Presidential Approval and Public Security in Mexico’s War on Crime

Vidal Romero
Beatriz Magaloni
Alberto Díaz-Cayeros

ABSTRACT

To fight criminal organizations effectively, governments require support from significant segments of society. Citizen support provides important leverage for executives, allowing them to continue their policies. Yet winning citizens’ hearts and minds is not easy. Public security is a deeply complex issue. Responsibility is shared among different levels of government; information is highly mediated by mass media and individual acquaintances; and security has a strong effect on peoples’ emotions, since it threatens to affect their most valuable assets—life and property. How do citizens translate their assessments of public security into presidential approval? To answer this question, this study develops explicit theoretical insights into the conditions under which different dimensions of public security affect presidential approval. The arguments are tested using Mexico as a case study.

This study analyzes the impact that citizens’ assessments of security issues have on presidential approval. Specifically, it delves into the specific conditions that prompt citizens to punish or reward the chief executive. Little is known about the impact public security issues have on presidential approval. The bulk of the literature has focused on analyzing the impact of the economy and foreign affairs on an executive’s job approval.¹

The relationship between crime and performance evaluations has usually been the domain of local politics. However, due to the significant increase in crime and violence in many countries around the globe, the responsibility for public security has partially shifted away from local governments toward the national sphere of government. Latin America has been particularly, and dramatically, affected by violence related to drug-trafficking organizations (UNODC 2012, 2014). In Latin America, in the eyes of the public, presidents have increasingly emerged as the main figures responsible for fighting crime.

Vidal Romero is professor and chair of the Political Science Department at the Instituto Tecnológico Autónomo de México. vromero@itam.mx. Beatriz Magaloni is an associate professor of political science and a senior fellow at the Freeman Spogli Institute for International Studies, Stanford University. magaloni@stanford.edu. Alberto Díaz-Cayeros is a senior fellow at the Freeman Spogli Institute for International Studies, Stanford University. albertod@stanford.edu

© 2016 University of Miami
DOI: 10.1111/j.1548-2456.2016.00312.x
Presidents need a significant degree of social support to successfully carry out policy interventions on public security. High approval ratings may boost citizens’ collaboration in the fight against crime by increasing their role as information providers and reducing their incentives to covertly help criminals, whether actively or by inaction. Funding and implementing preferred policies is easier for a popular president, since he or she has more leverage to negotiate the support and collaboration of subnational authorities and opposition parties in the legislature. In this context, public support of a president is a necessary condition for the implementation of a successful policy on public security. This is why presidents care about public opinion, even if re-election is not on the horizon.

This study focuses on the absolute and relative effect on approval of three security-related dimensions: support for policy interventions, sociotropic evaluations, and direct victimization. The arguments consider three core aspects of the issue: responsibility is shared among different levels of government; information is highly mediated by mass media and personal acquaintances; and public security affects, or threatens to affect, citizens’ most valuable assets: life and property.

On these bases, the study argues that when public security is a highly salient issue, the president’s responsibility increases in the eyes of the public. In this scenario, a bold policy intervention—regardless of the direction and the actual results—that signals that an executive is “doing something” about public security would induce a significant share of citizens to endorse the president.

An observable implication of such an effect is that citizens would heavily reward presidents for the mere policy intervention. The rewards for presidents’ actions to fight criminal organizations would be greater than those based on performance evaluations based on the actual issue, such as sociotropic assessments of security performance or direct crime victimization. Of these last two, sociotropic evaluations would tend to have a stronger effect than direct crime victimization, since the former can more readily be linked to a national policy frame and the latter is more local.

These theoretical insights are tested in the context of contemporary Mexico. This country has been immersed in a serious conflict between the government and organized criminal organizations and a secondary conflict among the different criminal organizations themselves. The death toll in this multifront war is appalling: between 2007 and 2014, more than one hundred thousand people died violently in incidents related to organized crime. Yet at the aggregate level, approval levels for President Felipe Calderón (2006–12) remained above 50 percent.

Due to the variation in crime over time, Mexico presents an excellent setting to explore the relationship between approval of the executive and public security assessments. President Calderón’s policy intervention in December 2006 allows us to measure the impact of public security issues on approval in a scenario of high issue salience and to compare it to a previous state in which the issue was not as important. Moreover, Mexico’s situation resembles the security circumstances in many countries in Latin America: consolidating democracies with weak state institutions, conditions that have created power vacuums filled by criminal organizations (Arias and Goldstein 2010), and the expansion and diversification of criminal organiza-
tions (CAF 2014; PNUD 2013). We use survey data from different points in time between 2006 to 2012; this covers periods before and after Calderón’s policy intervention. We analyze the data using a combination of coarsened exact matching (CEM) (Iacus et al. 2012) and logit regression models.2

This study’s contribution to the literature is twofold. First, it develops and empirically tests theoretical insights on the differential impact of the three security dimensions on presidential approval. It presents a more solid theoretical setting, and a more robust econometric specification, than do existing works in the literature (e.g. Pérez 2013; Romero 2013).

Second, this study presents compelling evidence that citizens seem to reward effort (approximated by security policy interventions) more heavily than actual performance. It seems that even if things go terribly wrong with objective security conditions, a president’s approval ratings may not significantly decrease as might have been predicted—if citizens support the prevailing policy intervention. National security has been widely studied as a determinant of approval in the case of wars (Brody 1991; Gelpi et al. 2006; Mueller 1973) and domestic terrorist attacks (Arce 2003; Carlin et al. 2014). This study adds public domestic security as a determinant of approval, carefully highlighting the differences that should be considered among cases.

The following sections proceed to present our theoretical arguments regarding the relationship between approval and security and then to briefly describe the public security context in Mexico. The theoretical arguments are empirically analyzed before discussing the implications of our findings.

**Presidential Approval and Public Security**

Presidents want to be popular. Alexander Hamilton argued as much in *The Federalist Papers* (Federalist 76, 1788) when he discussed the unipersonal nature of the presidency. Citizens render their verdict on a presidential administration based at least partly on the president’s actions in office.

