, we expect to work on a second project more focused on police violence in Mexico and Brazil in which we can fully develop an theoretical explanation for our findings.

Table 4.3: Regression Estimates: Conditional Effects of Crime Victimization and Police Violence on Security Policy Proposal Feature

	Crime Victimization	Police Victimization
Intercept	0.586***	0.590***
	(0.020)	(0.021)
PRI	-0.158***	-0.160***
	(0.016)	(0.017)
MORENA	-0.091***	-0.076***
	(0.016)	(0.017)
PAN	-0.088***	-0.092***
	(0.016)	(0.017)
Male	-0.070***	-0.059***
	(0.011)	(0.012)
Network Residuals (NR)	-0.006	-0.007
	(0.013)	(0.015)
Education to Youth	0.074***	0.064***
	(0.018)	(0.019)
Better Police/Security Cameras	0.115***	0.094***
	(0.018)	(0.020)
Death Penalty	0.009	0.020
	(0.019)	(0.020)
Police Militarization	-0.053***	-0.065***
	(0.019)	(0.020)
Leader Autodefensas	-0.051***	-0.051***
	(0.017)	(0.019)
Chief Local Police	-0.022	-0.041**
	(0.018)	(0.019)
Human-Rights Activist	0.106***	0.102***
	(0.017)	(0.019)
NR x Education to Youth	0.017	0.002
	(0.021)	(0.023)
NR x Better Police/Security Cameras	-0.011	-0.018
	(0.020)	(0.023)
NR x Death Penalty	0.037*	0.042*
	(0.021)	(0.024)
NR x Police Militarization	-0.021	0.011
	(0.020)	(0.024)
Num.Obs.	7876	6820
R2	0.045	0.042
R2 Adj.	0.043	0.039
se_type	CR2	CR2

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

All the models use benchmark OLS model with clustered standard errors by respondents. The dependent variables comes from the candidate choice conjoint task, and the moderator in each column are the residuals from the network models.

Table 4.4: Regression Estimates: Conditional Effects of Crime Victimization and Police Violence on Candidate's Occupation

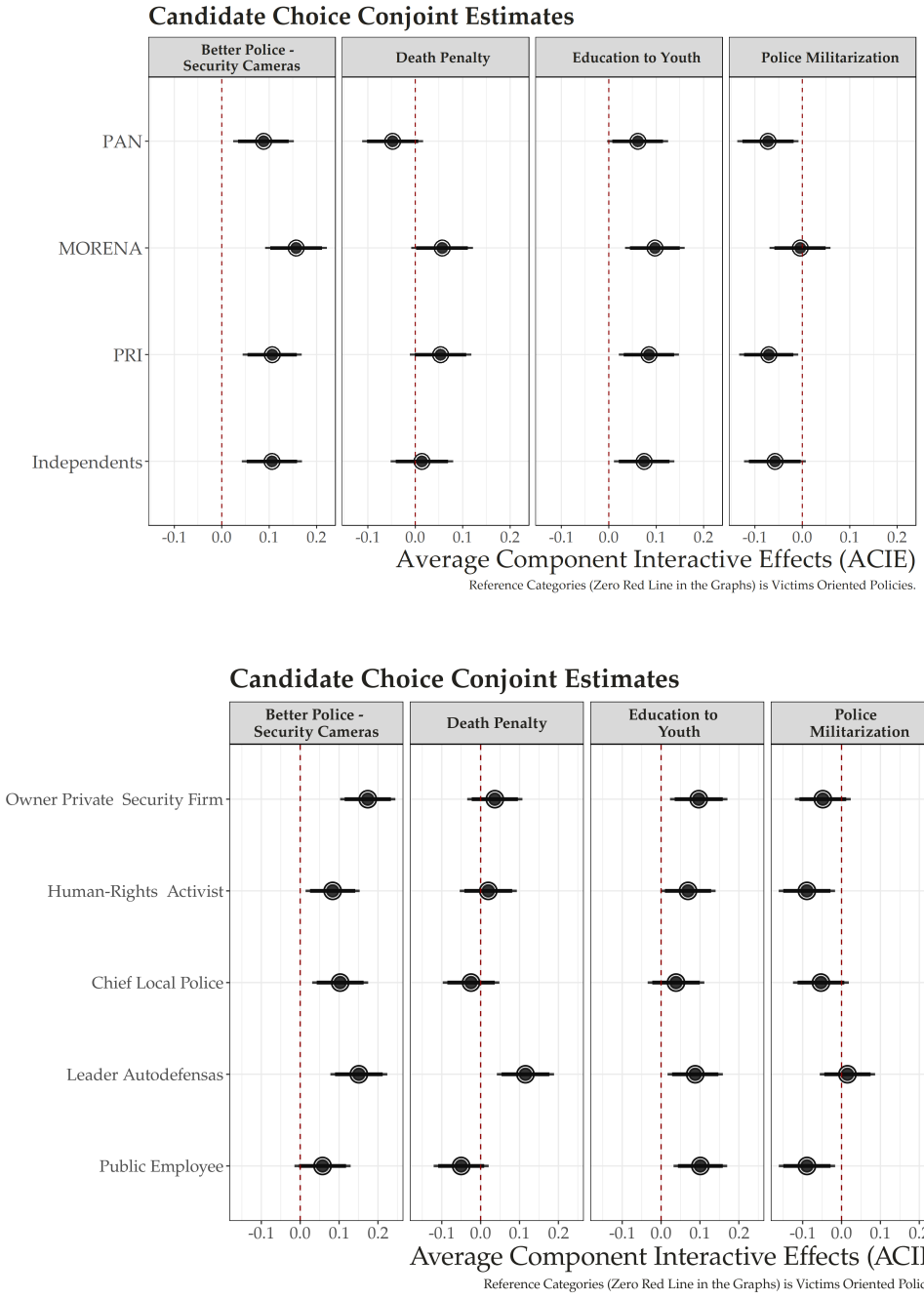
	Crime Victimization	Police Victimization
Intercept	0.586***	0.590***
	(0.020)	(0.021)
PRI	-0.156***	-0.160***
	(0.016)	(0.017)
MORENA	-0.090***	-0.076***
	(0.016)	(0.017)
PAN	-0.087***	-0.092***
	(0.016)	(0.017)
Male	-0.069***	-0.059***
	(0.011)	(0.012)
Network Residuals (NR)	-0.015	0.006
	(0.013)	(0.015)
Education to Youth	0.078***	0.064***
	(0.018)	(0.019)
Better Police/Security Cameras	0.113***	0.093***
	(0.018)	(0.020)
Death Penalty	0.019	0.022
	(0.018)	(0.020)
Police Militarization	-0.057***	-0.065***
	(0.018)	(0.020)
Leader Autodefensas	-0.050***	-0.051***
	(0.018)	(0.019)
Chief Local Police	-0.029	-0.041**
	(0.018)	(0.019)
Human-Rights Activist	0.101***	0.102***
	(0.018)	(0.019)
NR x Leader Autodefensas	-0.005	-0.002
	(0.020)	(0.023)
NR x Chief Local Police	0.031	0.002
	(0.020)	(0.022)
NR x Human-Rights Activist	0.020	-0.008
	(0.019)	(0.022)
Num.Obs.	7876	6820
R2	0.044	0.041
R2 Adj.	0.042	0.039
se_type	CR2	CR2

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

All the models use benchmark OLS model with clustered standard errors by respondents. The dependent variables comes from the candidate choice conjoint task, and the moderators in each column are the residuals from the network models.

4.10 Appendix C: Conjoint Interactive Effects: Difference in the Quantiles

Figure 4.3: Conjoint Estimates: Average Interactive Component Effects by Parties and Occupation with Security Proposal



Note: The plot shows the average component interactive effects between the features political party and security proposal. We present marginal component effects with 95% confidence intervals. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% and 90% confidence intervals.

