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Matthew S. Ribel April 8, 2018

Seeking Rents and Taking Names: Exploring the Nexus Between State Institutions, Public Good Provision, and Organized Crime

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Abstract

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Since the Great Recession of 2008, organized crime groups across the globe have expanded aggressively, capitalizing on the insecurity engendered by crippling austerity measures (Naim 2012). This troubling trend warrants a re-examination of the root causes of organized crime, a question which has remained largely unanswered for over five decades. For many years, the root of organized crime's existence was assumed to be prohibitions on vicious goods and services, or alternatively, sluggish economic conditions pushing impoverished groups to engage in crime out of financial desperation (Lotspeich 1995; Phongpaichit, Piriyarangsan, and Treerat, 1998; Rawlison 1998; Sutton 2000; Sung 2004). More recently, scholars have reframed the issue of as one that originates with power vacuums, centering their analyses around unmet demand for security in the face of an absentee or predatory state (Bandiera 2003; Konrad and Skaperdas 2010; Skaperdas 2001). Due to data limitations, few studies have assessed these theories cross-nationally, limiting the generalizability of existing scholarship (Sung 2004). In this thesis, I seek to provide causal clarity, empirically testing the explanatory power of these competing theories with a first-of-its-kind panel analysis spanning 150 countries and ten years (2007 – 2017). Further, I employ instrumental variable regression to mitigate endogeneity between institutional variables and organized crime power. Panel regressions indicate a strong relationship between the state's ability to enforce private property rights and contracts and the presence of organized crime, though it appears that trust in state institutions is the most powerful predictor of organized crime's reach in a state. On the contrary: prohibition, supply-side economic variables, and level of economic development do not have any appreciable effect on organized crime. These findings have significant implications for our understanding of how organized crime groups thrive, and should encourage policymakers to stop conceptualizing these groups merely as providers of vicious goods, and begin conceptualizing them as a direct competitor with the state in the provision of public goods. Governments should move away from strategies built solely around interdiction, and instead take steps to reduce insecurity, address institutional deficiencies, and fill holes in the social safety net.

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Table of Contents

Table of Figures

Introduction

Since the Great Recession of 2008, organized crime groups across the globe have expanded aggressively, capitalizing on the insecurity engendered by crippling austerity measures (Naim 2012). This troubling trend warrants a systematic re-examination of the root causes of organized crime growth. Without a clear understanding of *why* organized crime groups gain power, interdiction is little more than a fool's errand. Since antiquity, organized crime groups have vexed state authorities, providing the body politic with in-demand goods and services, deploying intimidation and violence, and otherwise undermining the rule of law. Yet, despite the enduring nature of this battle, effective countermeasures remain sparse. Organized crime groups (OCGs) do not emerge in isolation, and scholars must take empirical steps to understand what sort of environments are favorable to the growth of illicit organizations. For decades, academics have sparred over the answer to a fundamental question: *why do organized crime groups come into existence, and why do they exist across such a vast array of countries*? After half a century of scholarly inquiry, consensus remains elusive.

For decades, economists dominated this area of inquiry, largely focusing their attention on criminal firm behavior, illicit market structure, and formal incentive modeling (Backhaus 1979; Buchanan 1974; Fijnaut 1990; Jennings 1984; LaLumia 1981; Lavezzi 2008; Reuter and Rubinstein 1983; Schelling 1971). Generally speaking, these scholars were less concerned with *what begets organized crime* and more concerned with *what organized crime begets*. For many years, the root cause of OCG emergence was taken as a given: prohibitions on certain goods created a black market for their sale and acquisition. More recently, a divergent group of sociologists and economists have offered up supply-side "economic failure" theories of organized crime, which assert that sluggish economic conditions push impoverished groups to engage in economic crime (Lotspeich 1995; Phongpaichit, Piriyarangsan, and Treerat, 1998;

