Article

Violence and Business Interest in Social Welfare: Evidence from Mexico

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Abstract
Countries in the Global South are particularly vulnerable to social and political violence. This paper suggests that such violence makes certain recalcitrant economic interests more open to taxes and spending on social welfare. Using results from a survey experiment of business owners and operators in Mexico, we show that relative to more innocuous institutional weaknesses, concerns over violence generally increase support for anti-poverty spending and decrease support for tax cuts. To build a theory, we explore heterogeneous effects and textual data. The findings suggest that business interests see anti-poverty spending as a tool for shoring up costs of violence in consumer markets, with some leaders even extending support to welfare-enhancing taxes. However, violence can create challenges in labor markets that increase operational costs, leading some business interests to resist tax policies that ask them to help fund social programs.

Keywords
violence, crime, welfare, business, Mexico

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Business interests have inordinate influence on public policy (Bartels, 2016). And while the business sector frequently opposes redistribution (Esping-Andersen, 1985; Pierson, 1996), studies document systematic variation in business support for social welfare policies (Estevez-Abe et al., 2001; Mares, 2003; Paster, 2013; Swenson, 2002). However, such studies are conducted almost exclusively in economically advanced democracies. As a result, we know little about the social policy preferences of business interests in the Global South.

Like their counterparts in advanced democracies, business interests in the developing world have significant political influence (Schneider, 2013; Weymouth, 2012). Relative to advanced democracies, however, businesses in the Global South often confront widespread social and political violence. How do such conditions affect their support for social welfare policies?

Links between violence and business interests in social welfare are ostensibly complex. Widespread violence may lead people to believe that governments cannot deliver on their policies. We might thus expect violence to decrease support for welfare spending and taxation. However, other dynamics may muddle or overturn such effects. For example, endemic violence may incite more altruistic social attitudes; likewise, welfare programs may bolster the market activity that violence hinders. In turn, violence might actually increase support for redistributive social policies.

To better understand these potentially conflicting effects, we analyze original data from Mexico. We make two main contentions. First, relative to more innocuous state weaknesses, concerns over violence generally increase business support for anti-poverty spending and decrease support for tax cuts that siphon funds from welfare programs. Second, we suggest that economic considerations help drive this relationship: business interests see anti-poverty spending as a tool for shoring up costs of violence in consumer markets, with some leaders even extending support to welfare-enhancing taxes. At the same time, however, violence can also create challenges in labor markets that increase operational costs, leading some business interests to resist tax policies that ask them to help fund social programs.

To support these contentions, the paper is organized as follows. The next section briefly reviews academic literature on social policy attitudes, business, and violence in the Global South. To highlight a gap in this literature, it considers recent developments in Mexico, where violence has become increasingly salient in policy discussions among business leaders.

The third section highlights a theoretically complex relationship between violence and business interests in welfare. Namely, disparate theoretical perspectives suggest that violence may push business attitudes in conflicting directions. These complexities present a challenge: we cannot form a priori theoretical predictions about how a heterogeneous set of plausible mechanisms shape the aggregate size or direction of a causal effect. Rather, given the assortment of reasons to suspect *some* link, we start with a more modest

hypothesis: that violence has an identifiable effect on business support for welfare.

The fourth section outlines an empirical approach for testing this proposition. The primary goal of the research design is to parse out the size and direction of a causal effect of concerns over violence on business attitudes toward welfare. After identifying such an effect, the secondary goal is to use supplementary data to build more nuanced theory on the mechanisms that might underlie it.

The fifth section presents results of the primary analysis. Using data from a survey experiment of business owners and managers in Mexico, they show that relative to a control group, concerns over violence lead business interests to increasingly support certain social welfare programs. Specifically, priming concerns over the proliferation of criminal violence increased support for public spending on anti-poverty programs and decreased support for tax cuts that deflate welfare funding.

The sixth and seventh sections present findings from the secondary analysis, in which the goal is theory building. To do so, they consider heterogeneous effects and textual data. Broadly, the results suggest that economic considerations are key mechanisms driving the results from the preliminary analysis: the effects vary depending on the markets on which firms rely, and business leaders consistently frame their concerns over violence in terms of market activity.

Specifically, the secondary results suggest that concerns over domestic consumers help explain links between violence and business support for anti-poverty spending: positive treatment effects evaporate when firms sell to non-domestic consumers. Furthermore, firms that rely exclusively on domestic markets are more likely to reference issues that affect consumer behavior—such as fear—when discussing how violence impacts the business sector. Given these findings, our theory posits that businesses view anti-poverty programs as tools for mitigating costs of violence in consumption markets.

The results also suggest that labor markets structure the extent to which welfare support extends to more direct taxation. Violence is only likely to decrease support for tax cuts among respondents whose firms operate in peaceful areas and rely on small workforces. In fact, when businesses operate in violent areas or hire many employees, concerns over violence actually increase support for tax cuts. We attribute these findings to the strains that violence places on local production: when their firms operate in violent areas or employ large workforces, respondents are particularly likely to frame concerns over violence in terms of employment. In contrast, we posit that when firms are financially insulated from violence-induced declines in labor, they are more willing and able to bear upfront tax costs associated with policies that bolster welfare and consumption.

Together, the results show that violence has a generally positive effect on business support for public welfare programs, and suggest that concerns over consumption and labor help structure this relationship. To our knowledge, and

given general challenges to directly studying the preferences of wealthy populations (Feierherd et al., 2017), these are the first experimental findings on elite attitudes toward welfare in the developing world. In presenting the results, the paper contributes to two scholarly literatures.

First, the study highlights the need to disaggregate concepts like state weakness when studying redistribution and welfare states. Recent work shows that state weakness in the developing world drives opposition to welfare programs and progressive taxation (Berens & von Schiller, 2017). Yet even in advanced democracies, concerns about crime and security may lead wealthy individuals to increasingly support redistributive social policies (Ferwerda, 2015; Rueda & Stegmueller, 2016). We show that similar concerns may lead to shifts in social policy attitudes in developing countries, where residents more routinely confront ineffective institutions. In other words, concerns about the externalities of violence can lead reticent and powerful social interests to increasingly support welfare programs, even if violence casts further doubts about the state's capacity to deliver on policies.

And second, scholars increasingly focus on the broader social, political, and economic effects of violent conflict. In presenting the findings, the paper suggests new processes—related to shifts in attitudes among business interests—through which violence may influence the trajectory of socio-economic inequality in the Global South.

Background: Social Policy, Violence, and Business in the Global South

While an extensive literature examines welfare in advanced democracies, a growing number of studies take up the issue in the Global South. This recent literature highlights a key point: unique social and political configurations in developing countries influence the attitudes that citizens develop toward welfare policies.

The confluence of exceptional factors that shape welfare attitudes in developing countries is diverse. In much of the Global South, formal welfare states are simply structured differently, such that benefits typically reach citizens who are already wealthy (Holland, 2018). Moreover, even programs designed to assist the poor often fail to gain support due to inefficient, ineffective, or corrupt administration (Auyero, 2012; Coovadia et al., 2009; Gupta, 2012; Kyle, 2018). In turn, citizens experiencing labor market vulnerabilities and low social mobility clamor for support, with voters rewarding parties that promise to deliver it (Carnes & Mares, 2015; Diaz-Cayeros et al., 2016; Garay, 2017; Gaviria, 2008). Nonetheless, extreme and persistent inequality dampens the perceived legitimacy of formal political regimes and their welfare programs (Cramer & Kaufman, 2011; Haggard et al., 2013; Morgan & Kelly, 2017). Perhaps as a result, informal service provision—by both state and non-state

actors—is a prominent feature of welfare regimes in the Global South, and more programmatic policies may hinge on the strength of overriding collective identities (Cammett, 2014; Holland, 2017; Singh, 2015).

This surge in research illuminates key nuances for understanding social policy attitudes in the developing world. Yet important gaps remain. For example, recent work largely overlooks a key facet of social and political life in the Global South: the prevalence of violent conflict. This absence is noteworthy, in that both the causes and effects of social and political violence are often entangled in the socioeconomic security and disparity that welfare programs are designed to address.

Additionally, most work on social policy attitudes rely on random samples of respondents, making assumptions about wealthy subpopulations from relatively small subsets of data (Feierherd et al., 2017). Yet given their political power, it is particularly important to know what affluent citizens want government to do (Page et al., 2013). And because wealth and capital are entwined in contemporary economies, attitudes of the wealthy often translate to politics via organized business interests. Understanding welfare policies thus requires direct studies of attitudes in the business sector.

Together, work on welfare in the developing world typically overlooks issues of violence and powerful business interests. Moreover, there are reasons to expect links between these issues. In Mexico, for example, homicidal violence has spiked in recent years, and organized criminal groups increasingly engage in predatory crimes like extortion and kidnapping (Calderon et al., 2019; Rios, 2013). Such patterns have affected the economy as a whole, and the business community in particular. Every year, over half of all business owners in the country are victims of a crime, causing annual losses of around US$7.7 billion (Coparmex, 2018; INEGI, 2018). According to the World Economic Forum, Mexico's most important challenge to becoming globally competitive is the presence of organized crime and violence (Schawb, 2018). Domestically, 55–60% of Mexicans feel unsafe at local markets and malls. As a result, 52% no longer go out at night and 70% do not let their children go out (INEGI, 2018). More generally, studies show that spikes in homicides reduce both income and consumption (Castillo et al., 2014; Robles & Magaloni, 2018). These dynamics put immense strains on business.