Figure 4.4: Dendogram describing the Structure of the Network of Friends in Mexico

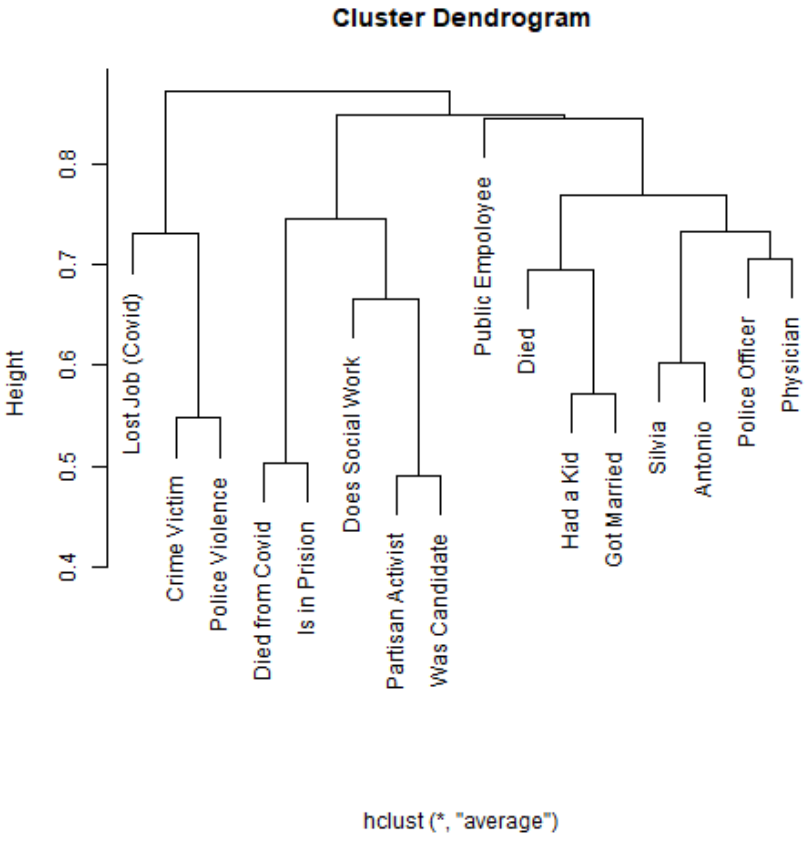
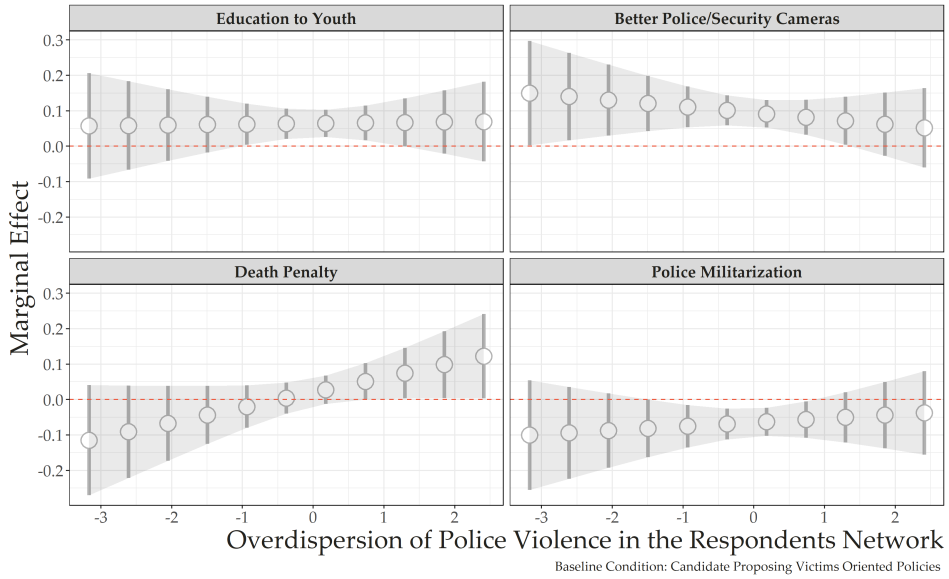
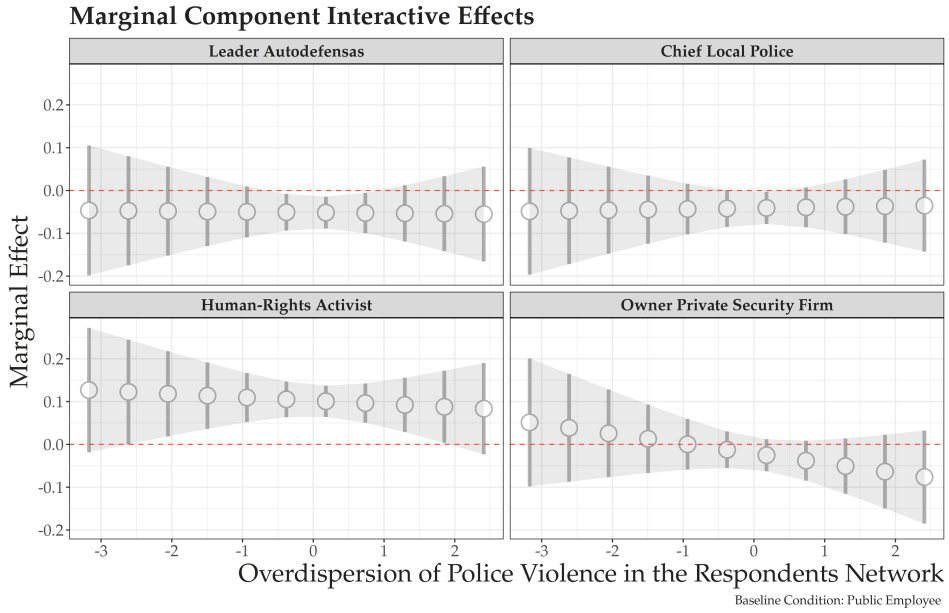


Figure 4.5: Conjoint Estimates: Average Marginal Interactive Effects for Police Violence



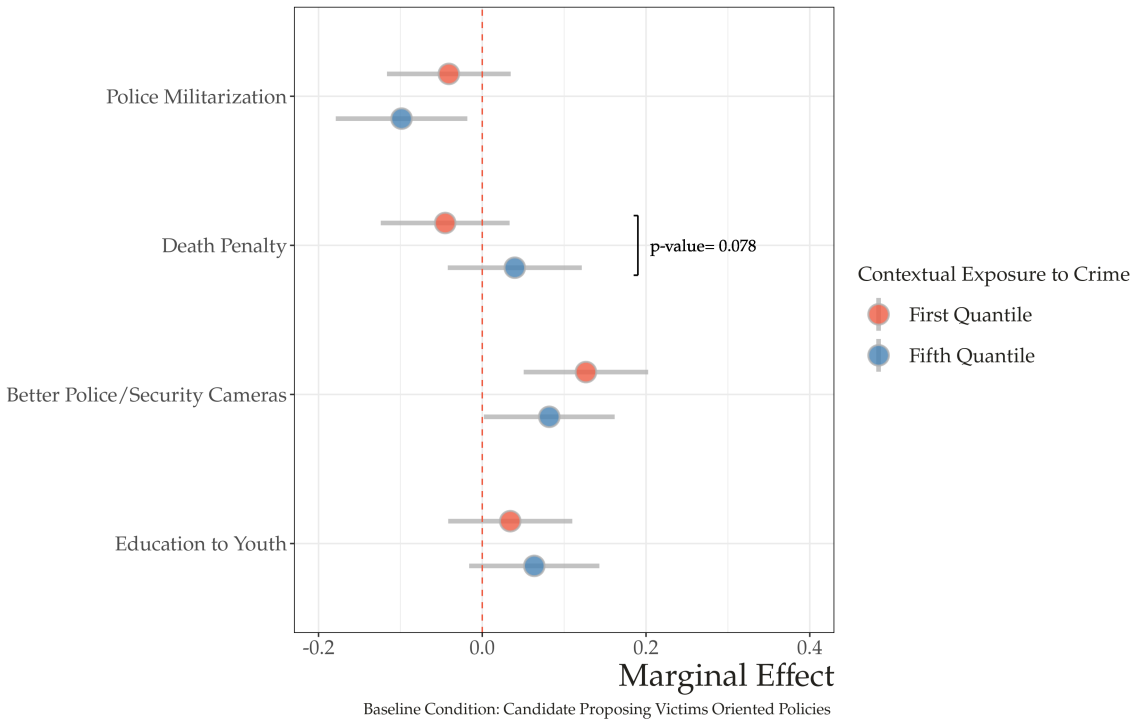
a) Security Policy X Police Violence



b) Occupation X Police Violence

Note: The plot shows marginal effects from linear interactive models between the residuals from the network models and the Security Policy feature. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