Rawlison 1998; Sutton 2000; Sung 2004). Economic failure theories are underwhelming insofar as they fail to reckon with significant qualitative differences between membership in the worlds of "ordinary" economic crime and organized crime. The costs to enter organized crime are substantially higher due to initiation rites, trials, and oath-taking, and membership thereby should be relatively inelastic with respect to underlying economic conditions (Bahney et al. 2013; Berman 2011; Milhaupt and West 2000; Shapiro 2013). At the same time, prohibition-based theories are difficult to reconcile with the realities of organized crime: over half of OCG income originates from banal "gray area" activities, such as personal protection, property rights enforcement, contract enforcement and dispute resolution, financial services, and supply chain assurance (Konrad and Skaperdas 2010; Milhaupt and West 2000; Shinar 2016; Skaperdas 2001; Sokolov 2004).

Over the past two decades, these theoretical deficiencies have sparked renewed interest in the demand-side determinants of organized crime. Scholars have reframed the issue as one that is about *power vacuums* above all else, re-focusing their attention on unmet demand for security in the face of an absentee or predatory state (Bandiera 2003; Konrad and Skaperdas 2010; Skaperdas 2001). This academic faction argues that organized crime is an entrepreneurial response to vacuums, or inefficiencies, in state institutions, and OCGs fill the void due to their unique ability to solve collective action problems (Milhaupt and West 2000; Skaperdas 2001; Sokolov 2004). Qualitative country-specific case studies have lent credence to these power vacuum theories (Bandiera 2003; Belokurova 2018; Berrittella 2018; Milhaupt and West 2000; Naim 2012; Shinar 2016; Skaperdas 2001; Sokolov 2004; Sung 2004; Varese 2001; Volkov 1999); however, few scholars have made any effort to test these theories cross-nationally, limiting the generalizability of existing scholarship (Sung 2004). In large part, data limitations

are to blame for this. Measuring the extent of illicit activity is notoriously difficult, particularly in states with weak intelligence and law enforcement apparatuses.

In this thesis, I seek to a) add new empirical weight to power vacuum theories of organized crime proliferation; and b) re-assess the merit of older prohibition and economic failure theories. Leveraging organized crime data from the World Economic Forum (WEF) Executive Opinion Survey, I seek to answer the following question: *to what extent does low state capacity create environments favorable to organized crime growth?* The WEF *organized crime perception* measure has impressive coverage, spanning 150 countries and ten years (2007 – 2017). It also contains substantial country-to-country variation, which allows us to conduct a first-of-its-kind panel analysis. Panel regression has the potential to generate highly generalizable inference about the institutional determinants of organized crime growth. Given the cataclysmic political and economic dynamism following the global economic crash of 2008, the study of the decade that immediately followed has significant implications for our understanding of how non-state governance entities emerge when governments abrogate commitments to their citizenry.

Conceptualizing "Organized Crime"

Historically, scholars have struggled to study organized crime groups (OCGs). By very nature of these groups being illicit, estimating group membership, group influence over legitimate actors, and size of criminal coffers is uniquely challenging. Beyond these empirical hurdles also lies a fundamental disagreement over the concept of *organized crime*, and what the term actually means. Academics have struggled even to agree on what the unit of analysis should be (Arsovska 2014)—is "organized crime" the process of committing crimes, the type of crime committed, or the type of criminal or group?

Nonetheless, the foremost obstacle to consensus has been forging agreement over what it means to be "organized." Most crime committed as a group is "organized" in some sense of the word, but a strong and readily-operationalizable definition must draw a nuanced distinction between *organized crime* and *crime that is organized* (Arsovska 2014). Take for example a group of small-time suburban burglars who deal in petty larceny—stealing jewelry and appliances from vacant homes. This band of thieves presumably coordinates action between members. Perhaps they even employ the skills of criminal specialists with backgrounds in reconnaissance, lockpicking, and escape planning. Despite the cooperative nature of this group, few would regard such an operation as organized crime, *per se*.