Such strains often lead business leaders in Mexico to discuss issues germane to welfare politics. In one sense, they lament faulty state policies and services (Valenzuela, 2019). For example, in a public statement in 2018, the leader of a business organization argued that, "Mexico cannot grow economically if the business climate is strained by crime and impunity…we need to recognize the weakness of our rule of law…[and] the challenges that institutions face in complying with and enforcing the legal framework, which have caused a profound crisis in confidence in authority and institutions" (CCE, 2018). Likewise, a press statement of another business group stated that

"we continue to be concerned about increases in crime, because we are convinced that the current security strategy of the federal government is not working" (Coparmex, 2020). In turn, such sentiments about the security apparatus often carry over to other state institutions, including those that implement welfare programs. In 2019, for example, a business organization chided a governmental economic plan for insufficient security planning and coordination; a sentence later, the document lambasted inefficient public welfare delivery (Coparmex, 2019b).

Statements like these suggest that Mexican business interests link violence to broader state weaknesses. Given the literature discussed earlier in this section, such concerns might, in turn, lead them to oppose welfare spending and taxes. At the same time, however, violence frequently drives Mexican business leaders to grapple more directly with issues like poverty, education, and unemployment. In 2019, for example, the president of a business organization stated that "if the aim is to reduce violence, it is necessary to have a strong social fabric…and open up opportunities for access to jobs and thereby raise welfare conditions for all Mexicans" (Concanaco, 2019a). Later in the statement, the leader described "vicious cycles," in which insecurity leads to drops in investment and employment, which, in turn, heighten insecurity. More broadly, business leaders often lump concerns about the state, violence, and socioeconomic degradation, as the leader of a national banking organization did after a 2018 election, when he cited a mandate "to repudiate high levels of violence, insecurity, corruption, poverty and inequality" (Concanaco, 2019b).

Together, statements from business interests highlight potentially nuanced links between violence and attitudes on welfare: violence seems to lead industry leaders to doubt state capacities to deliver on policies like welfare, while at the same time recognizing socioeconomic deprivation and inequality as causes and effects of violence. Moreover, despite misgivings about state, business leaders often respond to spikes in violence by reaffirming their commitment to support and strengthen state institutions. For example, a business organization claimed that to address insecurity and poverty, the country "must broaden the tax base…reduce the leakage from tax havens, so that the state has sufficient resources to create a public health and pension system" (Coparmex, 2019c). In some cases, regional business organizations have even imposed self-taxes to fund beleaguered public crime-fighting agencies (Coger, 2014). More broadly, while business leaders often view state institutions as inept, they also voice a willingness to invest resources for the "reengineering of social programs" in order to "significantly reduce poverty and increase safety" (Coparmex, 2019a; 2019b).

These processes in Mexico—spikes in violence, damage to industry, businesses blaming states and socioeconomic conditions—occur in a political climate in which commerce organizations hold incredible sway over economic policy, to the point in which some scholars view them as *de facto*

right-wing political parties (Haber et al., 2008; Vernon, 1963). Considered in terms of the broader literature, the case suggests that for those hoping to understand social policies in similar countries throughout the Global South, it is important to examine the complex ways in which violence may affect business attitudes toward welfare spending and taxation.

Theoretical Foundations

Our goal is to measure how violence affects business support for public welfare spending and taxation. But beyond identifying effects, we also hope to better understand why such effects might occur. Doing so is challenging, in that various theoretical traditions suggest complex causal links, in which A) seemingly disparate causal mechanisms might account for similar effects, B) alternative mechanisms might push businesses in opposing directions on welfare, C) various conflicting and complementary effects on attitudes are not necessarily incompatible, and might collectively shape overall support for welfare policies.

The following discussion overviews this causal complexity while outlining two assumptions on which our analysis is based. Considered together, it supports a basic theoretical proposition: that violence has some discernible effect of on the likelihood that businesses support welfare programs. Yet because existing work does not provide adequate tools for deductively inferring how various causal processes interact or aggregate, we cannot justify a priori expectations on the size or direction of such an effect. Rather, beyond the idea that violence is likely to have an identifiable effect on welfare support, the following discussion provides theoretical foundations for inductively exploring the mechanisms that underlie such an effect.

A theory linking violence and business attitudes toward welfare might start by positing the following causal process: *Violence is a signpost for state weakness. People are less likely to support public policies when they believe that states are incapable of delivering on promises. By making them more cynical of the state, violence thus decreases the likelihood that business interests support public welfare spending and taxation.*

The background in the previous section supports the first step of this causal process—in which violence signals state weakness—at least in Mexico. This leads to the first untested theoretical assumption in our analysis: that widespread violence and disorder reflect poorly on the state.

Literature discussed in the previous section strongly suggests that people are less likely to support the policies of ostensibly weak states. However, relative to more innocuous manifestations of state weakness, violence is associated with a host of additional incentives and attitudes that might influence support for welfare programs. It is thus more difficult to link the mechanisms from the proposition above to an overall negative effect on welfare support.

For example, alternative frameworks also suggest a negative effect of violence on business support for social policies, but posit economic mechanisms. Violent conflict deflates economies, and firms often respond to economic hardship by tightening belts (Greenwald & Stiglitz, 1993). In turn, we might expect that: *Violence creates financial strains on firms. When resources are constrained, business leaders are less likely to support public spending and taxation, since they believe that businesses fund such policies. By constraining their resources, violence thus decreases the likelihood that business interests support welfare spending and taxation.*

Other perspectives again suggest negative links between violence and welfare support but point to socio-psychological mechanisms. Social distance models argue that social affinity and animosity shape support for redistribution (Alesina & Glaeser, 2004; Kristov et al., 1992; Lupu & Pontusson, 2011; Shayo, 2009). Furthermore, people are less likely to support welfare programs when they believe that inequality stems from behavioral choices, rather than differences in opportunity (Alesina & Angeletos, 2005). A theory linking violence and welfare attitudes might combine these insights with recent work on violent conflict, which suggests that exposure to violence increases in-group favoritism and hardens intergroup hostilities (Bauer et al., 2014; Beber et al., 2014; Mironova & Whitt, 2014; Rohner et al., 2013). Together, an alternative causal processes posits that: *Welfare support hinges on favorable attitudes toward and ideas about beneficiaries. Violence makes people less tolerant of outsiders and more likely attribute inequality to pathologies in poor communities. Since welfare beneficiaries are disproportionately from poor communities outside the business sector, violence decreases business support for public welfare spending and taxation.*

The mechanisms that each of these first three causal processes specify—political, economic, and socio-psychological—seem plausible, in that numerous existing studies support their constituent parts. Moreover, because policy preferences likely reflect an amalgamation of underlying attitudes, these mechanisms might collectively produce a negative overall effect of violence on welfare support.

No less plausible, however, are alternative frameworks that posit mechanisms through which violence increases support for welfare spending and taxation. For example, support for welfare programs may simply be a function of general empathy and altruism, which exposure to violence may heighten (Hartman & Morse, 2018; Voors et al., 2012). As a result, an alternative causal process posits that: *Other-regarding people—business leaders or otherwise—are more likely to support redistribution. Since exposure to violence increases general altruism, violence makes business leaders more likely to support welfare spending and taxation.*

Moreover, even if social policy preferences were to only reflect financial considerations, business interests might still have incentives to support them.

Violence causes costly drops in consumption and human capital (Collier, 1999; Jarillo et al., 2016; Leon, 2012). Because welfare programs buttress vulnerable consumers and workers, businesses may view them as insurance for economic downturn (Iversen & Soskice, 2001). This is particularly plausible in light of general business behavior: firms often respond to adverse conditions by investing in broader economic stimuli, and business interests tend to support social policies that bolster their firms (Greenwald & Stiglitz, 1993; Mares, 2003). Together, an alternative causal process suggests that: *Violence hinders the consumption and labor on which firms rely. Business interests believe that social programs ameliorate violence or attenuate its damaging effects on consumers and workers. Because social policies insure firms against losses, business interests respond to violence by supporting welfare spending and taxation.*

Given this complex array of mechanisms through which violence may affect welfare support, a second theoretical assumption informs our analytical approach: that multiple causal processes influence most social and political outcomes (Braumoeller, 2003; Shapiro, 2005; Sil & Katzenstein, 2010). In this case, note that while different causal processes posit conflicting effects of violence on welfare support, the mechanisms themselves are not incompatible. Rather, each hinges on the effect of violence on a distinct set of underlying attitudes and incentives—ideas about the state, group-based sentiments, generalized altruism, short-term costs, and long-term insurance— which might then help shape overall support for social policies.

We thus assume that widespread violence reflects poorly on state capacity, but that multiple mechanisms might collectively shape how it affects overall support for welfare policies. With these assumptions in place, the goal of the research design outlined in the next section is first to identify the general direction and size of any effects of violence on support for welfare policies. Doing so helps illuminate the larger implications of violence on policy trajectories in the Global South. Measuring this average effect also provides preliminary intuitions about which sets of mechanisms (those suggesting positive or negative effects) are likely to be more influential in shaping overall welfare support. The second goal of the analysis is to further explore those mechanisms, paying specific attention to how they may interact or aggregate to shape support for welfare policies.

Research Design

Violence covaries with factors that are also likely to influence policy attitudes. We address this challenge to causal inference using a survey experiment in Mexico.

Two considerations drove case selection. First, Mexico has experienced severe but varied patterns of organized violence in recent decades. As a result,

the issue is salient enough to plausibly cause meaningful real-world shifts in policy attitudes. Second, and more practically, we were able to collaborate with a large business organization to implement the experiment directly with firm owners and managers. This provided a rare opportunity to experimentally study attitudes among an influential but often-reclusive socioeconomic sector.