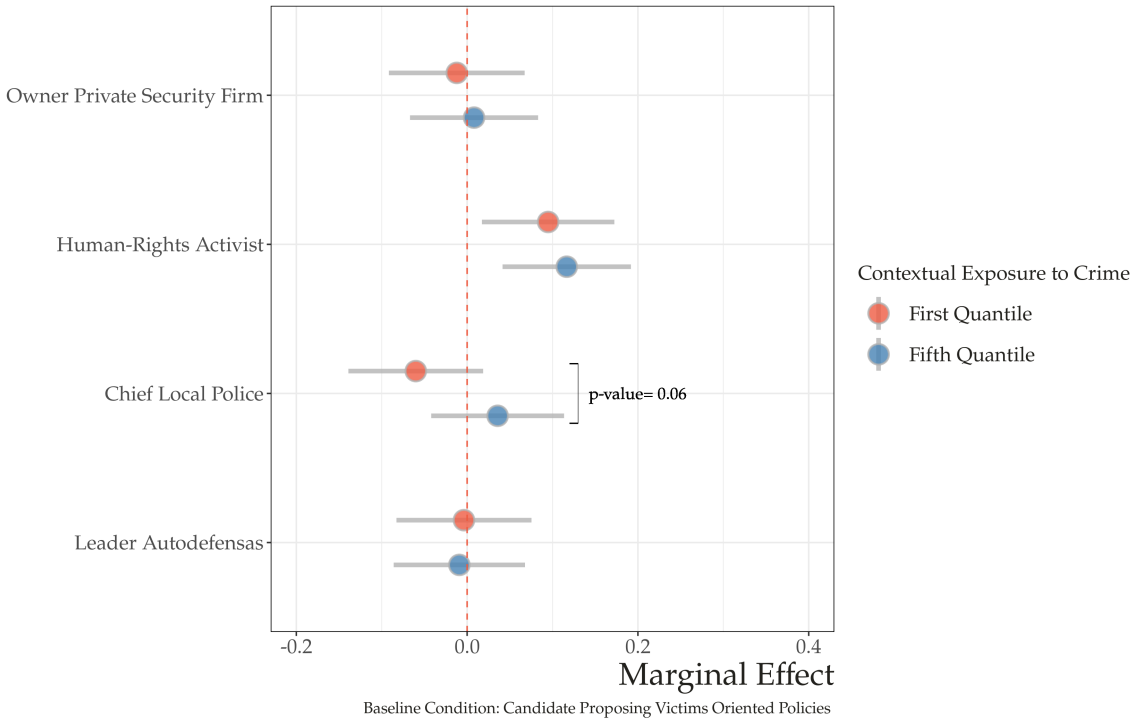
Figure 4.6: Conjoint Estimates: average marginal interactive effects by quantiles



a) Security Policy X Crime Victimization

Note: The plot shows marginal effects from linear interactive models between the residuals from the network models and the Security Policy feature. To assess statistical differences, we separate the crime data in five quantiles, and compare the differences between the first and last group. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Figure 4.7: Conjoint Estimates: average marginal interactive effects by quantiles



a) Occupation X Crime Victimization

Note: The plot shows marginal effects from linear interactive models between the residuals from the network models and the Security Policy feature. To assess statistical differences, we separate the crime data in five quantiles, and compare the differences between the first and last group. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

4.11 Appendix D: Partisanship and Conjoint Results

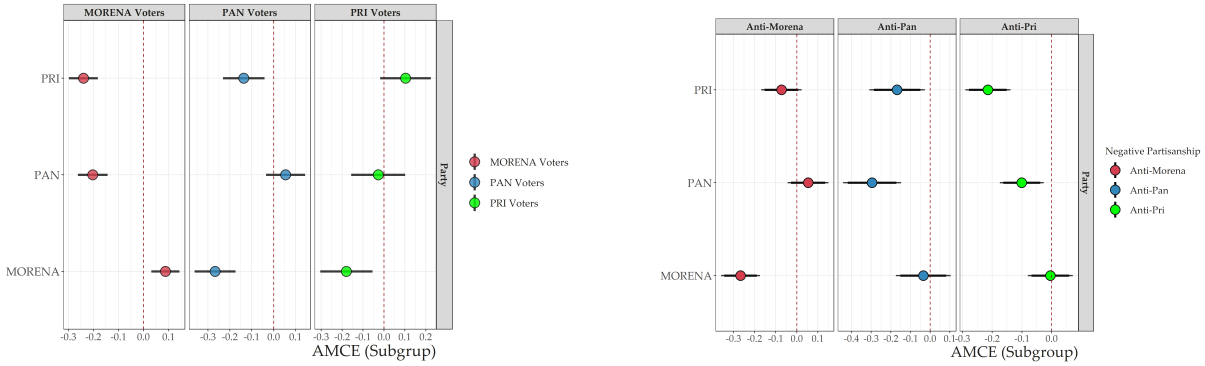
In this appendix, we present results focused on the effects of partisanship as a path for voters' decisions modelled in our conjoint. We understand this exercise as an validation for our design, and the results show results as expected and discussed in our pre-registration. Our main exam here consists on testing if partisans and anti-partisans behave as expected in the conjoint design, and vote accoring to their partisan preferences, unconditional on the other features of the candidates' choice task.

We use both positive and negative partisanship [30] to measures the effects of partisan identities on the subjects' decision in the conjoint experiment.

Results are consistent with expectations about partisan identities explaining vote choices. Both positive and negative feeling towards the PAN, PRI and MORENA explain voters' decision to support their more favorite and less favorite candidate. The effects stronger for Morena voters among our three options.

[30] We define negative partisanship as voters who expressed negative feelings towards party A, and no positive feelings towards any other party. See (**?**) for a complete discussion about the operationalization of negative partisanship using survey data

Figure 4.8: Conjoint Estimates: Conditional Effects by Positive and Negative Partisanship



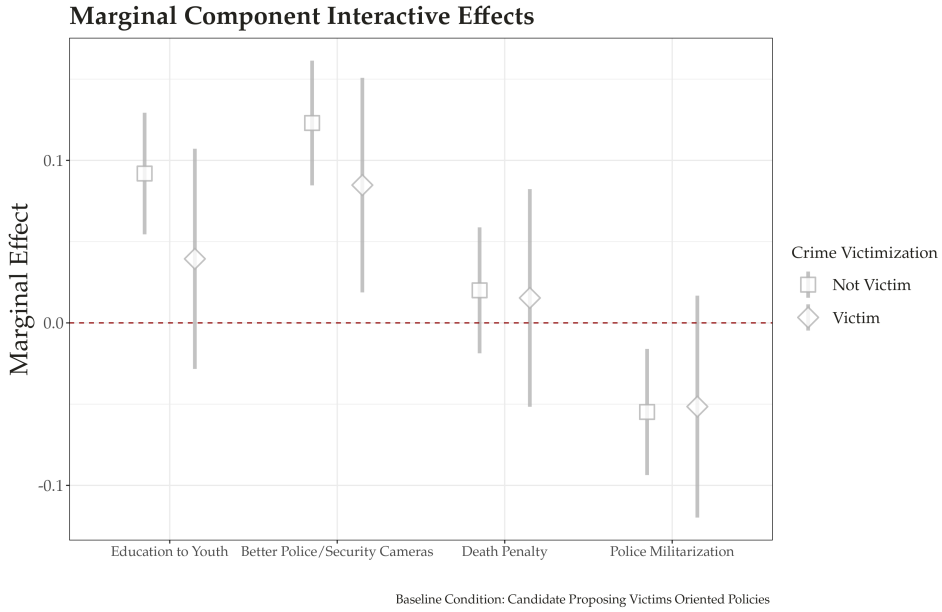
a) Positive Partisanship b) Negative Partisanship

Note: The plot shows marginal component effects using subgroups of respondents according to their positive and negative feelings towards the three parties in our conjoint. We present marginal component effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