Fijnaut (1990) offers a survey of the three prevailing conceptualizations of the term. The first of these frameworks harkens back to the burglary hypothetical—*professional crime as organized crime*. Professional criminals are often "organized" in the sense that the criminal underworld is connected through social assemblages, ethnic ties, and other informal mechanisms that ensure reciprocity and facilitate cooperation. Likewise, members of these circles are often bound by unwritten and written rules and share unique histories, traditions, customs, and forms of tradecraft. The second usage of "organized crime"—*white-collar crime as organized crime*—

has gained some popularity in North America over the last three decades, but still remains outside of the academic mainstream. This definition refers to the practice of persons involved in legitimate organizations, such as financial institutions, using available licit instruments to contribute to illicit modes of capital accumulation (Santino 1988). Few academics have adopted this conceptual orientation. The third view of organized crime, and by far the most common, is that which refers to the *criminal syndicate*—a type of criminal firm that supplies goods and services. These groups are enduring, hierarchical organizations comprised of operatives who engage in illegal activity for financial gain. These operatives generally, though not always, deploy violence to achieve these economic ends.

It was not until the 1990s that intergovernmental organizations like the United Nations (UN) began to forge some semblance of definitional consensus among experts. For the purpose of this thesis, I will adopt the comprehensive definition presented by the UN in the 1997 *Framework Convention Against Transnational Organized Crime*, which expands upon Fijnaut's third framework:

> *[Organized crime entails] group activities of three or more persons, with hierarchical links or personal relationships that enable their leaders to earn profits or to control territories or markets, internal or foreign, by means of violence, intimidation, or corruption, in both furthering criminal activity and infiltrating the legitimate economy, in particular by the following means: illicit traffic in narcotic drugs or psychotropic substances, and money-laundering; traffic in persons; counterfeiting currency; illicit traffic in or the theft of cultural objects; the theft of nuclear material; terrorist acts; illicit traffic in arms and explosive materials or devices; illicit traffic in or the theft of motor vehicles; and the corruption of public officials* (Arsovska 2014, 2).

This conceptualization is versatile and inclusive, concisely capturing oft-distorted realities of organized crime—namely that a) the portfolios of these organizations are often diversified, and some activities blur the line between illicit and licit; and b) most criminal organizations are not sprawling transnational groups, but rather small, local cells, many of which dabble in "grey area"

(or wholly legitimate) commercial activities (Fijnaut 1990; Milhaupt and West 2000; Reuter 1995; Skaperdas 2001).

Historically, a significant definitional hurdle has been the problem of regional variation. The "brand" of organized crime varies substantially from country to country, and even locality to locality, largely because organized crime activities are shaped by local factors. On the surface, organized crime in Lagos may look substantially different from organized crime in Tijuana. For this reason, scholars should steer clear of ostensive definitions, many of which have been influenced by popular media portrayals and tend to be "mafia-centric." The UN definition, on the other hand, makes clear that whether an organization resembles a Mexican drug cartel, a Nigerian terrorist organization, the Calabrian 'Ndrangheta, or a small group of Italian-Americans mobsters dealing in municipal sanitation contracts, all of these groups are bound by *at least* one common thread: they exhibit firm behavior and possess rational economic end-goals (Fijnaut 1990; LaLumia 1981; Lavezzi 2008). When working with cross-national organized crime data—and trying to maximize generalizability—an inclusive definition that focuses on shared behavioral and structural characteristics, rather than outward appearances, is essential.