Much of the literature has focused on assessing presidential approval in terms of executive performance on the economy and foreign policy (Norpoth et al. 1991; Gronke and Newman 2003; Berlemann and Enkelmann 2012). Few works exist that link presidential approval and public security, most probably because crime is commonly linked to local authorities (e.g., Arnold and Carnes 2012; Chevigny 2003; Devroe 2013). However, the aggravated security situation in many countries, especially in Latin America, and the globalization of criminal organizations have made crime a national issue (Castorena and Zechmeister 2015), and have therefore placed national executives as the main figures in the fight against crime.

Presidents care about public opinion on security issues because they need citizens’ support in order to solve the problem. The hidden nature of criminal activities makes citizens key information providers. There cannot be a police officer at every street corner; authorities need citizens to report crimes and suspicious activities in order to fight criminal organizations effectively. Similarly, executives need citizens’
compliance to implement measures that may reduce their freedom, such as increasing security at airports and borders, setting checkpoints on roads, or simply making it harder to open a checking account. Additionally, a popular president has an easier time convincing Congress to fund security policies.

Relating security issues to approval, however, is not straightforward. Public security is a complex issue for three main reasons. First, responsibility on security issues tends to be distributed among different levels of government and agencies, and has traditionally fallen into the realm of local politics. Mayors usually take responsibility for fighting crime in the eyes of the public. However, we suggest that when insecurity intensifies—either in objective numbers or in the magnitude of media coverage—the issue may tend to escalate to the national executive’s realm. As with foreign policy, terrorism, and war, it is the president who is seen as responsible for a coherent national crime prevention strategy (Carlin et al. 2014).

If presidents become the main figures in the fight against crime, there will be many instances in which presidents are blamed or rewarded for issues in which, in principle, they have no legal authority to intervene. For instance, high crime rates may not fully reflect on approval if they are attributed to local authorities, but the kidnapping of a public figure may negatively affect presidential approval disproportionately to crime rates.

A second reason for the complexity of the issue is that information is highly mediated by mass media and word of mouth. Typically, only a minority of citizens is directly affected by crime. For instance, the 2014 average victimization rate for all countries of the Americas is 17.6 percent, according to data from the Americas-Barometer.3 A much smaller proportion has a direct encounter with high-profile criminal organizations.

Lacking direct objective experience with the events means that citizens’ assessments of public security and their translation into presidential approval are imbued with elements of subjective perception. Politicians and their opponents have room to try to influence how people think about the security situation. Existing work on the topic has found that under certain circumstances, citizens’ opinions of presidential performance can be influenced by providing new information (Ardanaz et al. 2014; Banerjee et al. 2012) and by specific issue framing (Romero et al. 2015).

The third reason is that public security is a highly sensitive issue in public opinion because it affects, or threatens to affect, citizens’ most valuable assets: life and property. It implies that individuals’ opinions would be highly sensitive to traumatic personal experiences or to highly publicized incidents.

**Dimensions of Public Security**

The investigation focuses on three security dimensions that we deem particularly important to explain presidential approval: support for a policy intervention, sociotrophic evaluations, and direct victimization. We are interested in explaining what specific areas of public security citizens consider important when evaluating a president’s overall performance, and the relative magnitude of these variables.
Support for a Policy Intervention

A policy intervention may have value as such (Iyengar 1989). As in the case of wars, citizens may approve of an executive’s performance by the mere fact that he or she decides to implement a policy that attempts to reduce crime, independently of actual success in the matter.

An assessment of the executive based on agreement with a policy intervention assumes that citizens may reward executives for “trying” to solve the issue at hand. Citizens perceive that an executive is actually “doing something” to solve a public security issue. This aspect is comparable to Voeten and Brewer’s (2006) decision-maker model of accountability, which they apply to the case of the U.S. war in Iraq. In a nutshell, the model states that citizens will approve of the president’s performance based on his or her policy choices, beginning with the decision of whether to go to war or not, not necessarily on the results of such intervention. Arguments based on the “rally ‘round the flag” effect fit into this category (Mueller 1973; Newman and Forcehimes 2010). There is also evidence that citizens rally behind the presidential figure in light of terrorist attacks (Arce 2003; Carlin et al. 2014).

We contend that in conditions of elevated public insecurity, citizens become highly sensitized to the issue, and policy interventions aimed at alleviating the population’s fears would induce citizens to support the chief executive, regardless of partisanship.

This mechanism requires two necessary conditions: first, that public security be a high-salience issue, considered a significant societal problem that requires urgent attention; and second, that citizens can perceive the executive as the hero fighting the “bad guys” on behalf of the population. If these two conditions are met, we would expect that a significant portion of the citizens would support the president and the policy intervention, independently of actual performance. This effect should be relatively long-lasting, since there is no exit option from a war against criminal organizations fought on one’s own soil.4

Sociotropic Performance Evaluation

A performance-based evaluation implies that citizens assess outcomes to determine approval. These outcomes are both objective, such as victimization, and perceived. This dimension is similar to Voeten and Brewer’s managerial accountability model (2006). In this setting, citizens evaluate the conflict based on casualties and key events that signal success in a war. Similarly, the performance dimension fits into event-response theories (Berinsky 2007) that, like those of Voeten and Brewer 2006, relate the number and flow of casualties (Burk 1999; Gartner and Segura 1998; Mueller 1973) and the expectations of success in a war (Feaver and Gelpi 2004; Kull et al. 2004) to presidential approval.

Therefore, in addition to possible support for a president’s decision to fight crime (or not), citizens will evaluate a government’s actual performance on public security. This is no different from any other issue in which the government intervenes. However, unlike other issues, one would expect potential biases in how citi-
zens perceive security issues, due to the sensitive nature of the topic and to how the media and acquaintances present and share information.

When highly valued assets are at stake—such as life and property in the case of public security—humans tend to distort objective probabilities upward (Bazerman 2002). People tend to overstate the incidence of low-probability events. For instance, there is evidence showing that citizens overstate their “objective” probabilities of being victims of terrorist attacks (May et al. 2011), of being victims of low-incidence crimes (Warr 2000), or of being caught in the crossfire between drug-trafficking organizations (Magaloni et al. 2012). Therefore, we would expect that citizens would magnify negative events under a wide variety of conditions.