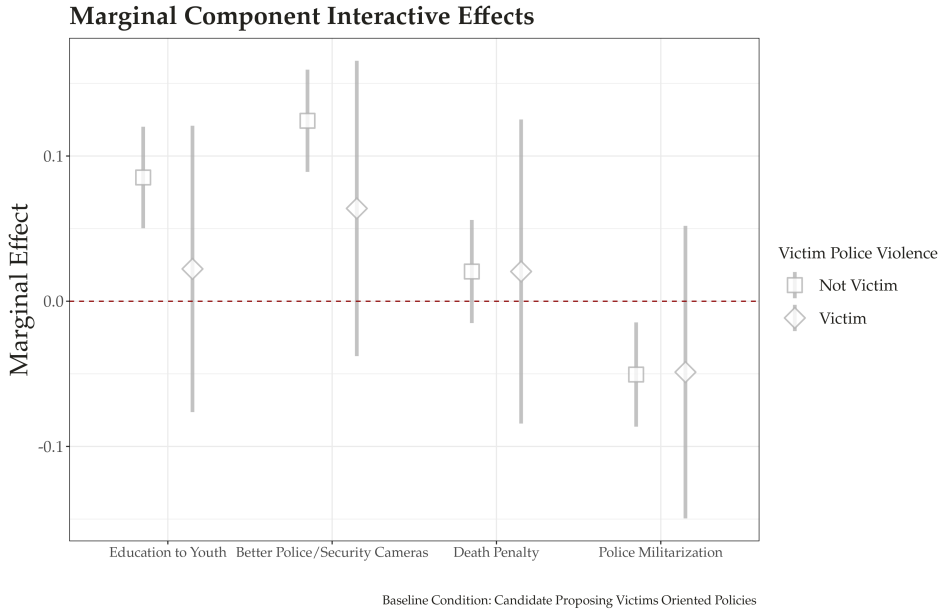
4.12 Appendix E: Conjoint Results with Direct Victimization Questions

In this section, we present results for the interactive effects of crime victimization and police violence with the policy proposals.

Figure 4.9: Conjoint Estimates: Average Marginal Interactive effects



a) Security Proposal X Crime Victimization



b) Security Proposal X Police VIolence

Note: The plot shows marginal effects from linear interactive models between the residuals from the network models and the Security Policy feature. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

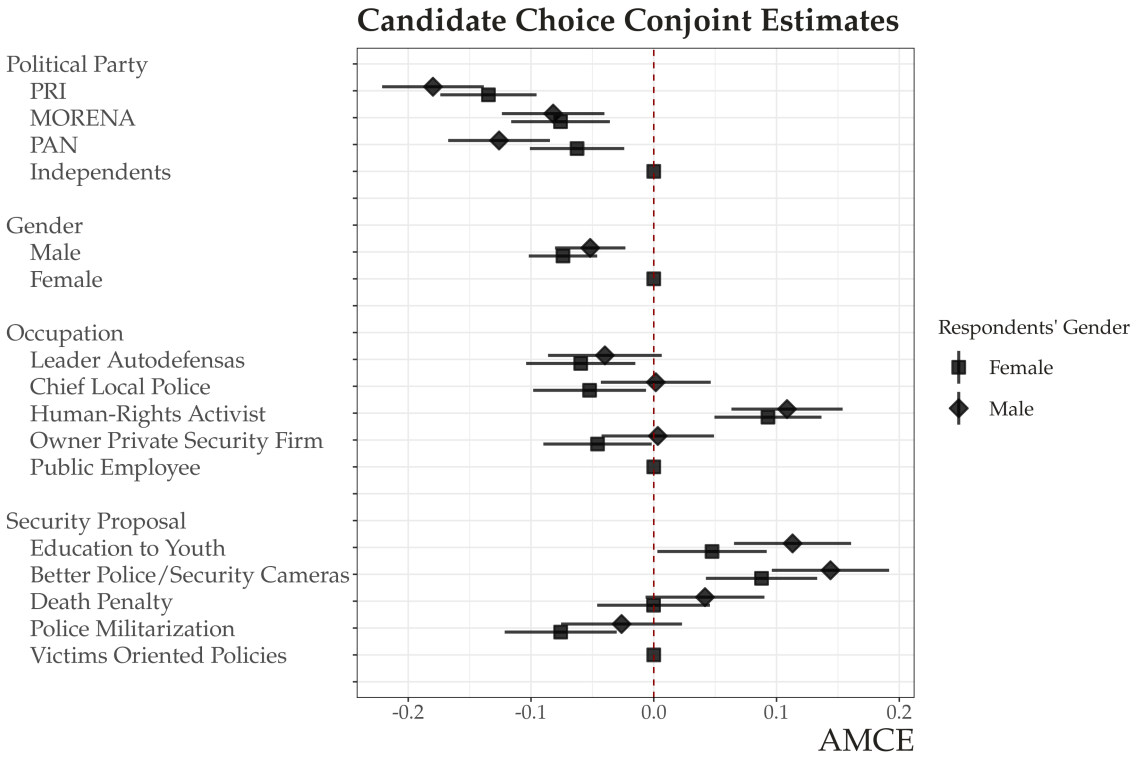
4.13 Appendix F: Additional Heterogeneous Effects

In this section, we report results for Interactive Effects (using both the AMCE and the Marginal Component Effects) on some additional covariates collected in our survey. We report results for the following covariates:

- Gender: Male and Female.
- Subjective Income [31]
- Trust in the Police.
- Fear of Crime.
- Overt Support for Punitive Policies
- Crime Victimization: Direct Survey Question
- Police Victimization: Direct Survey Question

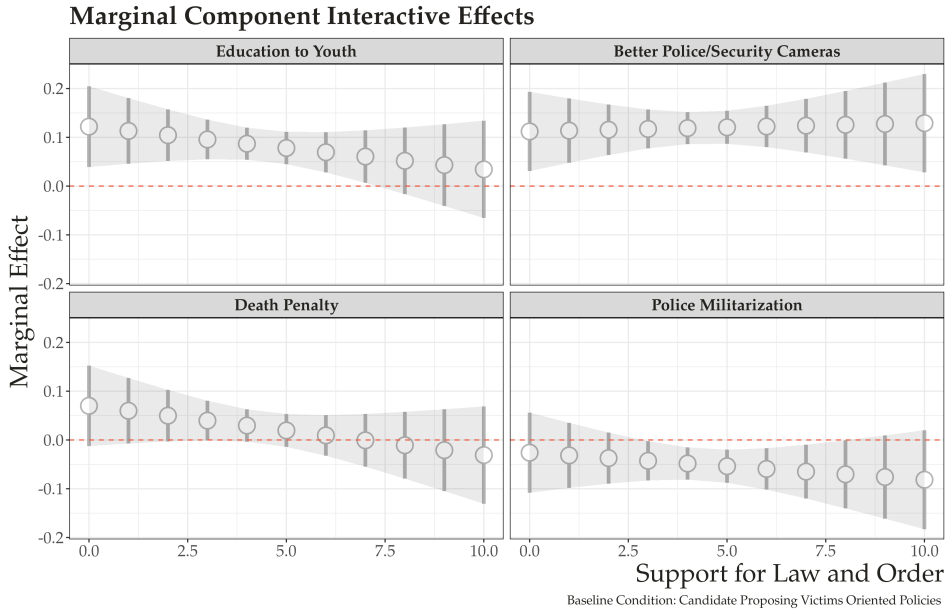
[31] Imagine a staircase with 10 steps. In the first step, people with lower income are located, and in step 10, people with higher income are located. Where would you be located

Figure 4.10: Conjoint Estimates: Average Component Interactive Effect by Gender)

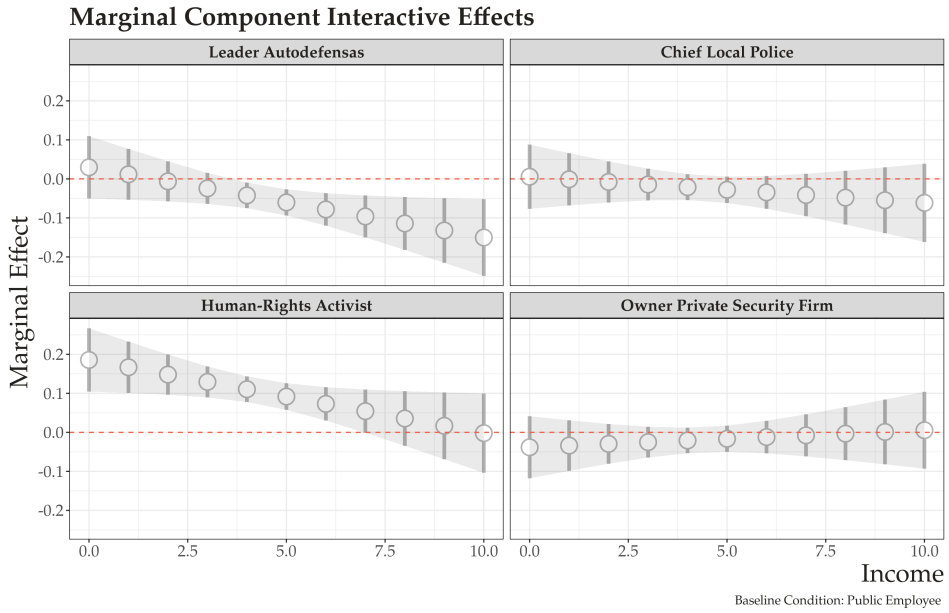


Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% confidence intervals. The points without bars represent the reference category for each attribute. The estimates are from sub-samples according to the gender variable from the survey.