The participating business organization, which regularly surveys its members, allowed us to embed an experiment in a survey fielded in fall 2017. The organization includes firms from each of Mexico's states, and we worked with regional directors to ensure that our sample was relatively balanced in terms of geography and firm size. In total, 1654 respondents completed the survey. Table 1 compares descriptive characteristics of the sampled respondents with the overall business community in Mexico. Relative to the broader population of formal businesses in Mexico, firms in our sample were more likely to operate in service rather than commerce and also more likely to export. It is thus possible that average treatment effects more strongly reflect the impacts of violence on business interests in those sectors, relative to a representative sample of firms. However, the survey pool included sizable numbers of respondents from each type of firm, and the experimental randomization procedures described below help ensure that differences between our respondents and the broader population of Mexican businesses do not threaten the internal validity of the findings.

The experiment exposed a randomly selected group of respondents to a prompt that primed concerns about of violence. While experimentally manipulating direct exposure to violence is neither feasible nor ethical, the priming approach captures a broader channel through which business interests are exposed to violence: even when actors are not direct victims, the dissemination

Table 1. Comparing Sample to National Business Census.

	Sample	National Business Survey
Industry		
Commerce	19.9	48.3
Services	61.4	39.1
Manufacturing	16.5	12.1
Number of employees		
0–10	37.8	38.9
11–50	34.1	18.5
51–250	17.6	26.0
>251	10.5	16.6
Exports?		
Yes	16.9	4.2

All numbers in percentages.

of information about violence may nonetheless provoke sentiments that help shape their support for policies.

Priming experiments provide respondents in a randomly assigned "treatment" group with a prompt that attempts to increase the salience of a particular issue. They typically compare those respondents with either a "control" group that is not exposed to a prompt, or a "placebo" group that is exposed to a prompt that is unrelated to the outcome of interest.

This typical setup does not provide adequate leverage for exploring the theoretical nuances discussed in the previous section. Recall that our first theoretical assumption is that violence reflects poorly on the state. At least in Mexico—where armed conflicts between criminal organizations and under-prepared state security agents have forced the release of cartel leaders, and collaborations between criminal organizations and corrupt state actors have preempted mass killings—this is indelibly the case. If we were to compare welfare support among "treated" respondents with those in a typical control or placebo group, any negative treatment effects might feasibly stem from the fact that violence reflects poorly on state capacity. Because existing literature already shows that citizens tend to oppose public policies when they believe the state is incapable or corrupt, such findings would be overly intuitive and prevent us from exploring more nuanced dynamics of the issue.

Selecting an appropriate baseline for comparison is thus a key challenge in our experimental design. Medical researchers often face similar challenges: when evaluating a new drug in the context of effective and widely available preexisting treatments, it is often uninformative and unethical to compare test subjects with a control group that receives either a placebo or no treatment (Mauri & D'Agostino, 2017). Instead, researchers increasingly rely on "pragmatic clinical trials" (Schwartz & Lellouch, 1967). To understand the real-world implications of introducing a new treatment to market, this strategy compares outcomes among patients receiving an established treatment with outcomes of patients receiving the new intervention (Tunis et al., 2003).

We adopt a similar approach, treating more typical manifestations of state weaknesses as an established and widely available treatment, that is, one that citizens in the Global South routinely confront in their daily lives. In our case, the "new drug" is violence, that is, a manifestation of state weakness that varies widely within and across developing countries. Our goal is thus to compare outcomes—that is, attitudes on social welfare policies—between these two groups.

To do so, as a baseline for comparison, we selected a manifestation of state weakness that is relatively ubiquitous and innocuous: the inefficiency of the Mexican postal system. Sepomex, Mexico's state-owned postal service, is widely viewed as inefficient and ineffective, with parcels often arriving late or being lost completely.[1] While its track record reflects poorly on the state, postal delivery is unlikely to provoke other sentiments that might shape attitudes toward welfare policies. In other words, it is an almost universally

consumed treatment among residents of Mexico, but one that is only likely to affect policy attitudes via a well-established mechanism from the literature, that is, doubts about the state's capacity to deliver services.

Comparing respondents who are primed to consider postal service delivery with a treatment group that is primed to consider violence allows us to better explore the nuanced theoretical processes discussed in the last section. Survey respondents were thus randomly assigned to receive one of the following prompts:[2]

> Control prompt: The inefficiency of the Mexican postal service affects our capacity to do business. The service promises to arrive in days but in reality often takes a month, with some parcels not arriving at all. What is the most serious repercussion of the low quality of the Mexican postal service for businesses in Mexico? Please write in detail your concerns about this subject.

> Treatment prompt: Violence affects employers a lot. We lose millions of pesos due to robbery and extortion by criminal groups. What is the most serious repercussion that the high levels of violence have had on businesspeople in Mexico? Please write in detail your concerns about this subject.

The prompts frame their respective issues in terms of effects on the business community to help ensure that they prime concerns over business, specifically. Asking respondents to write about their concerns increases the likelihood that they seriously grapple with the topic, while also providing rich textual data on the content of concerns.

In wording the prompts, our goal was to discuss the respective topics in terms that are commonly invoked in real-world business discussions. By exposing respondents to utterances that they might plausibly encounter outside of the study, this facet of the research design prioritized the external validity and implications of the findings. At the same time, however, this approach also produced subtle differences in the prompts that extend beyond the focus of this study. For example, the control prompt frames the issue of postal service inefficiency in terms of logistical costs, while the treatment prompt more explicitly mentions money. In turn, it is possible that such differences—and not the violence versus general institutional inefficiency dynamic—drive any results. Despite this potential drawback, we retained these prompts to help ensure that the analysis more directly considers the experiences of our subjects and the ways in which they speak about a given issue.

We measure post-treatment support for welfare programs in terms of levels of agreement on a 7-point scale with the following statements:

- *More public resources should be allocated to increasing social programs intended to reduce poverty.*

- *More public resources should be allocated to improving the quality of public education.*
- *Corporate income taxes should decrease, even if it reduces public spending on social programs.*
- *Social security is a waste of money, I prefer to hire contracted laborers.*

The first two items probe attitudes toward public spending on welfare-enhancing programs. Because concerns related to consumption and labor underlie one of the propositions discussed in the theory section, the item on *anti-poverty spending* references public spending that might bolster consumption, while the item on *education spending* references spending that might increase human capital. Additionally, because tax cuts may siphon public funds from welfare programs, the *tax cut* item explicitly refers to tax policies that hollow out social spending. Finally, because firms may prefer to substitute or augment public welfare programs with contributory social insurance programs (Mares, 2003), and because employers in Mexico may avoid contributions to contributory programs by hiring temporary contractors rather than permanent laborers, the fourth question probes attitudes toward a key *contributory welfare program*. Figure 1 displays the general distribution of responses for each of these items.

Main Results

Table 2 presents results of the main analysis, in which the goal is to identify the direction and size of an effect of priming concerns over violence.[3] Because the outcomes are categorical, each column presents results from an ordered probit model. To account for multiple comparisons and minimize the potential for false positives, we calculate Bonferroni-corrected significance levels as α/n, in which α is the targeted significance level and n is the number of tests considered.

The results from Models 1 and 4 are noteworthy. They show that relative to the post office "control" group, priming concerns over violence increased support for public spending on poverty and decreased support for tax cuts that would siphon funds from social programs. After applying the adjustments for multiple comparisons, the coefficients are significant at 99% and 90% levels, respectively.

To facilitate substantive interpretation of these non-linear models, Figure 2 plots marginal effects of the significant results. The plots present the treatment effects on the probability that respondents express each of the seven levels of support. Each point corresponds with the estimated treatment effect on the corresponding response, while the bars display 95% confidence intervals.

Results in the left panel of Figure 2 show that increases in support underlie treatment effects on public spending toward poverty programs: respondents in the treatment group were 9% more likely to respond with one of the top two

levels of agreement with allocating more public money to poverty alleviation. The right panel shows that treatment effects on attitudes toward taxes stem mainly from reluctance to strongly support tax cuts that stifle social spending: respondents in the treatment group were 7% less likely to respond with one of the top two levels of agreement with decreasing corporate income taxes at the expense of social programs.

Recall that the theory section posited a modest hypothesis: that violence has a discernible effect on the likelihood that business leaders support social welfare policies. The results from this section support this hypothesis and suggest that the overall effect is positive: concerns over violence generally make Mexican business interests more likely to support public spending on
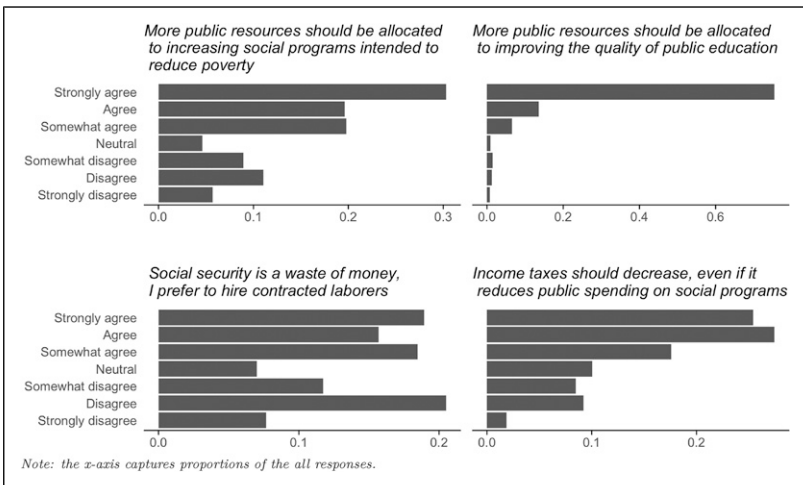

Figure 1. Distribution of responses. Note: the x-axis captures proportions of the all responses.