Sociotropic evaluations of public security are highly influenced by the mass media. This, combined with the sensitive nature of the issue, provides ample room for significant divergence between objective indicators and subjective perceptions (Ardanaz et al. 2014; Banerjee et al. 2012).

Small variations in crime and discrete events may trigger huge variations in sociotropic evaluations of security. For instance, even if crime figures are constant, the capture of a criminal kingpin may trigger an inordinate improvement in performance evaluations. However, the death of a minor child caught in crossfire between criminal groups would probably cause the opposite effect.

It should be a rather uncontroversial point that as public safety improves and the president is perceived as responsible, approval should increase. However, in terms of presidential decisionmaking, what is more interesting is the impact that performance evaluations have on approval as compared to other variables, such as support for policy intervention and direct victimization. This may determine how a president decides to act under these circumstances.

**Direct Victimization**

At first glance, we would expect that, *ceteris paribus*, someone who is the direct victim of a crime would be less likely to support the president. There is, after all, sufficient evidence showing that crime victimization negatively affects a victim’s trust in government institutions (Ceobanu et al. 2011; Corbacho et al. 2012; Cruz 2008; Fernández and Kuenzi 2010; Pérez 2003) and that victims of crime find government messages less credible (Romero et al. 2015). There is also evidence showing a decrease in political participation due to increases in crime in the case of Mexico (Ley 2013; Trelles and Carreras 2012). However, Bateson (2012) finds a strong positive effect of crime victimization on political participation using survey data from the five continents. We also know from the literature that crime victimization increases citizens’ preoccupation with domestic public security (Castorena and Zechmeister 2015).

The evidence regarding the effects of victimization on presidential approval is mixed. Rodríguez (2010) reports a negative effect of crime on Venezuelan president Hugo Chávez’s approval ratings, based on 2008 AmericasBarometer data; yet using 2010 AmericasBarometer data, Pérez (2013) finds no effect of rising crime levels on President Chávez’s popularity. Romero (2013) finds no effect of crime victimization
on approval for Mexico’s president Calderón in 2010, but he finds a negative effect if someone at the interviewee’s household has been the direct victim of a crime. Ley (2013) does not find any effect of victimization on approval for the case of Mexico in 2012, and Bravo (2012) reports a negative effect of crime victimization on presidential approval using AmericasBarometer data for a panel of 20 countries in the Americas for 2010.

We argue that under certain circumstances, presidents are seen as responsible for the big picture regarding public security but are not necessarily held accountable for day-to-day crime. An observable implication of this claim would be that the effect of crime on presidential approval should be minor in absolute terms, and relative to sociotropic evaluations and support for the policy intervention. This would partially explain divergences in the existing literature.

THE MEXICAN CASE

Mexico is a country with a high incidence of crime, in which a bold policy initiative meant to curb criminal activity was implemented in late 2006. This makes the country a suitable case to study the relationship between approval and security both before and after a public security intervention.\(^5\) The policy intervention also increased issue salience, generating a different context that may have influenced how citizens translated their security evaluations into approval.

Mexican society’s concern with security issues has risen significantly of late. In 2004, only 12 percent of citizens stated that security issues were the most important issue in the country. By 2012, the figure had increased to 39 percent, according to AmericasBarometer data.

Mexico’s security problems resemble the general context in Latin America in many ways. This region is now the most violent place on earth. An unfortunate combination of poverty, corruption, weak state institutions, the demand for drugs in developed countries, and a comparative advantage in the production and transportation of narcotics to the United States has induced a spiral of crime and violence in the region (CAF 2014; PNUD 2013).

Responding to an upward trend in crime since the early 2000s, President Calderón declared war on drug-trafficking organizations on his arrival in office in December 2006.

The government’s intervention, however, was not as successful as many had hoped. Homicides skyrocketed from 10 per 100,000 at the beginning of Calderón’s administration to 29 per 100,000 at the peak of violence in the summer of 2011. Other crimes increased as well. In December 2006, the robbery rate was 143 per 100,000 citizens; by the end of the Calderón administration it had risen to levels above 200 robberies per 100,000. It should be noted, however, that high violence was concentrated in relatively few localities. Not all citizens have experienced crime and violence directly or at the same magnitude.

President Calderón’s administration and its strategy to fight criminal organizations were systematically criticized in the media. There is tentative evidence showing
that some components of the strategy had significant costs. Homicides may have increased due to the use of the army to combat drug traffickers (Guerrero 2013), the nonselective attacks on criminal organizations (Lessing 2013; Osorio 2013), and the decapitation of criminal organizations (Dickenson 2014), although Phillips (2015) finds no general effect of military interventions.

Despite the chaotic environment, citizens did not seem to punish the president. Calderón’s average approval during his administration—according to Parametría, a polling firm—was 67 percent. His average approval in his last year of government was 69 percent.6 To put this number into context, the average approval for all presidents in the Americas in February 2012 was only 39 percent (as reported by the AmericasBarometer).

It seems that a high proportion of citizens decoupled their support for the fight against crime from the government’s actual performance in this fight. A survey conducted in July 2011 by the Office of the Mexican Presidency shows a striking difference in presidential approval between the proportions of citizens supporting the intervention, 86 percent, and those having a positive evaluation on public security, 36 percent.

Other researchers investigate a similar phenomenon of high approval rates relative to perceived performance on a security issue, such as Carlin et al. (2014), who study domestic terrorism. They compare attacks on the civilian population by the Fuerzas Armadas Revolucionarias de Colombia (FARC) during the presidential terms of Andrés Pastrana (1998–2002) and Álvaro Uribe (2002–10). Although the guerrilla attacks on the population were quite similar, Pastrana’s approval rating shrank by 12 percent, but Uribe’s popularity was not affected. The authors’ explanation rests on institutional factors experienced by each president: Pastrana faced a divided government and Uribe a unified government. Unified government centralized responsibility on President Uribe, which allowed him to concentrate citizens’ support, which provided a solid floor of approval.