Figure 4.11: Conjoint Estimates: Average Marginal Interactive Effects for Subjective Income



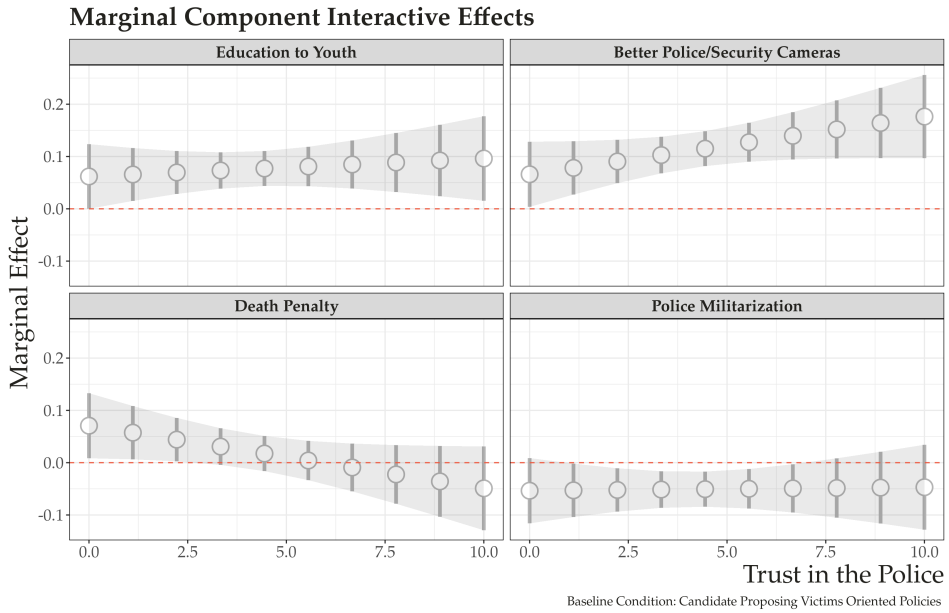
a) Marginal Effects: Income x Policy Proposal



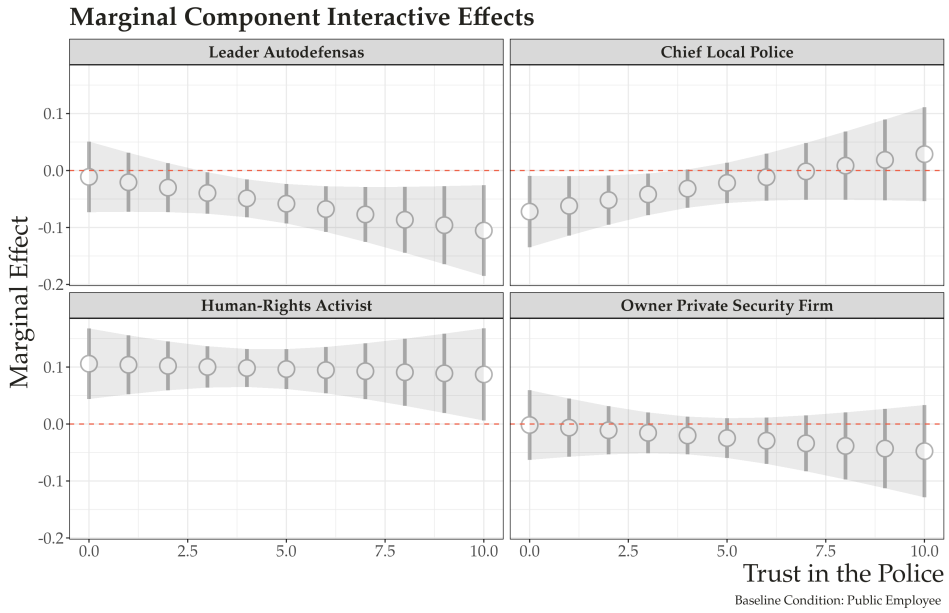
a) Marginal Effects: Income x Occupation

Note: The plot shows marginal effects from linear interactive models between the survey question about subjective income and the conjoint tasks. The questions asks where respondents would place themselves on a stair from 0-10, where 0 are for lower income people and 10 for wealthier classes. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Figure 4.12: Conjoint Estimates: Average Marginal Interactive Effects for Trust in the Police



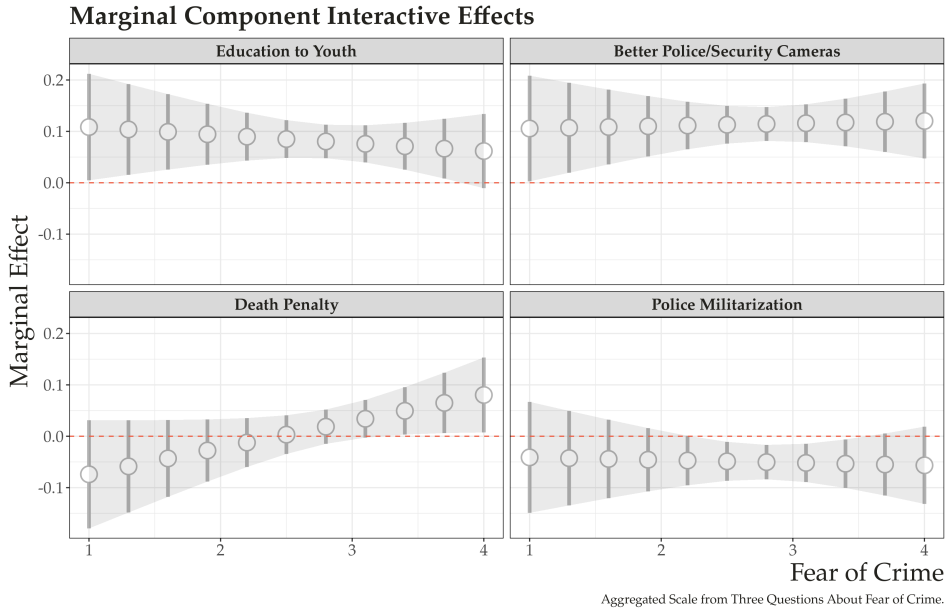
a) Marginal Effects: Trust in the Police x Policy Proposal



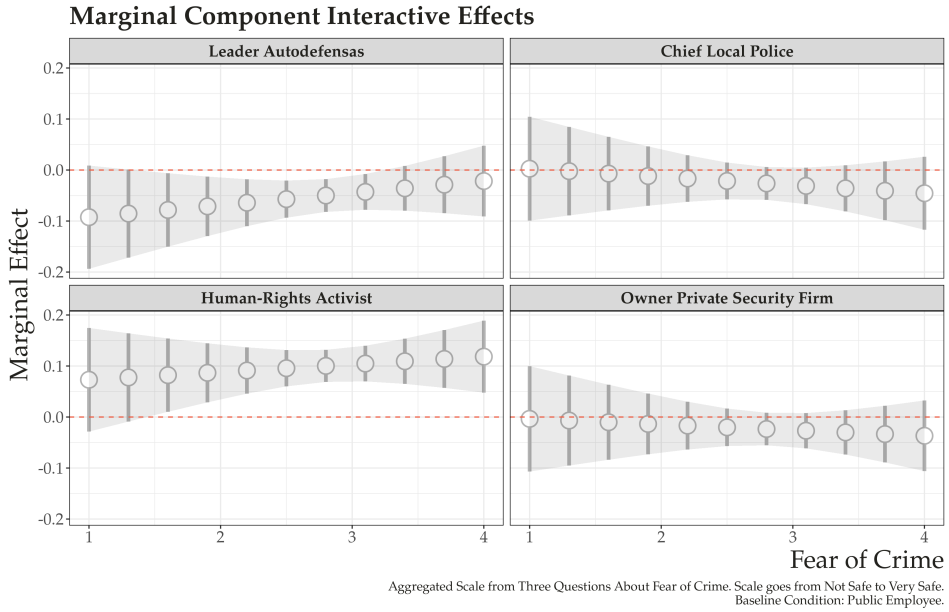
a) Marginal Effects: Trust in the Police x Occupation