Table 2. Effects of Concerns over Violence on Business Support for Social Policies.

	Model 1	Model 2	Model 3	Model 4
	Poverty Spending	Education Spending	Contributory Programs	Tax Cuts
Violence treatment	.24*** (0.06)	.16 (0.08)	−0 (0.06)	−.19* (0.06)
N	1086	1083	1083	1086

Standard errors in parentheses. Bonferroni-corrected significance levels: *** $p < .0025$, ** $p < .01$, * $p < .025$.
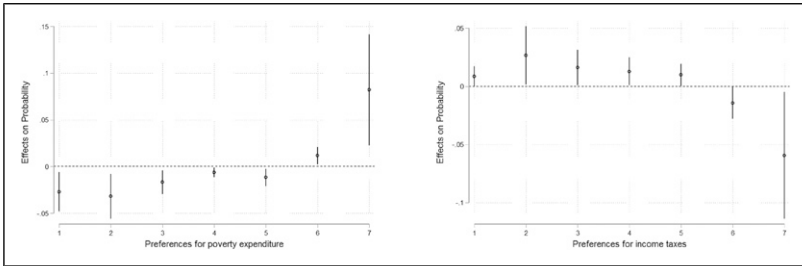
Figure 2. Marginal effects plots. The left panel presents treatment effects on each response choice for the item probing support for anti-poverty programs, in which 1 represents "strongly disagreeing" with increasing welfare spending and 7 represents "strongly agreeing" with increasing spending. The right panel presents these values for the item probing support for tax cuts that hollow out social spending, in which 1 represents "strongly disagreeing" with cutting taxes and 7 represents "strongly agreeing" with cutting taxes.

anti-poverty programs and less likely to support tax cuts that hollow out social spending.

However, these results provide fewer insights into the more nuanced mechanisms discussed in the theory section. Recall here that we outlined both conflicting and complementary mechanisms that might link violence to welfare support. While the results suggest that mechanisms positing positive effects more strongly drive overall support of welfare policies, they do not allow us to parse out evidence on which of those mechanisms underlie this relationship, or on the interplay between such mechanisms and ones that might push business interests in the opposite direction.

To develop insights on these underlying mechanisms, the next two sections engage in inductive theory building, in which the goal is to use more granular evidence to outline plausible set processes linking concerns over violence to business support of social welfare policies.

Theory Building I: Heterogenous Effects

The main results suggest that, relative to more routine and ubiquitous institutional weaknesses, concerns over violence lead business interests to increasingly support anti-poverty spending and oppose tax cuts that siphon funds from welfare programs. The theory section posits two sets of mechanisms that might account for such an effect. In the first, violence stirs altruistic social attitudes, leading businesses to support policies that help needy citizens. In the second, violence spurs concerns about consumers and workers, leading businesses to support welfare policies that shore up economic losses.

We do not have data on underlying social attitudes. However, the survey included questions on a variety of firm-level characteristics that might affect the extent to which business leaders are vulnerable to violence-related market declines. We thus focus our theory building on the economic mechanisms outlined in the theory section. To do so, we begin by examining heterogeneous effects on the two outcomes—attitudes toward anti-poverty spending and tax cuts—for which we found significant overall treatment effects.

Our theory building starts from two baseline propositions. The first is that efforts to fund welfare programs may entail upfront costs for firms, and that in some cases, such costs are particularly apparent. Specifically, relative to general public spending on anti-poverty programs, using corporate income taxes to fund welfare more directly implies upfront costs to business interests.

The second baseline proposition is that firms may incur two general types of costs from violence. First, violence may lead to drops in consumption—due to fear and income loss—that make it difficult for businesses to sell their goods and services. Second, violence may create operational difficulties that make it more costly for businesses to produce their goods and services.

Yet not all firms are equally vulnerable to such issues. We focus on five variables that may structure the extent to which Mexican firms are vulnerable to violence-related economic costs. First, firms that operate in agriculture and extract other *primary commodities* are particularly vulnerable to production-related costs stemming from extortion.[4] Second, firms that rely on *highly educated workers* are particularly vulnerable to production-related costs stemming from drops in human capital. Third, firms that rely on *large numbers of employees* are particularly vulnerable production-related costs stemming from general labor shortages. Fourth, firms that rely on *domestic consumers*, rather than exportation, are particularly vulnerable to violence-related drops in consumption. Fifth, firms operating in *particularly violent areas* are more likely to be exposed to costs in both production and consumption.[5]

This variable set results from background information about our case—existing work does not provide strong empirical evidence on variation in costs of violence in the business sector. Thus, selecting variables is necessarily somewhat arbitrary, and could include an almost infinite number of factors that "might" influence treatment effects. In such contexts, analyzing heterogeneous effects using traditional methods—that is, running separate models that split data based on each variable under consideration—risks devolving into "fishing" expeditions for significant results. We thus stress that our analysis of heterogeneous effects is exploratory: the goal is to begin building a theory that might guide future work.

Additionally, to minimize the amount of separate models we run while leveraging the power of alternative modeling strategies, we rely on recent methodological advances for exploring heterogeneous effects. Specifically, we analyze subgroup differences in terms of marginal conditional average

treatment effects (MCATEs). Using the terminology of Grimmer et al. (2017), MCATEs capture the effects of an experimental treatment within subgroups of the sample, *while setting other variables at their means*. Calculating these values allows us to include all of the variables of interest in a single cohesive model for each outcome, rather than running models for each variable separately.

Scholars have developed several methods for calculating MCATEs. Because it is difficult to determine *ex ante* how each method will perform with a given data set, we analyze heterogeneous effects using the ensemble approach proposed by Grimmer et al. (2017). The approach pools multiple modeling strategies and uses machine learning techniques to weigh the contribution of each strategy based on its respective out-of-sample predictive performance. In doing so, the ensemble approach improves on the ability of each of its constituent methods to detect heterogeneous effects that are likely to occur systematically, rather than randomly.[6]

Figure 3 presents the results. The size of each dot corresponds to the proportion of the sample that belongs to a given subgroup. The location of each point can be interpreted as follows: given the specified level of the variable on the *y*-axis, and holding all other variables at their means, the treatment effect of priming violence is estimated as the value on the *x*-axis.

The left column of Figure 3 shows that most variables are consistently associated with positive treatment effects on support for anti-poverty spending. However, differences between exporters and non-exporters are noteworthy: when holding other values at their means, positive treatment effects disappear for firms that sell at least a portion of their products abroad. These findings suggest that mechanisms related to consumption underlie the relationship between concerns over violence and support for anti-poverty programs: the relationship is relatively stable when firms rely exclusively on domestic consumers but not when firms sell to consumers who are detached from domestic violence.

Moving to the right column of Figure 3, note that while most variables are consistently associated with negative treatment effects on support for tax cuts, variation on two measures reverses this effect. When firms operate in municipalities with high levels of homicides in the last year, or when firms rely on large workforces, priming concerns over violence actually increases support for tax cuts that hollow out social spending. Considered together, these findings suggest that labor markets structure links between violence and attitudes on taxation: firms that operate in violent areas or rely on many employees are more likely to experience financial stress stemming from depleted labor markets. For such firms, tax cuts are a way to mitigate losses, even if such cuts diminish spending on welfare programs that bolster consumption.[7]

These findings provide theoretical foundations on the mechanisms linking violence and business interests in social welfare. They suggest that violence leads members of the business sector to support public welfare spending in
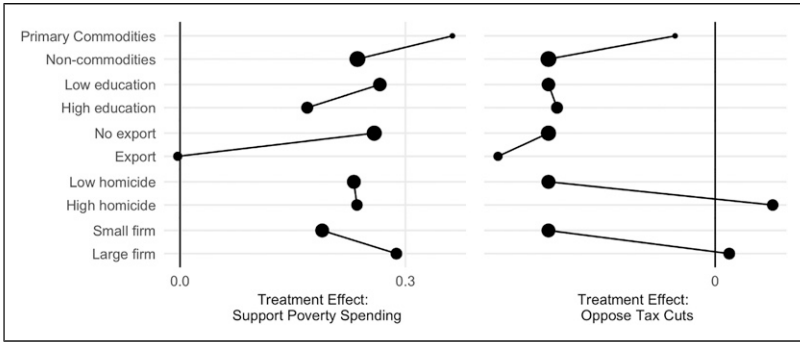
Figure 3. Marginal conditional average treatment effects.

order to bolster general consumption—this is evident from the fact that the relationship seems to disappear when firms sell to consumers who are not affected by domestic violence. However, this support only carries over to more direct taxation issues when firms' labor markets are relatively insulated from the effects of violence: for business interests that are more vulnerable in this regard, concerns about violence-related labor costs may actually increase support for tax cuts that explicitly hollow out funding for social programs.