Arce (2003) looks into a similar effect regarding terrorist attacks in Peru, but mediated by partisanship. He finds that subversive actions by the insurgent army Shining Path boosted support for right-wing governments but reduced support for left-wing governments.

**Empirical Evidence**

To test our theoretical arguments regarding the relationship between approval and crime, we use survey data from Mexico. We found no single survey series that had all the proxies that we deemed necessary to test our hypotheses. We required specific questionnaire items to test each dimension and at least two points in time to test for the differences in effects before and during President Calderón’s security policy implementation. Therefore we use survey data from two different sources: the AmericasBarometer and a survey conducted by the Office of the Mexican Presidency in 2011. Analyzing the data using CEM and logit regression models, we empirically examine the independent effects on approval of our three dimensions of inquiry.
Direct Victimization

We measure the effect victimization has on approval by using nationwide survey data from the AmericasBarometer at two different points in time: February 2006, before President Calderón’s intervention and administration, when the yearly homicide rate was 8 per 100,000 habitants; and during the period 2008–12, using a pooled dataset that includes surveys conducted in 2008, 2010, and 2012, during President Calderón’s intervention, when the yearly homicide rate was 20 per 100,000 habitants. This allows us to measure the absolute effect of victimization on approval, the relative effect of victimization as compared to sociotropic evaluations of security, and the difference in the effect of victimization on approval before and during Calderón’s policy intervention.

Since security issues are highly sensitive to specific events, we decided to use a pooled dataset for the intervention period, as opposed to selecting one of the available survey rounds for the period during the intervention. This allowed us to get a more robust estimation that would minimize any potential bias specific to the time a survey was conducted (such as a highly publicized arrest or a particularly deadly incident).

We consider our design to be more robust than that found in the existing literature in three significant respects. First, the design considers points in time before and after the policy intervention. This provides a comparative perspective and allows us to assess the effect that the policy intervention and the drastic changes in the security conditions have on the public’s executive approval evaluations regarding public security. Previous works, such as as Pérez 2013 and Romero 2013, present only results during the intervention, at a time of dismal security conditions.

Second, we explicitly account for potential endogeneity problems. There may be specific social, political, or demographic characteristics that make individuals more likely to become victims of specific crimes. These same variables may also be related to presidential approval, thereby generating biased estimators.

A third improvement in our test, as compared to Pérez 2013 and Romero 2013, concerns the nonindependence of some of the explanatory variables in the model. An individual’s assessment of public security is a necessary control variable to explain presidential approval, yet this assessment may well be affected, at least to some degree, by having been victimized. Ceteris paribus, we would expect that victims of crime would be less likely to support the incumbent. If this is the case, it will bias the coefficient estimates, since victimization is also an independent variable in the model.

To minimize these potential issues, we have combined a variety of methods in a three-step procedure. First, to improve our design in terms of causal inference, we balance our data using CEM. This method reduces the imbalance between the treatment and control groups that are being matched, decreasing model dependence.8 In our design, the treatment is defined as being the victim of a crime. Ideally, we would like to estimate, on average, how much having been the victim of a crime affects the likelihood of approving of a president in two otherwise identical individuals. Given the available data, this method is our best approximation of our ideal design.
We matched victims and nonvictims in the sample using CEM on the basis of two demographic characteristics (sex and age), their political predispositions (whether they identified with the president’s party), and their perception of the country’s economy. For the 2006 data, imbalance is reduced by 10.5 percent from $L = 0.532$ to $L = 0.476$. And for the 2008–12 pooled data, imbalance is reduced by 14.5 percent from $L = 0.516$ to $L = 0.441$.

In the second step, we minimize the potential endogeneity issues of our two core independent variables, victimization and sociotropic evaluation, on public security. To do so, we construct a variable that approximates performance evaluation and that has been “cleaned” from crime victimization. This variable is constructed from the residuals of an OLS regression model whose dependent variable is the performance evaluation on public security, and has victimization as the independent variable, such that

$$\text{Security performance}_i = \beta_0 + (\beta_1 \ast \text{Victimization}_i) = \gamma_i$$

$$\gamma_i = \text{Security performance}_i - \beta_0 - (\beta_1 \ast \text{Victimization}_i)$$

in which is our new security performance variable, which we label $\text{SecRes1}$.

In the third step, we specify a logit regression model weighted by the CEM weight and a set of covariates that control for the remaining imbalance between the treated (i.e., victims) and control (i.e., nonvictims) groups. Given the potential endogeneity problems of including multiple variables approximating different dimensions of security, we keep our model as parsimonious as possible. It is specified as

$$\Pr(\text{Approve}_i = 1 \mid X) = \frac{\exp(Z)}{1 + \exp(Z)},$$

in which

$$Z = \beta_0 + \beta_1 \ast \text{Victim}_i + \beta_2 \ast \text{SecRes1}_i + \beta_3 \ast \text{Eco}_i + \beta_4 \ast \text{Panista}_i + \beta_5 \ast \text{Woman}_i + \beta_6 \ast \text{Education}_i + \beta_7 \ast \text{Age}_i + \mu_i$$

The 2008–12 model includes year fixed-effects dummies and standard errors clustered by year to account for heterogeneity across rounds of the AmericasBarometer. $\text{Victim}$ is a dummy variable indicating whether the individual was the victim of a crime. The proportions of victims in the samples were 20.4 percent in 2006 and 22.1 percent in 2008–12.

$\text{SecRes1}$ is the instrumental variable described above that approximates sociotropic performance evaluations on public security. $\text{Eco}$ approximates the sociotropic assessment of the economy by the individual. $\text{Panista}$ indicates whether the interviewee identifies with the president’s party, the National Action Party (PAN). $\text{Woman}$ indicates the individual’s sex. Education measures school attendance in years. The age of the interviewee is measured in years, $\text{Age}$.

There are no substantive differences between these rounds of the AmericasBarometer; questionnaires, phrasing, and procedures are alike. Table 1 shows the regression output and, to facilitate interpretation, the marginal effects of each independent variable, $\text{ceteris paribus}$, when it varies from its minimum to its maximum.
That is, each marginal change cell shows the difference between the predicted value of the homicide rate when a given independent variable is set at its maximum minus the model’s predicted value when the same independent variable is set at its minimum, *ceteris paribus*.