Note: The plot shows marginal effects from linear interactive models between the survey question measuring trust in the police and the conjoint tasks. The responses vary from not safe to very safe. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Figure 4.13: Conjoint Estimates: Average Marginal Interactive Effects for Fear of Crime



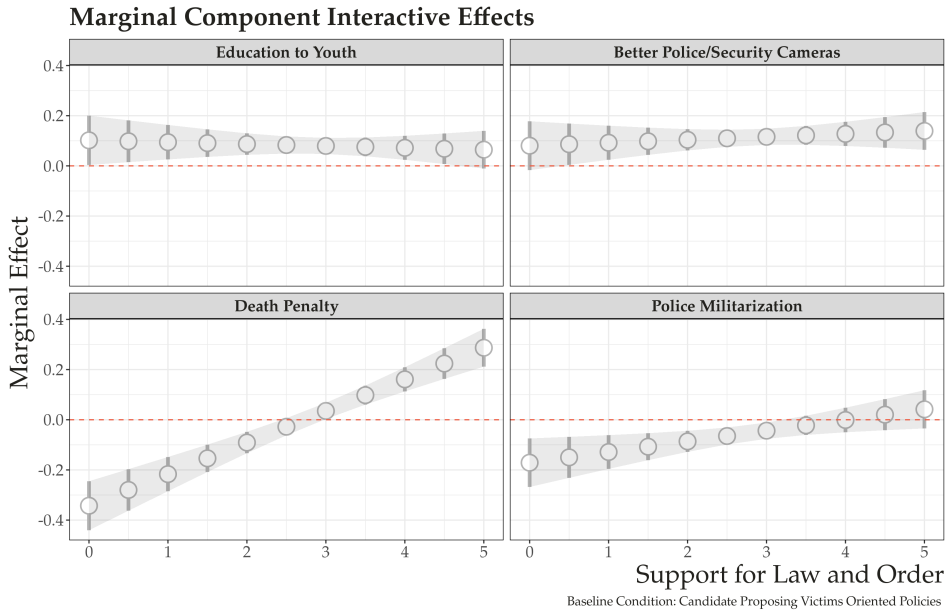
a) Marginal Effects: Fear of Crime x Policy Proposal



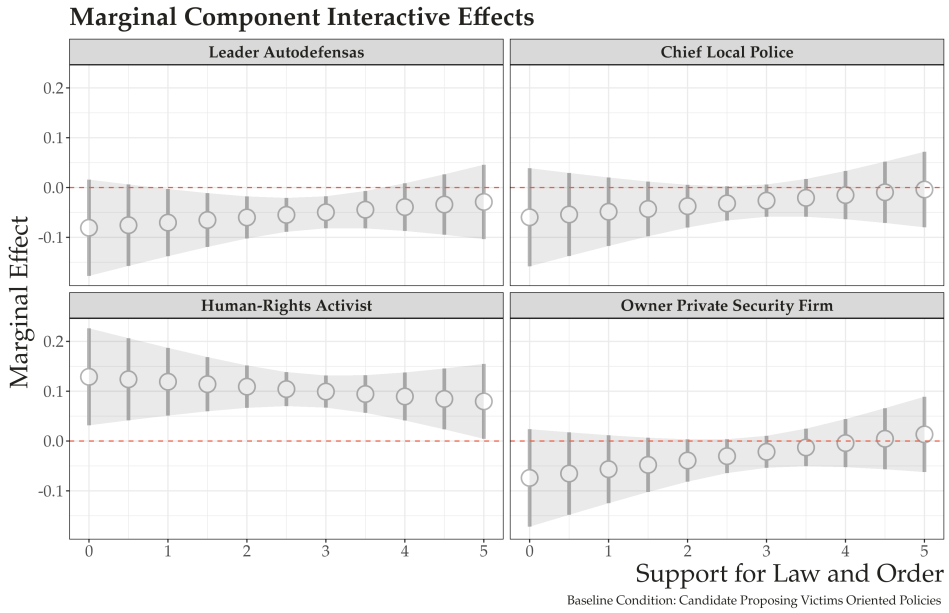
a) Marginal Effects: Fear of Crime x Occupation

Note: The plot shows marginal effects from linear interactive models between the aggregated measure of fear crime extracted from the survey questions and the conjoint tasks. The questions ask respondents about their fear of walking alone on a street, driving at night, and staying alone at home. The responses vary from not safe to very safe. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Figure 4.14: Conjoint Estimates: Average Marginal Interactive Effects for Punitive Preferences



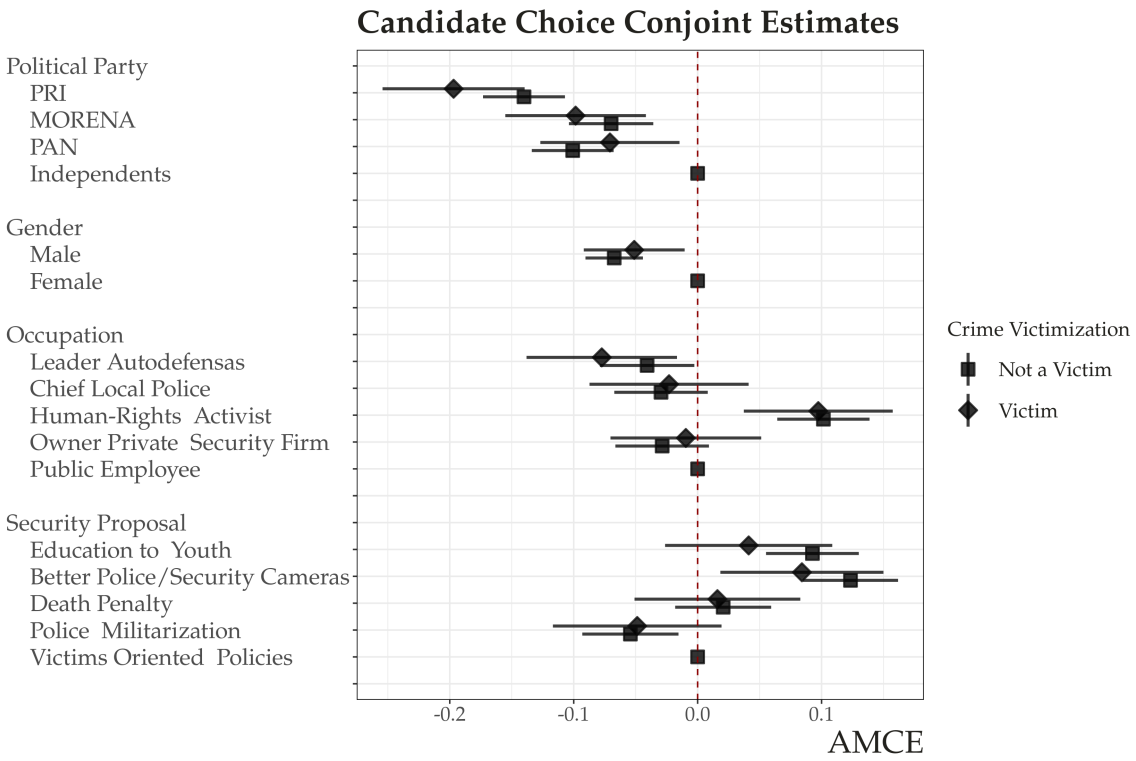
a) Marginal Effects: Punitive Preferences x Policy Proposal