Together, we posit the following theory explaining links between violence and business interests in welfare: *Businesses interests see welfare spending as a tool for bolstering domestic consumer markets. Concerns over violence, and particularly its effects on consumers, may thus lead business leaders to support anti-poverty programs and, in some cases, the taxes that fund them. However, violence also creates challenges in labor markets that increase costs of production, making certain business interests resist welfare-enhancing tax policies that further strain their resources.*

Theory Building II: Structural Topic Models

The previous section shows that businesses interests vary in their responses to violence, and suggests that concerns about consumers and labor help shape the positions they take on social policies. However, the theory relies on aggregate patterns, while making assumptions about the cognitive processes that violence provokes. It is thus possible that alternative mechanisms account for the findings. Stronger evidence of the theory would show that in response to violence, business leaders do, in fact, grapple with concerns over consumers, labor, markets, and the economy.

This section thus explores the content of business leaders' expressed concerns over violence. Recall that the experimental item in the survey asked respondents to write about their main concerns about a given topic. While this

strategy helps ensure delivery of the treatment, researchers often discard the open-ended responses to such items: human coding of unstructured textual data is costly and difficult (Roberts et al., 2014). Yet the content of business concerns are potentially invaluable: open-ended responses provide rare insights into the issues that are actually on respondents' minds when they are primed to think about violence.

To systematically analyze open-ended responses from the experiment, we use structural topic models (STMs). STMs belong to class of models that use unsupervised machine learning to infer topics—defined as "distributions over a vocabulary of words that represent semantically interpretable 'themes'"— directly from text (Roberts et al., 2014, p. 1066). The approach treats each word in a corpus of documents as a belonging to a topic, and each document as the mixture of topics that result from its constituent words. Relative to other modeling strategies, the STM approach is particularly useful for our purposes because it models the prevalence of topics, and the content within such topics, as a function of document-level covariates.

We use STMs to examine two general questions related to the mechanisms in our theory. First, the theory broadly suggests that violence triggers economic concerns among business leaders; does priming violence—as opposed to more innocuous manifestations of state weakness—make them more likely to talk about such concerns? And second, the theory suggests that for business leaders whose consumers or labor forces are particularly affected by violence, concerns over those markets inform positions on welfare policies; are such leaders more likely to discuss costs of violence in terms of consumption and workers?

As in the previous section, it is important to note that the analysis that follows is exploratory: modeling choices were not specified in the pre-analysis plan, but instead built upon the findings from previous sections. This point is particularly relevant because model specification and selection in STMs rely partially on human judgment: different initializations produce sets of topics that may be more or less interpretable and meaningful (Wilkerson & Casas, 2017). For example, choosing the number of topics in unsupervised models depends on the goal of the analysis (Roberts et al., 2014). We specified 10-topic models in order to analyze meaningful topics that are granular enough to provide leverage for theory building. We used a data-guided model selection procedure, running 200 models of each specification, and using quantitative guidelines to identify models with maximal topic cohesiveness and exclusivity.[8] Within the leading-candidate models, we then manually compared the highest-probability words of each topic with "exemplar" documents of those topics, selecting models in which the two aligned semantically.[9]

To address the first question above, we used a topic prevalence model, which estimates differences between the control and treatment groups in terms of how often respondents from each group discuss different topics. Figure 4

presents the results.[10] To get an intuitive sense of model, first compare Topic 2 and Topic 3, the topics most strongly correlated with control and treatment conditions. The vocabulary associated with each topic consists of words that we generally associate with discussions about the post office (postal, delivery, mail, etc.)—that is, the control group—and violence (kidnapping, fear, and violence). In other words, while the models do not incorporate a priori assumptions about topical content, they are able to detect topics that we would naturally expect to arise from differences in experimental treatment.

While links between treatment assignment and prevalence of Topics 2 and 3 intuitive, Figure 4 also shows that violence elicits topics that are interesting in terms of our theory. The previous section posits that business interests link violence with drops in consumption and challenges in production. Reflecting this logic, the model shows that when primed to write about violence, respondents are particularly likely to mention issues like employment and production (Topic 4) and economic losses (Topic 8).

Moreover, the findings on Topic 5 in Figure 4 suggest that relative to the control prompt, business interests frame concerns over violence in terms of inequality, poverty, and class—that is, issues that welfare policies are meant to address. To get a qualitative sense of what such discussions might entail, Figure 5 plots two verbatim responses that the model identifies as representative of this topic.[11] The responses illustrate some of the ways that respondents link business interests and social concerns. In the top statement, the respondent clearly links violence to social problems that deflate the economy. In turn, the respondent in the bottom statement views socioeconomic issues as root causes of violence. Together, these responses comport with the theory, at least to the extent that business interests consciously link violence, socioeconomic
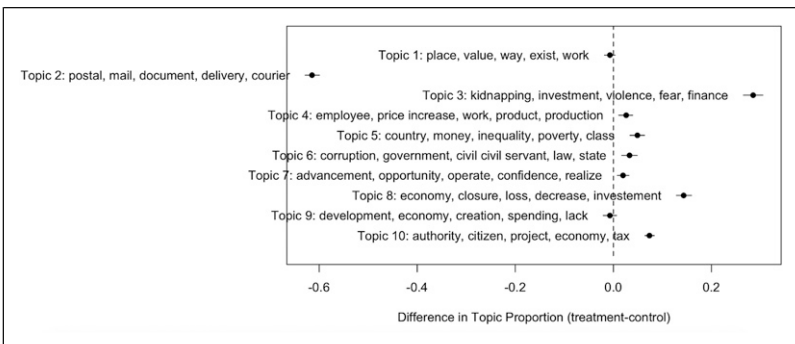

Figure 4. Difference in topic prevalence between control and treatment groups. Note: moving from left to right along the x-axis, topics were more likely to be discussed by respondents primed to discuss concerns over violence.

concerns, and economic downturn in ways that might plausibly heighten their support for welfare policies.

Beyond the assumption that businesses link violence to broader issues in the economy, the theory posits that vulnerabilities in consumer and labor markets help shape business responses to violence. We explore these mechanisms using topic content models. Whereas the previous model compared the prevalence of different topics between respondents in control and treatment groups, content models explore how sets of respondents use different vocabularies when discussing the same topic.

The analysis of heterogeneous effects showed relatively consistent links between treatment and support for anti-poverty spending. However, one variable seemed to diminish these effects: exportation. We attributed this finding to differences in exposure to consumption-related costs: if businesses increasingly support anti-poverty spending in hopes of bolstering violence-stricken consumers, such effects are likely to diminish for firms whose consumers live abroad. We might thus expect exporting and non-exporting business interests to vary in how they talk about their economic concerns and violence.
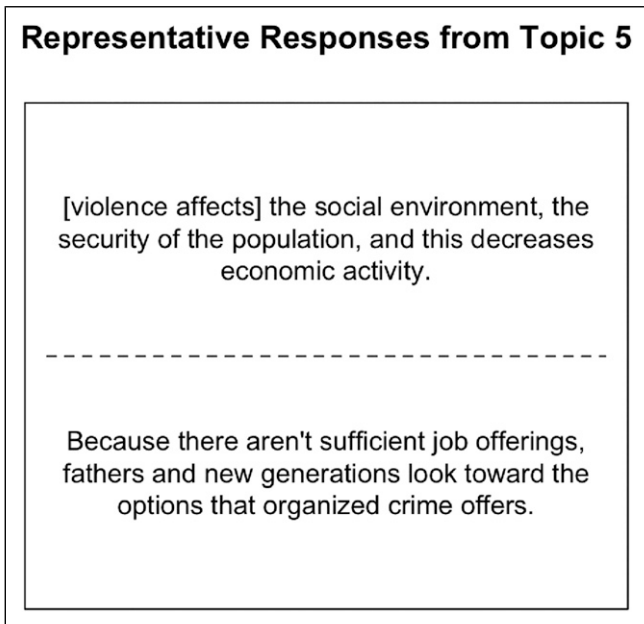

Representative Responses from Topic 5

[violence affects] the social environment, the security of the population, and this decreases economic activity.

- -

Because there aren't sufficient job offerings, fathers and new generations look toward the options that organized crime offers.

Figure 5. Examples of concerns that focus on socioeconomic issues. Note: the two texts are verbatim responses that the topic prevalence model identifies as representative of a topic with the following key words: "country, money, inequality, poverty, class."

Figure 6 provides preliminary support for the contention that non-exporting firms are more likely to frame economic costs to violence in terms of consumption. The left panel overviews the general content of one topic, with the top list showing that its most strongly associated words are related to economic issues and violence.[12] The two exemplar texts, which we manually selected from a quantitatively produced list of responses that are representative of the topic, illustrate different ways that respondents link violence to business interests: business concerns over violence range from issues related to private security costs to a hollowed-out customer base.

The right panel of Figure 6 shows that exporters and non-exporters use different words when discussing this topic. Some of the words, such as *que*, are not substantive, and result from a combination of variation in sentence structures and general imprecisions when applying certain text analysis tools in Spanish. Some of the substantive words, however, have more direct bearing on our theory. Specifically, relative to exporters, respondents who rely exclusively on domestic markets were more likely to mention issues related to domestic consumption, like fear, activity, and products.