We hypothesized that crime victimization would have a minor effect on approval in absolute terms and relative to other security determinants, and that such an effect should have decreased after Calderón’s policy intervention. We find evidence to support our claim.

<table>
<thead>
<tr>
<th>Table 1. Logit Regression Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
</tr>
<tr>
<td>Marginal Change</td>
</tr>
<tr>
<td>Coefficient (%)</td>
</tr>
<tr>
<td>SecRes1</td>
</tr>
<tr>
<td>(0.055)</td>
</tr>
<tr>
<td>-0.518***</td>
</tr>
<tr>
<td>(0.182)</td>
</tr>
<tr>
<td>0.602***</td>
</tr>
<tr>
<td>(0.134)</td>
</tr>
<tr>
<td>1.519***</td>
</tr>
<tr>
<td>(0.274)</td>
</tr>
<tr>
<td>-0.158</td>
</tr>
<tr>
<td>(0.164)</td>
</tr>
<tr>
<td>0.052**</td>
</tr>
<tr>
<td>(0.022)</td>
</tr>
<tr>
<td>-0.010</td>
</tr>
<tr>
<td>(0.007)</td>
</tr>
<tr>
<td>year2010</td>
</tr>
<tr>
<td>(0.016)</td>
</tr>
<tr>
<td>year2012</td>
</tr>
<tr>
<td>(0.008)</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>(0.447)</td>
</tr>
<tr>
<td>-1.000***</td>
</tr>
<tr>
<td>(0.373)</td>
</tr>
<tr>
<td>Pseudo R²</td>
</tr>
<tr>
<td>n</td>
</tr>
</tbody>
</table>

* p < .10; ** p < .05; *** p < .01
Standard errors in parentheses.
Note: Cell entries for marginal changes are differences between model predictions at the minimum and the maximum of each independent variable, *ceteris paribus*. Marginal changes are shown only for significant variables.
Having been the victim of a crime decreases the likelihood of approving of the president at the two points in time that we examine: before (2006) and during (2008–12) the policy intervention. The sizes of the likelihood reductions are 9.8 percent and 7.0 percent, respectively. Crime victimization’s absolute magnitude is not especially large. Suppose that the entire population of Mexico were the victim of a crime in a given year. In this catastrophic scenario, ceteris paribus, President Calderón’s approval would have decreased by only 7 percent. This is minimal, as punishment goes. To compare: Mexico’s December 1994 economic crisis caused President Ernesto Zedillo’s approval to plummet 46 percent in July 1995, as compared to the last month of president Carlos Salinas’s administration, November 1994.14

Similarly, the size of the effect of victimization relative to performance evaluation is small. For both periods, 2006 and 2008–12, the effect of victimization is about a fifth of the effect of security performance. The difference increased after the policy intervention, as was expected.

Tables 2a and 2b further illustrate the relative effects of these two variables. Using the model as predictor, we estimated the probability of approving of a president with different performance evaluations (minimum, maximum, and the mean) by victims and nonvictims of crime. We did this for time periods both before and after the intervention. We find a similar pattern for both time points: good perceptions of an executive’s performance secure high levels of approval, and that leader is hardly punished by victims of crime.

### Table 2. Model Predictions: Likelihood of Approving the President

<table>
<thead>
<tr>
<th>Performance Evaluation (%)</th>
<th>Minimum (worst)</th>
<th>Mean</th>
<th>Maximum (best)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victim</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>7.8</td>
<td>21.0</td>
<td>59.3</td>
</tr>
<tr>
<td>2008–2012</td>
<td>10.9</td>
<td>34.6</td>
<td>72.9</td>
</tr>
</tbody>
</table>

Note: Cell entries are model predictions for the combination of values of the independent variables in the axes, *ceteris paribus.*

<table>
<thead>
<tr>
<th>Performance Evaluation (%)</th>
<th>Minimum (worst)</th>
<th>Mean</th>
<th>Maximum (best)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonvictim</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>12.4</td>
<td>30.8</td>
<td>71.0</td>
</tr>
<tr>
<td>2008–2012</td>
<td>14.2</td>
<td>41.6</td>
<td>78.4</td>
</tr>
</tbody>
</table>
Sociotropic Performance Evaluation

For the second dimension of the study, sociotropic performance evaluation, we find a significant effect of citizen assessments of security on approval levels (table 1). The absolute size of the effect is substantively important. In February 2006, *ceteris paribus*, there was an average difference of 57.2 percent in the likelihood of approving of President Calderón between someone who completely disapproved of the job he was doing on public security and someone who fully approved of his performance on security. The difference increased to 63.8 percent by 2008–12, which was expected, as the salience of the security issue increased. Similarly, tables 2a and 2b show how the likelihood of approving of a president increases as sociotropic evaluations of security improve.

It is noteworthy that the effect of security on approval is considerably larger than the effect of economic performance. In 2006, before the intervention, the effect of the former was more than twice the size of the latter effect. The relative difference significantly increased during the intervention to a fourfold effect of security as compared to the economy during 2008–12 (see table 1). According to these results, citizens weigh security more heavily than they do the economy when they are judging the executive, even when the issue is not as salient, as was the case in 2006. Our results are in line with similar research, which has found that other issues, such as foreign policy (Nickelsburg and Norpoth 2000) or terrorism (Carlin et al. 2014), are at least as important as the economy in determining presidential approval.

We do not deem this a general result under all circumstances; context is important. Further research should work on the specific conditions under which one policy domain matters more than the other when explaining presidential approval.

Support for the Intervention

Our third security dimension examines citizens’ support for the security intervention itself. We inquire into its effects on approval and its relative impact as compared to crime victimization and sociotropic evaluations.

In our theoretical section, we hypothesized that in the context of high levels of public insecurity, citizens would reward a president for merely implementing a bold security policy. We also predicted that the relative magnitude of the effect on approval would be higher than the effect of other security dimensions.