a) Marginal Effects: Punitive Preferences x Occupation

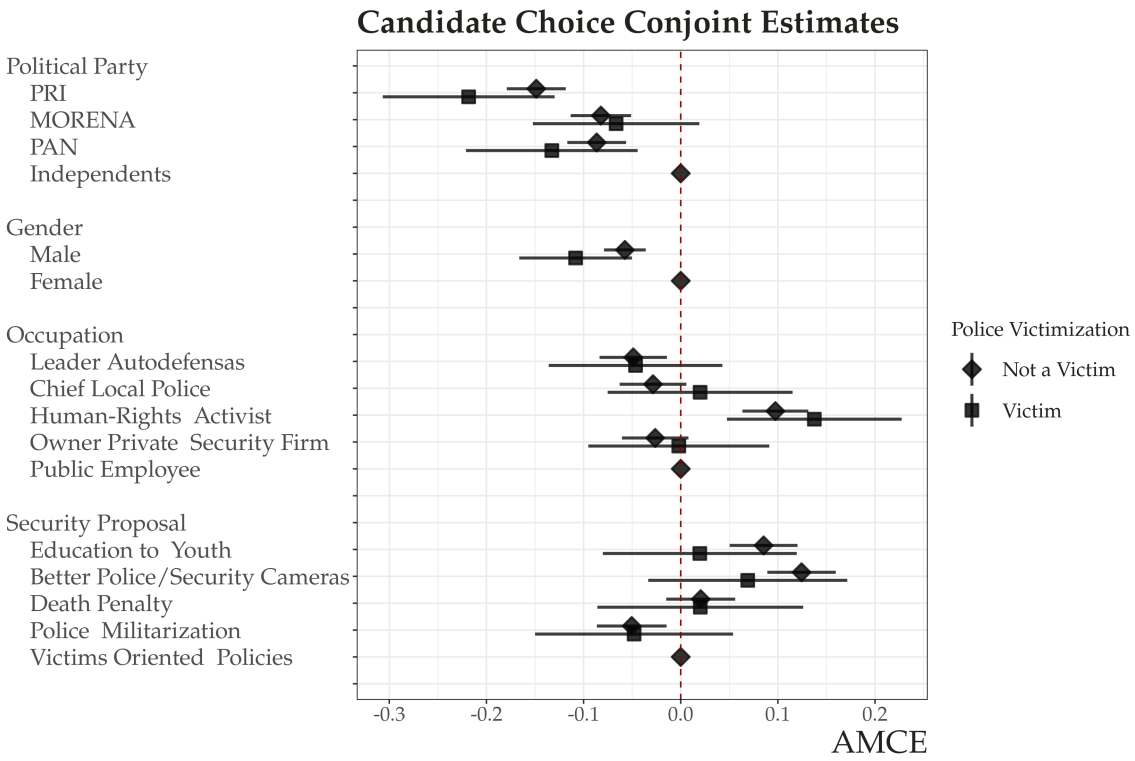
Note: The plot shows marginal effects from linear interactive models between the a aggregated scale from five questions measuring support for punitive penal policies extracted from the survey and the conjoint tasks. We present marginal effects with 95% confidence intervals calculated from benchmark OLS model with clustered standard errors by respondents.

Figure 4.15: Conjoint Estimates: Average Component Interactive Effect (Crime Victimization)



Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% confidence intervals. The points without bars represent the reference category for each attribute. The estimates are from sub-samples according to the variable crime victimization

Figure 4.16: Conjoint Estimates: Average Component Interactive Effect (Police Victimization)



Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% confidence intervals. The points without bars represent the reference category for each attribute. The estimates are from sub-samples according to the variable police victimization

4.14 Appendix G: Robustness Checks

As suggested by Hainmueller et al. (2014), we conduct two distinct robustness checks for our conjoint design. We first investigate validity of the assumption of no carryover effects. This assumption assumes effects are stable across the choice tasks and that treatments on one task has no effect in the following ones. To test for no carryover effects, we examine the Average Marginal Component Effects across the two different repetition of our conjoint. Therefore, our results show no evidence of carryover effects between the two tasks. To conduct a proper statistical test, we use an F-test for the joint significance of the interaction terms between the conjoint features and the task number. Here, we find that we cannot reject the null that the interactive effects are equal to zero (p-value = 0.60)

We also replicate the same type of validation but to detect the presence of profile order effects. A key assumption on conjoint designs is that the order in which the profiles are presented do not affect the respondents' decision. In other words, this assumption states that the likelihood of supporting a candidate does not change if one sees this profile in the first or in the second position in each task. Figure 4.19 presents the interactive effects between the features and the profile order. As before, we use a F-test to evaluate the joint significance. We find no evidence of profile order effects, and the F-test cannot reject the null that the interactive effects are equal to zero (p-value =0.37)

Figure 4.17: Examining the no carryover effects' assumption.

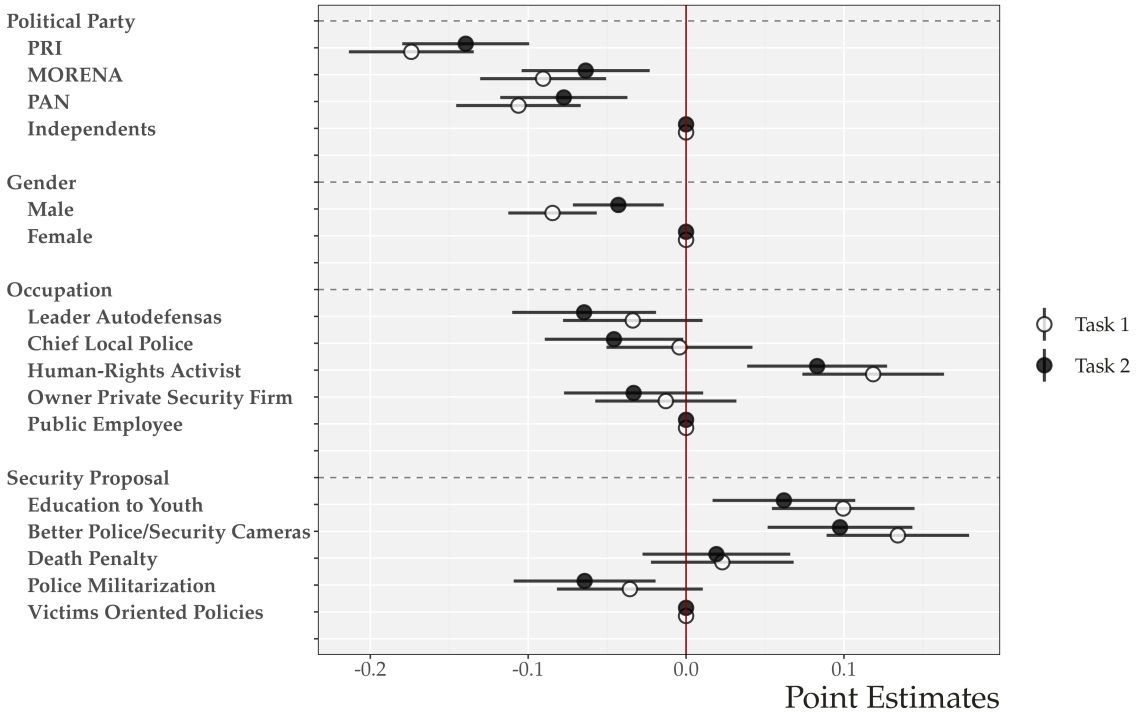
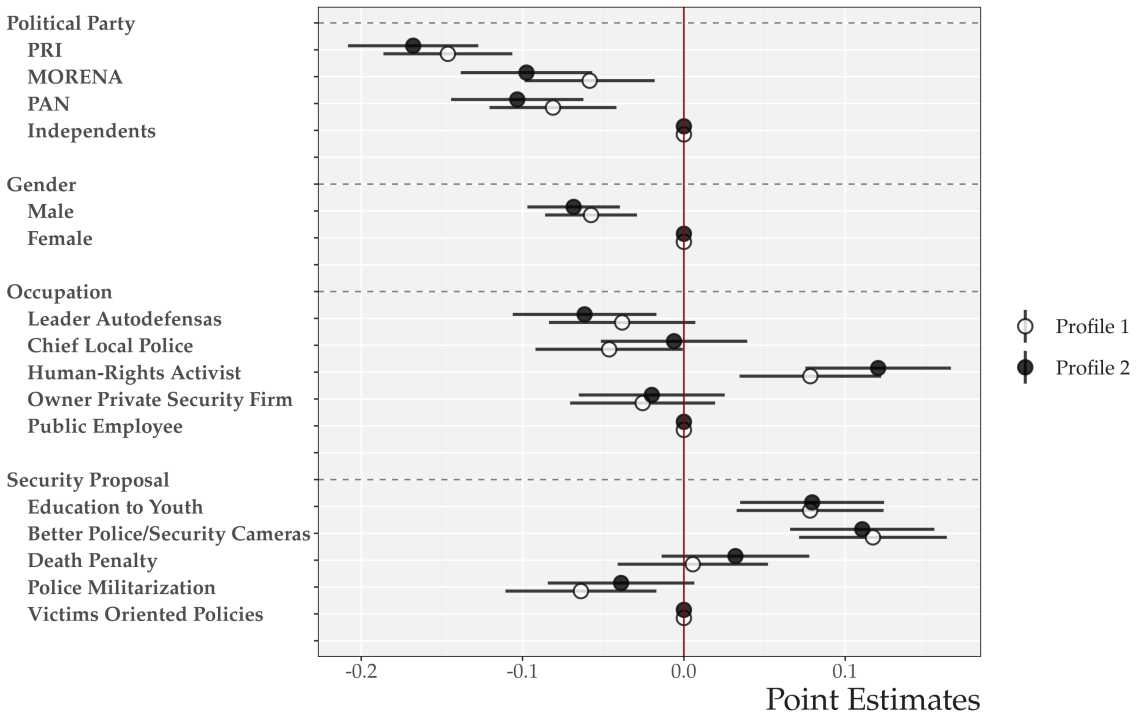


Figure 4.18: Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% confidence intervals. The points without bars represent the reference category for each attribute.