When we analyzed heterogenous effects on support for tax cuts, we found that despite negative average treatment effects, operating in violent areas and employing large workforces were associated with positive effects of violence on support for tax policies that hollow out social spending. We attributed these findings to how such variables shape costs of violence: firms that rely on small workforces and operate in peaceful areas are less likely to experience the violence-related strains in labor markets that increase their resistance to
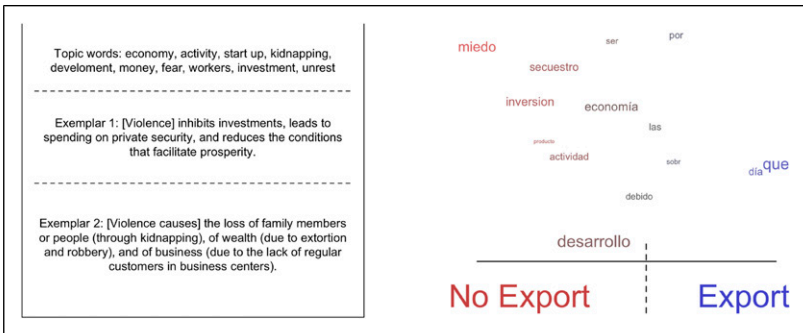

Figure 6. Respondents relying exclusively on domestic markets discuss concerns differently. Note: the left panel provides key words and verbatim examples of texts from a topic identified by the structural topic model. In the right hand plot, moving from right to left along the *x*-axis are words that non-exporters were more likely to use when discussing this topic, including fear (miedo), activity (actividad), and products (producto). Words are sized relative to how frequently they were used. Placement on the vertical axis is random.
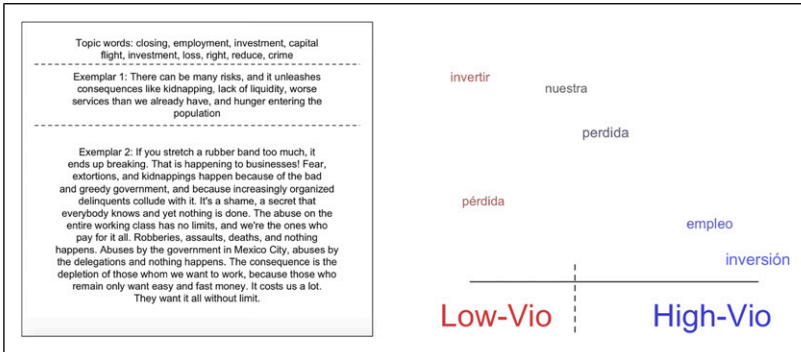
Figure 7. Respondents working in low- and high-violence municipalities discuss concerns differently. Note: the left panel provides key words and verbatim examples of texts from a topic identified by the structural topic model. In the plot right hand plot, moving from left to right along the *x*-axis are words that business leaders from violent municipalities were more likely to use when discussing this topic, including employment (empleo). Words are sized relative to how frequently they were used. Placement on the vertical axis is random.
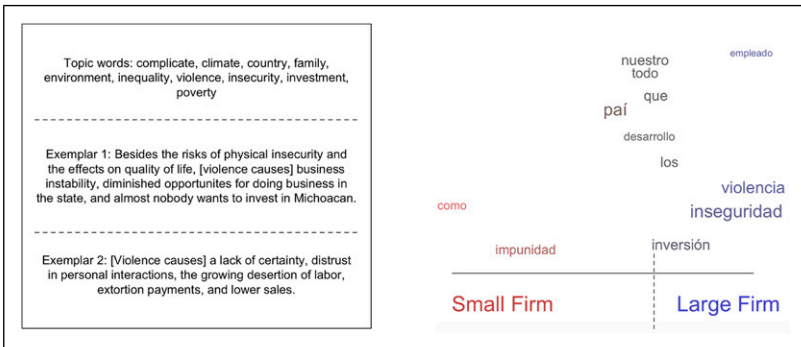

Figure 8. Respondents representing small and large firms discuss concerns differently. Note: the left panel provides key words and verbatim examples of texts from a topic identified by the structural topic model. In the right hand plot, moving from left to right along the *x*-axis are words that operators of large firms were more likely to use when discussing this topic, including violence (violencia), insecurity (inseguridad), and employment (empleado). Words are sized relative to how frequently they were used. Placement on the vertical axis is random.

making direct contributions to welfare programs. We might thus expect such firms to discuss economic issues and violence in different ways.

Figure 7 supports the idea that local levels of violence structure the extent to which business interests discuss costs of violence in terms of labor markets.

As a primer, note differences between the two exemplar texts: while the first highlights a myriad of potential costs, the second laments a lack of quality employees, suggesting that labor costs produce financial strains for firms whose worker pools are affected by violence. Moreover, the right hand panel in Figure 7 shows that when primed to express concerns over violence, respondents whose firms operate in violent municipalities are particularly likely to discuss employment.

Figure 8 shows similar dynamics when comparing open-ended responses among respondents representing large and small firms. The exemplar texts highlight various production and consumption-related costs of violence on business, including a diminished pool of labor. The right panel shows that when discussing the topic, large firms are more likely to mention not only violence and insecurity but also employment. In other words, while respondents discuss a myriad of concerns regarding violence, those from large firms are particularly likely to include employment in those discussions.

Together, the findings from the structural topic models buttress the theory developed in the previous section: relative to other manifestations of state weakness, violence leads businesses to grapple with economic issues, with leaders who rely on vulnerable consumers or labor forces being particularly likely to discuss costs of violence in those terms.

By itself, the text analysis does not provide definitive evidence of any theoretical proposition: even systematic analysis of textual data leaves room for researcher discretion that may bias the results. Yet the suggestive evidence from the topic models, combined with verbatim responses, existing literature, main experimental findings, and analysis of heterogeneous effects, helps triangulate a broader theory linking violence to business attitudes toward social welfare: given concerns about consumers, violence may increase business support for anti-poverty spending; however, labor-related costs of production may stop such support from carrying over to tax policies that ask businesses to help fund such spending.

Conclusion

In many areas of the Global South, powerful business interests operate in environments replete with social and political violence. Such conditions might affect attitudes on welfare policies in numerous ways. On the one hand, violence might cast doubts about state capacity, hinder financial flexibility, and harden attitudes toward welfare recipients. In response, business leaders might increasingly oppose social spending and taxes. On the other hand, welfare programs might mitigate violence, bolster markets, and help needy neighbors. In turn, business leaders might increasingly supporting social spending and taxes.

Given these conflicting mechanisms, we used a survey experiment in Mexico to measure the average effects of concerns about violence on business support for welfare policies. Doing so helps illuminate the broader implications of violence in the Global South in terms of inequality and well-being. Yet because citizens in the Global South are routinely exposed to gaps in state service delivery, such insights hinge on identifying the effects of violence that extend beyond more common manifestations of state weakness. We thus compared attitudes of respondents exposed to a treatment priming violence with a control group that was exposed to a relatively innocuous and universally recognized gap in Mexico's state services: the postal system. We found that on average, concerns over violence increased business support for anti-poverty spending and decreased support for tax cuts that hollow out welfare programs.

To build a theory on the mechanisms underlying these relationships, we explored heterogeneous effects and textual data from the survey. We found that positive treatment effects on support for anti-poverty spending evaporate when firms sell to consumers abroad, and that exporting firms were less likely to mention issues related to consumption when discussing confirms about violence. From this, we posited that concerns about domestic consumers underlie effects of violence on support for anti-welfare spending: business leaders whose markets are affected by violence view welfare spending as tools for mitigating drops in consumption.

On average, positive links between violence and welfare attitudes extend to tax policies that fund social spending. However, analysis of heterogeneous effects showed that when firms operate in violent areas and rely on large workforces, violence actually heightened support for tax cuts that siphon money from welfare programs. Such firms were also particularly likely to frame concerns over violence in terms of workers and employment. Together, we posited that production costs help structure links between violence and welfare-enhancing taxes: when violence strains their labor markets, business interests resist policies that might further drain operational funds.

By focusing on the understudied links between violence and business attitudes, this paper contributes to a burgeoning literature on the factors that shape welfare states in the Global South. Moreover, as scholars study the effects of conflict on economic parity (Scheidel, 2018), we highlight novel processes linking violence to socioeconomic inequality: recalcitrant economic interests may increasingly welfare programs that stymie violence or mitigate its pernicious effects in markets. However, such links are contingent on the complex and varying ways in which violence and welfare programs affect consumers, workers, and operational assets. For scholars of inequality in the Global South, the findings thus highlight the need to closely study how the business sector is structured, and the subsequent interplay between violence and welfare in markets.

Declaration of Conflicting Interests

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Notes

1. Federal audits (ASF, 2011, 2013), popular press accounts (Economist, 2006), and academic studies (Del Ángel et al., 2015), consistently highlight inefficiencies in the public postal service in Mexico. In 2011, Sepomex employed one worker per 5262 citizens; during the same period, the US postal service employed one worker per 422 citizens (ASF, 2011). Only 7% of Mexican businesses use Sepomex (INEGI, 2016), and six firms are responsible for over half of its total income (ASF, 2013). General perceptions of Sepomex's inefficiencies are also reflected in the qualitative responses of our respondents, who frequently state that members of the business community avoid using the public postal system due to problems with service.

2. The experiment also included a treatment condition on political corruption that did not produce significant results. While we do not discuss that treatment in the main body of this paper, including those tests in the Bonferroni corrections for multiple hypotheses does not change the results presented here.

3. Replication materials and code can be found at B. Holland and Ríos (2021).

4. For accounts of the vulnerabilities of Mexican commodity producers to extortion, see García-Ponce and Lajous (2014) and Linthicum (2019).

5. The modeling strategy described below requires binary measures of these variables. For primary commodity production, the variable measured one if a respondent's firm engaged in agriculture or mining, and zero otherwise. For worker education, the variable measured one if the majority of a respondent's employees had a college education. For number of employees, the variable measured one if the respondent's firm employed thirty or more workers. For domestic consumers, we constructed an "exportation" variable, which measured one if a respondent's firm engaged in any exporting. Finally, for local violence, the variable measured one if a respondent's firm's primary operations were located in a municipality where homicide rates in the previous year were higher than the rates of at least two thirds of all Mexican municipalities in the previous year.