We use data from a nationwide face-to-face survey conducted in Mexico during July 2011 (n = 2,700) by the Office of the Mexican Presidency. At the time the survey was conducted, violence in Mexico was at its peak.

In terms of the duration of citizens’ support for the intervention, the timing of the survey sets a tough test; at this time, performance evaluations were highly negative, and the war against organized crime had already lasted four-and-a-half years.

We did not use the AmericasBarometer dataset that we used in the previous analysis because it did not have a precise questionnaire item that approximated cit-
izens’ support of the government’s intervention against organized crime in Mexico. We replicate the regression models presented in the previous subsection as closely as possible, while adding the support for the intervention variable.

To approximate citizens’ support for the government intervention, we used a questionnaire item that asked, “Are you for or against President Calderón’s government’s fight against organized crime?” While the question is not precise regarding the specific form of intervention (e.g., use of the national army to fight drug-trafficking organizations), it actually helps to measure citizens’ overall support for Calderón’s fight against crime and the mere decision to fight a war.

President Calderón’s policies included the use of the national army, but also included many other aspects. A question focused on a military intervention, such as the one utilized in Romero 2013, would not address the policy intervention as such. Additionally, the military has been participating in fighting drug-trafficking organizations in Mexico at least since the 1970s.

We follow a three-step design, which is similar to the design in the previous analysis. In the first step we specify a CEM model to reduce imbalance between the treatment and control groups—defined by whether they were victims of a crime or not—using as covariates gender, age, identification with the president’s political party, and perception of the country’s economy. Imbalance is reduced by 17.5 percent, from $L_0 = 0.618$ to $L_f = 0.510_{15}$.

Then, in a second step, we minimize endogeneity problems caused by a potential causal relationship between victimization and the two security variables we analyze (support for the intervention and security performance). We suspect that direct experiences with crime will affect citizens’ assessments of presidential performance and their support for the intervention. The procedure to generate our instruments is identical to the one described for the models in table 1.

\[
\text{Security performance}_i = \beta_0 + (\beta_1 \ast \text{Victimization}_i) + \tau_i \\
\tau_i = \text{Security performance}_i - \beta_0 - (\beta_1 \ast \text{Victimization}_i)
\]

in which $\tau_i$ is our instrumented security performance variable. We label it $\text{SecRes}2$.

And, for the case of support for the intervention,

\[
\text{Support for the intervention}_i = \beta_0 + (\beta_1 \ast \text{Victimization}_i) + \omega_i \\
\omega_i = \text{Support for the intervention}_i - \beta_0 - (\beta_1 \ast \text{Victimization}_i)
\]

in which $\omega_i$ is our new support for the intervention variable. We label it $\text{SecIntRes}$.

In the third step we specify a logit regression model in which presidential approval is the dependent variable. The independent variables are similar to those that we use in the models in table 1: Woman, Education, Age, Panista, and the sociotropic assessment of the economy ($\text{Eco}$). Because of the design of different questionnaires, our proxy for security performance changes a bit with respect to the previous models. In this model it is a retrospective assessment of public security, as compared to the previous year.
The model is weighted to adjust the sample to population parameters by type of locality (urban or nonurban) and the number of homicides related to drug-trafficking organizations at the municipal level.16

Table 3 shows the regression output and the marginal change in the likelihood of approving of the president when every variable changes from its minimum to its maximum, while holding everything else constant.

The model’s results square with the two previous models that we had specified using data from the AmericasBarometer for 2006 and 2008–12.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Marginal Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SecRes2</td>
<td>0.426***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.093)</td>
<td>21.3</td>
</tr>
<tr>
<td>Victim</td>
<td>–0.250</td>
<td>–6.2</td>
</tr>
<tr>
<td></td>
<td>(0.156)</td>
<td></td>
</tr>
<tr>
<td>SegIntRes</td>
<td>0.514***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.090)</td>
<td>47.4</td>
</tr>
<tr>
<td>Eco</td>
<td>0.273***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.090)</td>
<td>13.2</td>
</tr>
<tr>
<td>Panista</td>
<td>1.44***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.228)</td>
<td>31.1</td>
</tr>
<tr>
<td>Woman</td>
<td>0.078</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.160)</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.022</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.025)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>–0.637**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.408)</td>
<td></td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.158</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>2,471</td>
<td></td>
</tr>
</tbody>
</table>

* p < .10; ** p < .05; *** p < .01
Standard errors in parentheses.
Note: Cell entries for marginal changes are differences between model predictions at the minimum and the maximum of each independent variable, *ceteris paribus*. Marginal changes are shown only for significant variables.
The size of the victimization coefficient is similar to previous models, yet not significant in this model (just at 0.109). Victimization is the least relevant security dimension to determine presidential approval.

The marginal effect of security performance is larger than the effect of economic performance, although the size of the difference varies. Such differences may be caused by the difference in how public security performance is measured in both surveys, by having added the support for the security intervention variable, and by the different timing of the surveys. We see no reason for concern regarding these variations, since the overall picture is basically the same.

This result—that the marginal effect of security performance is larger than the effect of economic performance—is a significant contribution to our understanding. It also differs from the findings of Romero 2013, which had no control for endogeneity and therefore underestimated the effect of support for the intervention in regard to the economy.

Our findings have other relevant implications. First, the variable that approximates citizens’ support for the security intervention continued to have a strong effect on approval years after the war on drugs began. Four-and-a-half years later, in the summer of 2011, the likelihood of approving of President Calderón had increased, on average, by 47.4 percent among citizens who endorsed the government’s policy intervention against organized crime as compared to those who did not support the intervention (controlling for partisanship). This shows significant resilience for this sort of support.