Figure 4.19: Examining the no profile order effects' assumption.



Note: The plot shows estimates of the randomly assigned attributes (Party, Gender, Occupation and Security Policy Proposal) in the subject decision to vote for a hypothetical mayoral candidate. Estimates are based on the benchmark OLS model with clustered standard errors by respondents; we present point estimate with 95% confidence intervals. The points without bars represent the reference category for each attribute.

Conclusion

This concluding chapter considers some key lessons and implications from the four papers collected in this dissertation. I start with a summary of the main findings collected through these four chapters. Then, I later integrate the overarching contributions of the dissertation.

Chapter one shows that a municipal exogenous crime shock right before legislative elections in Brazil substantively increases the vote share of law-and-order candidates in cities more afflicted by violence. This effect is only present in municipalities with more robust support for more conservative presidential candidates and driven mainly by wealthier, more educated voters. Additionally, experimental results from an endorsement design indicate that Brazilians broadly support messages about public security endorsed by candidates with occupational heuristics from a law enforcement agency. The endorsement is particularly attractive to wealthier and more punitive respondents. In chapter two, I introduce a new theoretical model of security preferences as insurance dynamic. Then, I use a behavioral experiment to assess the empirical implications of the model. My most important finding shows that income and fear of crime follow a positive joint distribution. Experimental results indicate that wealthier respondents, who feel less safe, support more police allocation on high-crime and low-income areas. Chapter three uses

computational text analysis on more than one hundred thousand congressional speeches to show that rather than conservative parties, candidates with a professional experience in law-and-order own the issue of crime and security in Brazil. These candidates talk more often and with a more punitive framing about security in Congress. Chapter four uses survey and experimental data to focus on support for law-and-order candidates and policies in Mexico. The paper finds that higher exposure to crime increases support for punitive policies and candidates previously employed in the local police forces. These findings combine new models to measure crime exposure, using information from respondents' friendship networks, and a conjoint candidate-choice design.

In the introductory chapter of this dissertation, I motivated the dissertation chapters based on three critical shortcomings of the emerging academic literature on crime and politics in Latin America. I now highlight how the four chapters collected in this dissertation broadly address these limitations. First, I argued that most of the established literature on crime and politics in Latin America focuses on attitudinal changes on voters exposed to criminal violence (Krause, 2014; Pérez, 2015; Merolla et al., 2013; Malone, 2010; Trelles and Carreras, 2012; Visconti, 2019; Garcia-Ponce et al., 2019; Bateson, 2012; Singer et al., 2020). This focus on attitudes is problematic for three main reasons. Attitudes are hard to map on behavior, particularly voting decisions. Second, attitudes, especially when using direct survey questions when no trade-offs are imposed, might only be a manifestation of *cheap talk* from respondents. Third, considering sensitive items such as support for punitive penal policies, survey responses might suffer from well-known concerns of social desirability bias (Zaller and Feldman, 1992). To remedy these concerns, this dissertation's main focus was on behavioral measures and on deploying experimen-

tal designs capable of reducing the likelihood of *cheap talk* and social desirability bias.

To the best of my knowledge, the chapter Voting for Violence provides the first causal evidence from observational data of nationwide effects of crime on voting for law-and-order candidates. Moreover, both the endorsement experiment in chapter one and the conjoint experiment in chapter four use indirect questions to capture respondents' preferences. As in the behavioral map experiment, these designs all capture behavioral choices (sharing a social media message, voting for a hypothetical candidate, allocating a fixed number of police stations) as the outcome of interest. These interventions and strategies are both effective on reducing social desirability bias, as others have already shown (Teele et al., 2018; Horiuchi et al., 2018). More importantly, these interventions capture voters' reactions in a more realistic environment, making connecting the experimental survey results with real-world strategic decisions more straightforward.

Second, most of the previous studies that focused on the emergence of citizens' punitive preferences consider only the direct consequence of personal experiences of crime victimization (Bateson, 2012; Visconti, 2019; Garcia-Ponce et al., 2019). This dissertation connects preferences for security policies with the long-established literature of welfare models in political economy. Therefore, expanding the narrow focus from the previous literature beyond the effects of victimization. I provide a general micro-level model to explain preferences for the allocation of public security goods and connect my work with recent efforts to model how concerns about security affect policy preferences (Rueda and Stegmueller, 2015; Gingerich and Scartascini, 2018; Altamirano et al., 2020).

Inspired by the work of Moene and Wallerstein (2001), the theory's main prediction deals with a positive joint distribution between risk and crime. Chapter One, with elec-

toral and experimental data, and Chapter Two, with a behavioral experiment, confirm this theoretical implication. These findings contrast with previous studies focusing on altruistic behavior from upper-income classes to reduce inequality (Stegmueller et al., 2017; Rueda and Stegmueller, 2015), and puts my conclusions on an interesting comparative perspective. While in Europe, concerns about crime make wealthier voters willing to redistribute, in Latin America, concerns about crime make these same voters develop a greater taste for punishment.

Third, most previous studies in this field have focused on the effects of crime on attitudinal changes, ignoring how parties and candidates react to these changes. The existing literature credits that partisan issue ownership (Petrocik, 1996; Kaplan et al., 2006; Holland, 2013; Gerber and Jackson, 2016; Cohen and Smith, 2016) would explain why some parties win more than others when a particular issue becomes more salient. Three of my chapters show little evidence for the influence of party heuristics in the case of public security in Latin America. This finding highlights how in democracies with weak partisan identifies, occupation and experience on law enforcement agencies work as the most crucial heuristic signaling to voters about candidate's policy preferences on the issue of security.

For example, Chapter One shows how a crime shock increases the vote share to legislative candidates with occupational heuristics at higher rates than more traditional conservative parties. Chapter three uses text analysis to show how former law enforcement employees control the security agenda in Congress and how more conservative parties rarely use their speech time to talk about public security. For the case of Mexico, Chapter Four finds experimental evidence that voters more exposed to violence increase their

support for the death penalty and become more likely to vote for candidates with experience in the local police. None of these effects in Mexico expand to party preferences at the conjoint level and voters' partisan preferences dimension. Evidence across three separate investigations shows that issue ownership theory relying on the assumption that security works as a valence issue is somewhat limited for the Latin American context.

Alongside these theoretical and methodological ambitions, normative concerns also emerge as a contribution of this dissertation. As discussed in the introduction, the political arena in Latin America has shifted towards a greater presence of law-and-order politicians advancing and campaigning on war-type policies to fight against crime. As others have shown so far, these policies have no detectable, causal effect on the reduction of crime, but render higher levels of state-sponsored violence against certain socioeconomic and ethnic groups (Bueno, 2012; Weintraub and Blair, 2020; Novaes, 2018; Denyer Willis, 2015). Therefore, an essential puzzle is precisely why these policies and candidates receive social support at such high levels despite their undetectable positive benefits on the crime's agenda.

This dissertation shows that electoral incentives explain such historical persistence. Because crime makes wealthier voters more punitive and more willing to invest in the police, candidates, particularly those with valuable occupation heuristics, are aware that framing security policies as punishment renders more votes. Consequentially, candidates work to build around them a reputation of being tough-on-crime wishing to receive the electoral support of those more concerned with crime, particularly better-off, punitive, and more conservative voters. These pernicious electoral incentives represent a risk to the newly established democracy in short and the long run. In the former, police forces

are pushed to be tough-on-crime to gain social support from economic elites and future voters. In the latter, if elected, these offices need to deliver in punishment enacting policies with evident humane costs against social and racial minorities in Latin America.

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