6. Specifically, our ensemble is comprised of the following methods: LASSO (Hastie et al., 2001), Bayesian GLM (Gelman et al., 2008), Bayesian Additive Regression Trees (BART) (Chipman, George, McCulloch, et al., 2010), Random Forests (Breiman, 2001), Supported Vector Machines (Hearst et al., 1998), and Bagging Classification and Regression Trees (Breiman, 1996; Bühlmann, 2012).

7. It is interesting to note is that while exporting erases the effect on anti-welfare spending, this does not seem to be the case with tax cuts. This may be due to the broader framing of the tax cut item in terms of social programs, rather than anti-poverty programs specifically. We suspect that this framing drove exporters to consider social programs that more directly bolster components of their production, like education or workforce training.

8. Where cohesiveness is the extent to which high-probability words for a topic co-occur within documents, and exclusivity is the extent to which top words for a topic are unlikely to appear as top words in other topics (Roberts et al., 2014).

9. "Exemplars" were identified quantitatively as those documents with highest proportion of the words that are representative of a given topic.

10. All of the models that follow use the entire corpus at our disposal, which include survey responses to the experimental treatments described above, as well as a treatment on corruption. Including the documents on corruption increased the size of our data set, which helped identify meaningful topics. However, to facilitate interpretation of the topic prevalence models, comparisons based on experimental treatment assignment only compare respondents in the violence treatment group to those in the post office treatment group.

11. All exemplar texts presented in this section come from the set of documents that the model identifies as most strongly associated with a given topic. Within that set, we selected documents that illustrate key components of the theoretical mechanisms we develop.

12. It is necessary to run separate STMs for each variable, resulting in changes in topic content and numbers between models.

References

Alesina, A., & Angeletos, G.-M. (2005). Fairness and redistribution. *American Economic Review*, 95(4), 960–980. https://doi.org/10.1257/0002828054825655.

Alesina, A., & Glaeser, E. L. (2004). *Fighting poverty in the us and Europe: A world of difference*. Oxford University Press.

ASF (2011). *Servicio postal mexicano, prestación del servicio social. Auditoría de Desempeño 15-1-09J9E-07-0398 398-DE*. Reportes de la Cuenta Pública.

ASF (2013). *Servicio postal mexicano, prestación del servicio social. Auditoría financiera y de Cumplimiento: 13-1-09J9E-02-0027 DE-102*. Reportes de la Cuenta Pública.

Auyero, J. (2012). *Patients of the state: The politics of waiting in Argentina*. Duke University Press.

Bartels, L. M. (2016). *Unequal democracy: The political economy of the new gilded age*. Princeton University Press.

Bauer, M., Cassar, A., Chytilová, J., & Henrich, J. (2014). War's enduring effects on the development of egalitarian motivations and in-group biases. *Psychological Science*, *25*(1), 47–57. https://doi.org/10.1177/0956797613493444.

Beber, B., Roessler, P., & Scacco, A. (2014). Intergroup violence and political attitudes: Evidence from a dividing Sudan. *Journal of Politics*, *76*(3), 649–665. https://doi.org/10.1017/s0022381614000103.

Berens, S., & von Schiller, A. (2017). Taxing higher incomes: What makes the high-income earners consent to more progressive taxation in Latin America? *Political Behavior*, *39*(3), 703–729. https://doi.org/10.1007/s11109-016-9376-2.

Braumoeller, B. F. (2003). Causal complexity and the study of politics. *Political Analysis*, *11*(3), 203–233. https://doi.org/10.1093/pan/mpg012.

Breiman, L. (1996). Bagging predictors. *Machine Learning*, *24*(2), 123–140. https://doi.org/10.1007/bf00058655.

Breiman, L. (2001). Random forests. *Machine Learning*, *45*(1), 5–32. https://doi.org/10.1023/a:1010933404324.

Bühlmann, P. (2012). Bagging, boosting and ensemble methods. In *Handbook of computational statistics* (pp. 985–1022). https://doi.org/10.1007/978-3-642-21551-3_33.

Calderon, L. Y., Heinle, K., Rodriguez Ferreira, O., & Shirk, D. A. (2019). *Organized crime and violence in Mexico. Justice in Mexico series*. University of San.

Cammett, M. (2014). *Compassionate communalism: Welfare and sectarianism in Lebanon*. Cornell University Press.

Carnes, M., & Mares, I. (2015). Explaining the 'return of the state' in middle-income countries employment vulnerability, income, and preferences for social protection in Latin America. *Politics & Society*, *43*(4), 525–550. https://doi.org/10.1177/0032329215602893.

Castillo, J. C., Mejía, D., & Restrepo, P. (2014). *Scarcity without leviathan: The violent effects of cocaine supply shortages in the Mexican drug war*. Working Paper 356. Center for Global Development.

CCE (2018). Un balance de cara a la transmisión de podres en el ejecutivo. Retrieved May 25, 2020, from http://www.cce.org.mx/un-balance-de-cara-a-la-transmision-de-poderes-en-el-ejecutivo/.

Chipman, H. A., George, E. I., & McCulloch, R. E. (2010). Bart: Bayesian additive regression trees. *The Annals of Applied Statistics*, *4*(1), 266–298. https://doi.org/10.1214/09-aoas285.

Coger, L. (2014). *The private sector and public security: The cases of ciudad juárez and monterrey*. Working Paper Series on Civic Engagement and Public Security in Mexico. University of San Diego.

Collier, P. (1999). On the economic consequences of civil war. *Oxford Economic Papers*, *51*(1), 168–183. https://doi.org/10.1093/oep/51.1.168.

Concanaco (2019a). Inseguridad y crecimiento económico, temas urgentes por solucionar: Concanaco servytur. Retrieved May 25, 2020, from https://www.concanaco.com.mx/inseguridad-y-crecimiento-economico-temas-urgentes-por-solucionar-concanaco-servytur/.

Concanaco (2019b). Preocupa el freno de la inversión en méxico: Citigroup. Retrieved May 25, 2020, from https://www.concanaco.com.mx/preocupa-el-freno-de-la-inversion-en-mexico-citigroup/.

Coovadia, H., Jewkes, R., Barron, P., Sanders, D., & McIntyre, D. (2009). The health and health system of South Africa: Historical roots of current public health challenges. *The Lancet*, *374*(9692), 817–834. https://doi.org/10.1016/S0140-6736(09)60951-X.

Coparmex (2018). Marcaje a mi gobierno. Retrieved August 2, 2019, from www.datacoparmex.

Coparmex (2019a). La agenda por cumplir para el poder ejecutivo. Retrieved May 25, 2020, from https://coparmex.org.mx/la-agenda-por-cumplir-para-el-poder-ejecutivo/.

Coparmex (2019b). Plan nacional de desarrollo 2019 - 2024, tarea para los diputados. Retrieved May 25, 2020, from https://coparmex.org.mx/plan-nacional-de-desarrollo-un-pendiente-de-las-y-los-diputados/.

Coparmex (2019c). Retos para el 2018, año electoral. Retrieved May 25, 2020, from https://coparmex.org.mx/retos-para-el-2018-ano-electoral/.

Coparmex (2020). Coparmex propone acciones para hacer frente a la inseguridad y violencia que vive méxico. Retrieved May 25, 2020, from https://coparmex.org.mx/coparmex-propone-acciones-para-hacer-frente-a-la-inseguridad-y-violencia-que-vive-mexico/.

Cramer, B. D., & Kaufman, R. R. (2011). Views of economic inequality in Latin America. *Comparative Political Studies*, *44*(9), 1206–1237. https://doi.org/10.1177/0010414010392171.

Del Ángel, M., Ochoa, A., Hernández, A., & Ángel, J. D. (2015). *Postal mail distribution: An approximation from the problem of the VRP*. Working paper. Instituto Tecnológico Superior de Naranjos.

Diaz-Cayeros, A., Estévez, F., & Magaloni, B. (2016). *The political logic of poverty relief: Electoral strategies and social policy in Mexico*. Cambridge University Press.

Economist, T. (2006). On Mexican time—Mexico's postal services. *The Economist*.

Esping-Andersen, G. (1985). *Politics against markets: The social democratic road to power*. Princeton University Press.

Estevez-Abe, M., Iversen, T., & Soskice, D. (2001). Social protection and the formation of skills: A reinterpretation of the welfare state. In P. A. Hall, & D. Soskice (Eds.), *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford University Press.

Feierherd, G., Schiumerini, L., & Stokes, S. (2017). When do the wealthy support redistribution? Inequality aversion in Buenos Aires. *British Journal of Political Science*, *50*(2), 793–805. https://doi.org/10.1017/S0007123417000588.

Ferwerda, J. (2015). *The politics of proximity: Local redistribution in developed democracies (Unpublished doctoral dissertation)*. Dissertation. Massachusetts Institute of Technology.

Garay, C. (2017). *Social policy expansion in Latin America*. Cambridge University Press.

García-Ponce, O., & Lajous, A. (2014). How does a drug cartel become a lime cartel. *Washington Post*. Retrieved May 25, 2020, from https://www.washingtonpost.com/news/monkey-cage/wp/2014/05/20/how-does-a-drug-cartel-become-a-lime-cartel/.

Gaviria, A. (2008). Social mobility and preferences for redistribution in Latin America. *Economía*, *8*(1), 55–96. https://doi.org/10.1353/eco.2008.0003.