A potentially problematic issue is how to distinguish empirically between agreement with a policy intervention and the performance evaluation related to the same policy. It should be noted, however, that these two variables are not as closely related as they might seem at first glance, at least for the case that we examine here. The numbers are quite different: a massive 85 percent of the population either favors or strongly favors the government intervention against organized crime, yet only 35 percent of citizens approve of the executive’s performance on security. The Spearman correlation coefficient between these two variables is significant but small in magnitude, only 0.18.17

Table 4 shows the model’s predictions for different scenarios of the three security variables. Note that even if a citizen has been the victim of a crime and has the worst possible opinion of the government’s performance on security issues, if that citizen supports the intervention, the executive still has a 54.5 percent chance of approval by this person (lower left cell in table 4a). This can be an excellent scenario for a president. Yet this strong effect operates both ways. If support for the intervention is at its minimum, even if an individual has not been the victim of a crime and that person has an excellent perception of the government’s performance on security, the best that a president could hope for is a 30.8 percent chance of approval (upper right cell in table 4b).

In this particular context, a president who does not have at least an average level of support for a security intervention cannot realistically aspire to high approval levels. Furthermore, if the policy intervention attracts very low support, then an
## CONCLUSIONS

The aim of this study has been to analyze how different security issues affect a citizen’s approval of the chief executive. Given the recent wave of crime and violence in many nations all over the world, but especially in Latin America, this is a key issue to understand. As public security becomes a high-profile issue, presidents become the main figures responsible in the eyes of the public for fighting crime.

Our evidence shows that public security matters when attempting to explain presidential approval. In the specific contexts analyzed here, security issues weigh in citizens’ minds more heavily than partisanship or even the economy when determining presidential approval.

Of the three security dimensions on which the analysis focused, support for the policy intervention is the dimension that most matters to determine approval of the president. Given the complex nature of security in terms of public opinion, a strong positioning by the chief executive is highly rewarded, even more than performance itself.

### Table 4. Model Predictions: Likelihood of Approving the President

<table>
<thead>
<tr>
<th>(a) Victim</th>
<th>Performance Evaluation (%)</th>
<th>Minimum (worse)</th>
<th>Mean</th>
<th>Maximum (better)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Support</td>
<td>Minimum (no support)</td>
<td>12.5</td>
<td>17.2</td>
<td>25.1</td>
</tr>
<tr>
<td>Mean</td>
<td>43.6</td>
<td>52.8</td>
<td>65.2</td>
<td></td>
</tr>
<tr>
<td>Maximum (full support)</td>
<td>54.5</td>
<td>63.5</td>
<td>74.4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b) Nonvictim</th>
<th>Performance Evaluation (%)</th>
<th>Minimum (worse)</th>
<th>Mean</th>
<th>Maximum (better)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Support</td>
<td>Minimum (no support)</td>
<td>15.5</td>
<td>21.0</td>
<td>30.8</td>
</tr>
<tr>
<td>Mean</td>
<td>49.8</td>
<td>58.9</td>
<td>70.6</td>
<td></td>
</tr>
<tr>
<td>Maximum (full support)</td>
<td>60.6</td>
<td>69.1</td>
<td>78.9</td>
<td></td>
</tr>
</tbody>
</table>

Note: Cell entries are model predictions for the combination of values of the independent variables in the axes, *ceteris paribus.*
We find that the impact on approval of having been the direct victim of crime is substantively small, especially as compared to support for the intervention and performance evaluation. The impact of victimization on approval is a contentious issue in the literature. We have used a more robust specification than existing work in the literature to contribute to a better understanding of how crime victims behave.

Our work contributes to and expands on existing works on the literature, especially Romero 2013, theoretically and empirically. Empirically, we correct for potential endogeneity problems and we consider points in time before and during the policy intervention, which allows us to assess the effect that the intervention has on security-related approval evaluations. Romero 2013 considers only a point in time during the intervention. We show that sociotropic evaluations of public security increased approval and evaluations of the economy decreased approval, a substantive point not addressed in previous works.

Moreover, Romero 2013 and Pérez 2013 are empirical works that do not really have a theory that explains how public security issues affect presidential approval. Theoretically, this article goes further and develops an explicit theory explaining the effect of three specific security dimensions on approval: sociotropic evaluations, support for a security intervention, and direct victimization. This is a significant contribution to our knowledge of the circumstances under which citizens reward and punish executives for their performance on public security.

The overall findings explain the apparent divergence between poor security conditions and President Calderón’s relatively high approval ratings. Citizens rewarded the executive for publicly making the effort of fighting criminal organizations while they punished him relatively less for the deteriorating security conditions in the country.

These results have significant implications for Mexico and other countries in Latin America facing a similar situation. Improving security conditions takes time and resources, which, in turn, require significant citizen support. Bold policy interventions seem to induce citizens to support executives to a higher degree than actual performance and crime victimization. This implies that an executive would have incentives to put security high on the agenda, if it is considered it to be a pressing issue.

Nevertheless, there are also negative implications. These results imply an incentive structure in which presidents would be more inclined to invest political capital and money to conduct actions that emphasize their willingness to fight crime, instead of focusing on actually curbing crime. Presidents would be more inclined to work on managing public opinion than on delivering actual results. If a mere policy intervention is valued above performance, there are incentives for “grand gestures” and short-term but high-impact actions—such as the arrest of famous drug lords—rather than low-profile policies to curb crime and violence, such as work to improve communities’ social capital. This is clearly not optimal from a citizen’s point of view, as it limits accountability. Tragically, citizens involuntarily may induce this sort of result by providing a president with the wrong incentives.
### APPENDIX: DESCRIPTION OF VARIABLES

Table 5. Surveys 2006 and 2008–2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval</td>
<td>0.35</td>
<td>0.48</td>
<td>0</td>
<td>1</td>
<td>Regarding the incumbent government, in general, would you say that the work being done by President Vicente Fox/Felipe Calderón is: very good, good, neither good nor bad, bad, or very bad?</td>
</tr>
<tr>
<td>SecRes1</td>
<td>−0.00</td>
<td>1.74</td>
<td>−2.66</td>
<td>3.96</td>
<td>To what extent would you say the current government improves citizen security?</td>
</tr>
<tr>
<td>Victim</td>
<td>0.20</td>
<td>0.40</td>
<td>0</td>
<td>1</td>
<td>Have you been a victim of any type of crime in the past 12 months?</td>
</tr>
<tr>
<td>Eco</td>
<td>1.8</td>
<td>0.65</td>
<td>1</td>
<td>3</td>
<td>Do you think that the country’s current economic situation is better than, the same as, or worse than it was 12 months ago?</td>
</tr>
<tr>
<td>Panista</td>
<td>0.16</td>
<td>0.37</td>
<td>0</td>
<td>1</td>
<td>Which political party do you identify with?</td>
</tr>
<tr>
<td>Woman</td>
<td>0.50</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>8.8</td>
<td>4.2</td>
<td>0</td>
<td>18</td>
<td>What was the last year of education you completed?</td>
</tr>
<tr>
<td>Age</td>
<td>37.4</td>
<td>14.2</td>
<td>18</td>
<td>86</td>
<td>What is your age in years?</td>
</tr>
</tbody>
</table>