Gelman, A., Jakulin, A., Pittau, M. G., & Su, Y.-S. (2008). A weakly informative default prior distribution for logistic and other regression models. *The Annals of Applied Statistics*, *2*(4), 1360–1383. https://doi.org/10.1214/08-aoas191.

Greenwald, B. C., & Stiglitz, J. E. (1993). Financial market imperfections and business cycles. *The Quarterly Journal of Economics*, *108*(1), 77–114. https://doi.org/10.2307/2118496.

Grimmer, J., Messing, S., & Westwood, S. J. (2017). Estimating heterogeneous treatment effects and the effects of heterogeneous treatments with ensemble methods. *Political Analysis*, *25*(4), 413–434. https://doi.org/10.1017/pan.2017.15.

Gupta, A. (2012). *Red tape: Bureaucracy, structural violence, and poverty in India*. Duke University Press.

Haber, S. H., Klein, H. S., Maurer, N., & Middlebrook, K. J. (2008). *Mexico since 1980*. Cambridge: Cambridge University Press.

Haggard, S., Kaufman, R. R., & Long, J. D. (2013). Income, occupation, and preferences for redistribution in the developing world. *Studies in Comparative International Development*, *48*(2), 113–140. https://doi.org/10.1007/s12116-013-9129-8.

Hartman, A. C., & Morse, B. S. (2018). Violence, empathy and altruism: Evidence from the Ivorian refugee crisis in Liberia. *British Journal of Political Science*, *50*(2), 731–755. https://doi.org/10.1017/s0007123417000655.

Hastie, T., Friedman, J., & Tibshirani, R. (2001). *The elements of statistical learning*. Springer.

Hearst, M. A., Dumais, S. T., Osuna, E., Platt, J., & Scholkopf, B. (1998). Support vector machines. *Intelligent Systems and Their Applications*, *13*(4), 18–28. https://doi.org/10.1109/5254.708428.

Holland, A. C. (2017). *Forbearance as redistribution: The politics of informal welfare in Latin America*. Cambridge University Press.

Holland, A. C. (2018). Diminished expectations: redistributive preferences in truncated welfare states. *World Politics*, *70*(4), 555–594. https://doi.org/10.1017/S0043887118000096.

Holland, B., & Ríos, V. (2021). Replication data for: Violence and business interest in social welfare: Evidence from Mexico. *Harvard Dataverse*. https://doi.org/10.7910/DVN/V9X6QG.

INEGI (2016). *Encuesta nacional de calidad regulatoria e impacto gubernamental en empresas*. INEGI: Aguascalientes.

INEGI (2018). *Encuesta nacional de victimización de empresas, aguascalientes*. INEGI: Aguascalientes.

Iversen, T., & Soskice, D. (2001). An asset theory of social policy preferences. *American Political Science Review*, *95*(4), 875–893. https://doi.org/10.1017/s0003055400400079.

Jarillo, B., Magaloni, B., Franco, E., & Robles, G. (2016). How the Mexican drug war affects kids and schools? Evidence on effects and mechanisms. *International Journal of Educational Development*, *51*, 135–146. https://doi.org/10.1016/j.ijedudev.2016.05.008.

Kristov, L., Lindert, P., & McClelland, R. (1992). Pressure groups and redistribution. *Journal of Public Economics*, *48*(2), 135–163. https://doi.org/10.1016/0047-2727(92)90024-a.

Kyle, J. (2018). Local corruption and popular support for fuel subsidy reform in Indonesia. *Comparative Political Studies*, *51*(11), 1472–1503. https://doi.org/10.1177/0010414018758755.

Leon, G. (2012). Civil conflict and human capital accumulation the long-term effects of political violence in Perú. *Journal of Human Resources*, *47*(4), 991–1022. https://doi.org/10.1353/jhr.2012.0036.

Linthicum, K. (2019). Inside the bloody cartel war for Mexico's multibillion-dollar avocado industry. *Los Angeles Times*. Retrieved May 25, 2020, from https://www.latimes.com/world-nation/story/2019-11-20/mexico-cartel-violence-avocados.

Lupu, N., & Pontusson, J. (2011). The structure of inequality and the politics of redistribution. *American Political Science Review*, *105*(2), 316–336. https://doi.org/10.1017/s0003055411000128.

Mares, I. (2003). The sources of business interest in social insurance: Sectoral versus national differences. *World Politics*, *55*(02), 229–258. https://doi.org/10.1353/wp.2003.0012.

Mauri, L., & D'Agostino, R. B. (2017). Challenges in the design and interpretation of noninferiority trials. *New England Journal of Medicine*, *377*(14), 1357–1367. https://doi.org/10.1056/nejmra1510063.

Mironova, V., & Whitt, S. (2014). Ethnicity and altruism after violence: The contact hypothesis in Kosovo. *Journal of Experimental Political Science*, *1*(02), 170–180. https://doi.org/10.1017/xps.2014.18.

Morgan, J., & Kelly, N. J. (2017). Social patterns of inequality, partisan competition, and Latin American support for redistribution. *The Journal of Politics*, *79*(1), 193–209. https://doi.org/10.1086/687412.

Page, B. I., Bartels, L. M., & Seawright, J. (2013). Democracy and the policy preferences of wealthy Americans. *Perspectives on Politics*, *11*(1), 51–73. https://doi.org/10.1017/s153759271200360x.

Paster, T. (2013). Business and welfare state development: Why did employers accept social reforms? *World Politics*, *65*(03), 416–451. https://doi.org/10.1017/s0043887113000117.

Pierson, P. (1996). The new politics of the welfare state. *World Politics*, *48*(2), 143–179. https://doi.org/10.1353/wp.1996.0004.

Rios, V. (2013). Why did Mexico become so violent? A self-reinforcing violent equilibrium caused by competition and enforcement. *Trends in Organized Crime*, *16*(2), 138–155. https://doi.org/10.1007/s12117-012-9175-z.

Roberts, M. E., Stewart, B. M., Tingley, D., Lucas, C., Leder-Luis, J., Gadarian, S. K., Albertson, B., & Rand, D. G. (2014). Structural topic models for open-ended survey responses. *American Journal of Political Science*, *58*(4), 1064–1082. https://doi.org/10.1111/ajps.12103.

Robles, C. G., & Magaloni, B. (2018). *The economic consequences of drug trafficking violence in Mexico*. Poverty and Governance Series Working Paper. Stanford University.

Rohner, D., Thoenig, M., & Zilibotti, F. (2013). Seeds of distrust: Conflict in Uganda. *Journal of Economic Growth*, *18*(3), 217–252. https://doi.org/10.1007/s10887-013-9093-1.

Rueda, D., & Stegmueller, D. (2016). The externalities of inequality: Fear of crime and preferences for redistribution in Western Europe. *American Journal of Political Science*, *60*(2), 472–489. https://doi.org/10.1111/ajps.12212.

Schawb, K. (2018). *The global competitiveness report 2018*. Insight report. World Economic Forum.

Scheidel, W. (2018). *The great leveler: Violence and the history of inequality from the stone age to the twenty-first century*. Princeton University Press.

Schneider, B. R (2013). *Hierarchical capitalism in Latin America*. Cambridge University Press.

Schwartz, D., & Lellouch, J. (1967). Explanatory and pragmatic attitudes in therapeutical trials. *Journal of Clinical Epidemiology*, *20*(8), 637–648. https://doi.org/10.1016/0021-9681(67)90041-0.

Shapiro, I. (2005). *The flight from reality in the human sciences*. Princeton University Press.

Shayo, M. (2009). A model of social identity with an application to political economy: Nation, class, and redistribution. *American Political Science Review*, *103*(2), 147–174. https://doi.org/10.1017/s0003055409090194.

Sil, R., & Katzenstein, P. J. (2010). Analytic eclecticism in the study of world politics: Reconfiguring problems and mechanisms across research traditions. *Perspectives on Politics*, *8*(2), 411–431. https://doi.org/10.1017/s1537592710001179.

Singh, P. (2015). *How solidarity works for welfare: Sub nationalism and social development in India*. Cambridge University Press.

Swenson, P. (2002). *Capitalists against markets: The making of labor markets and welfare states in the United States and Sweden*. Oxford University Press.

Tunis, S. R., Stryer, D. B., & Clancy, C. M. (2003). Practical clinical trials: increasing the value of clinical research for decision making in clinical and health policy. *Jama*, *290*(12), 1624–1632. https://doi.org/10.1001/jama.290.12.1624.

Valenzuela, C. (2019). Falta coordinación entre estado y federación para combatir inseguridad: Consejo coordinador empresarial. *Omnia*. Retrieved July 31st, 2019, from http://www.omnia.com.mx/noticia/114567.

Vernon, R. (1963). *The dilemma of Mexico's development, the roles of private and public sectors*. Cambridge: Harvard University Press.

Voors, M. J., Nillesen, E. E. M., Verwimp, P., Bulte, E. H., Lensink, R., & Soest, D. P. V. (2012). Violent conflict and behavior: A field experiment in Burundi. *The American Economic Review*, *102*(2), 941–964. https://doi.org/10.1257/aer.102.2.941.

Weymouth, S. (2012). Firm lobbying and influence in developing countries: A multilevel approach. *Business and Politics*, *14*(4), 1–26. https://doi.org/10.1515/bap-2012-0030.

Wilkerson, J., & Casas, A. (2017). Large-scale computerized text analysis in political science: Opportunities and challenges. *Annual Review of Political Science*, *20*(1), 529–544. https://doi.org/10.1146/annurev-polisci-052615-025542.

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