Note: Upper figures come from the 2006 survey, lower figures from the 2008–12 survey.
Source: LAPOP
Table 6. 2011 Survey

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval</td>
<td>0.58</td>
<td>0.49</td>
<td>0</td>
<td>1</td>
<td>In general, do you approve or disapprove of the job President Felipe Calderón is doing?</td>
</tr>
<tr>
<td>SegIntRes</td>
<td>0.09</td>
<td>1.03</td>
<td>-3.28</td>
<td>0.86</td>
<td>Are you for or against President Calderón’s government fight against organized crime?</td>
</tr>
<tr>
<td>SegRes2</td>
<td>0.08</td>
<td>0.90</td>
<td>-0.87</td>
<td>1.21</td>
<td>If you compare the current public security situation in the country with public security a year ago, would you say that now it is much better, better, worse, or much worse?</td>
</tr>
<tr>
<td>Victim</td>
<td>0.47</td>
<td>0.49</td>
<td>0</td>
<td>1</td>
<td>Have you been a victim of any type of crime in the past 12 months?</td>
</tr>
<tr>
<td>Eco</td>
<td>1.79</td>
<td>0.85</td>
<td>1</td>
<td>3</td>
<td>If you compare your current economic situation to a year ago, would you say that now it is much better, better, worse, or much worse?</td>
</tr>
<tr>
<td>Panista</td>
<td>0.23</td>
<td>0.42</td>
<td>0</td>
<td>1</td>
<td>Independently of your voting choice, which political party do you identify with?</td>
</tr>
<tr>
<td>Woman</td>
<td>0.50</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>6.11</td>
<td>3.33</td>
<td>1</td>
<td>12</td>
<td>What was the last year of education you completed?</td>
</tr>
<tr>
<td>Age</td>
<td>39.94</td>
<td>16.00</td>
<td>18</td>
<td>99</td>
<td>What is your age in years?</td>
</tr>
</tbody>
</table>

Source: Office of the Mexican Presidency 2011

Notes

We are grateful for the insightful comments we received from Ryan Carlin, Austin Hart, Chappell Lawson, Benjamin Lessing, Alexandra Uribe, and participants at the 2013 American Political Science Association and 2014 Midwest Political Science Association annual meetings. We would like to thank the four anonymous reviewers for their helpful comments and suggestions. We acknowledge support from the Poverty and Governance Program at the Center on Democracy, Development, and the Rule of Law (CDDRL) at Stanford University. Vidal Romero also thanks the Asociación Mexicana de Cultura A.C. and the Sistema Nacional de Investigadores of Conacyt. Details of the research design and data can be found in the online appendix, http://goo.gl/sFu1Dp.

1. For reviews of the literature on presidential approval see Norpoth et al. 1991; Gronke and Newman 2003; Berlemann and Enkelmann 2012.
2. It should be noted that crime incidence and the nature of criminal violence in Mexico vary widely by locality and region. There are no data at the local level, however, that would allow us to test our hypotheses.

3. The AmericasBarometer is published by the Latin American Public Opinion Project (LAPOP). We thank the Latin American Public Opinion Project and its major supporters (the United States Agency for International Development, the Inter-American Development Bank, and Vanderbilt University) for making the data available.

4. Although the effect we describe has some analogous elements to the “rally ’round the flag” effect (Mueller 1973), there are significant differences between interstate and intrastate wars that must be considered. We leave this point for future research. We thank the anonymous reviewers for pointing out this issue.

5. See Bailey 2014; Guerrero 2013; Osorio 2013; and Ríos 2012 for different narratives and explanations of the Mexican war on drugs.


7. We thank Rafael Giménez and Lorena Becerra for granting access to the data.

8. For a detailed description of CEM, see Condra and Shapiro 2012; Iacus et al. 2012.

9. See the complete CEM output in the online appendix.

10. See the online appendix for the regression output.

11. To verify potential differences among the surveys included in the pooled data model, we replicated the model for each of the three rounds in the online appendix. The few differences among models may be explained by context-specific events at the time the survey was conducted. The pooled data model reduces the impact on the estimators of such short-term effects, which are not the focus of this paper.

12. There might be some underreporting in our victimization data for the 2008–12 period, such as survey data on crime victimization. For different reasons (e.g. fear), people may choose not to report being the victim of a crime when interviewed. However, this is an issue that we cannot verify in an uncontroversial manner. Also, we cannot disaggregate by the specific type of crime because the sample size does not allow us to include this in our models.

13. See the appendix, tables 5 and 6, for descriptive statistics and the phrasing in the questionnaire.

14. The November 1994 survey conducted by the Office of the Mexican Presidency reported a 77 percent approval for Salinas, and the Reforma newspaper survey of June 1995 reported only 31 percent approval for Zedillo.

15. See the complete CEM output in the online appendix.

16. The original survey sample has an equal number of cases in three categories of municipalities by number of homicides. The first group considers the first three quartiles in the distribution of homicides; the second group considers the last quartile, except by the top .02 percent of localities in which the distribution clearly changes. The weight adjusts the sample to the population parameters.

17. One way to think about it is support for a football team. An individual can strongly support team X and simultaneously believe that team X had a lousy performance in a specific game.
REFERENCES


SUPPORTING INFORMATION

Additional supporting materials may be found with the online version of this article at the publisher’s website:

1. Online Appendix