Criminal Group Behavior & Illicit Market Foundations

Common Modes of Revenue Generation

"*What is the business of organized crime*?" asks Schelling (1971) in his seminal article of the same title. Schelling notes that at the time, it had "become widely accepted that the business of organized crime is to provide the public with illicit goods and services like bets, narcotics, sex out of wedlock and unregulated loans" (1971: 643). Until quite recently, scholars have focused primarily on salacious criminal activity—gambling, loan sharking, racketeering, drug and alcohol provision, prostitution, theft, arson, smuggling, and counterfeiting (Jennings 1984). Given the dominance of American scholars in this field, it is no surprise that "traditional" illicits have been the main focus (Backhaus 1971; Buchanan 1974; Koivu 2017; Reuter 1995; Reuter and Rubinstein 1983; Ruth 1967; Schelling 1971). Throughout the 20th century, romanticized media portrayals of Italian-American crime families, as well as intermittent political panics about the growing power of urban mobsters, captured the American public, seeding salacious narratives deep into the country's popular imagination (Albanese 1988; Fijnaut 1990). Certainly, these conceptions were not entirely fictive. Throughout the Prohibition Era of the 1920s, American organized crime groups maintained a stranglehold over the manufacturing, transport, and sale of bootlegged alcohol (Nelli 1976). Likewise, the administration of illegal gambling in the United States was long dominated by organized crime syndicates, and for many years, made up the lion's share of their income and sociopolitical influence (Reuter and Rubenstein 1983). Some have remarked that groups at the time were so skilled in running these gambling rings—and had developed such remarkable synergies with their other operations—that they held a competitive advantage over legitimate "overworld" bookkeepers (Schelling 1971).

Despite the prominent role that conventionally illegal activities played in generating OCG revenues, American groups have also been heavily involved in less black-and-white forms

of illegality. In some cases, powerful groups moved entirely out of the direct provision of illicit goods and services. In the 1960s, *La Cosa Nostra*—the Italian-American Mafia—opted to move exclusively into the business of providing services to other illicit organizations, including contract assurance and dispute resolution (Reuter 1995; Skaperdas 2001). Further, for much of the 20th century, organized criminals maintained strong ties to labor unions, and very rarely have scholars discussed at length the role that American gangsters played in facilitating labor peace in times of worker unrest. In reality, this was one of the most lucrative modes by which OCGs extracted rents (Donnelly 2003; Koivu 2017; Ichniowski and Preston 1989; Ruth 1967).

Despite the relative skill of OCGs in providing illicit goods and services, and despite the common belief that these are the sole dominion in which criminal groups dabble, roughly half of all worldwide organized crime revenue comes from activities that are not *explicitly* illegal (Milhaupt and West 2000). These so-called "gray area" activities are often quite banal—including personal protection, private property rights enforcement, contract enforcement, supply chain assurance, and basic financial services (Konrad and Skaperdas 2010; Milhaupt and West 2000; Skaperdas 2001; Shinar 2016; Sokolov 2004). Many would consider these services to be essential functions of the state, and indeed, 21st century scholars have noted that a significant proportion of OCGs engage in some sort of public good provision. This phenomenon has been documented qualitatively in a number of country-specific contexts across multiple continents (Bandiera 2003; Finckenauer and Voronin 2001; Koivu 2017; Mehlum, Moene, and Torvik 2003; Milhaupt and West 2000; Shinar 2016; Skaperdas 2001; Sokolov 2004). In these cases, OCGs fill institutional voids that result from low state capacity, poor institutional design, and in some cases, deliberate neglect. Post-Soviet Russia offers an instructive case study. Scholars have contended that following the collapse of the Soviet Union and subsequent ouster of its communist regime, OCGs propped up the fledgling Russian private sector (Alexeev, Gaddy, and

Leizel 1995; Belokurova 2018; Finckenauer and Voronin 2001; Milhaupt and West 2000; Shinar 2016; Sokolov 2004; Varese 1994; Volkov 1999). As the Russian economy underwent a period of rapid liberalization in the early 1990s, and the fragile state had scant institutions to protect newfound rights, OCGs filled the void, providing critical contract enforcement and protective services.

Similar forays into public good provision have been documented elsewhere, and the following examples are by no means exhaustive. ‘Ndrangheta, a vast Calabrian mafia network, originated as a means of defending impoverished feudal serfs against abusive rentiers when the fractured Italian state could not (Blok 1988; Nicasio and Lamothe 1995). Heger and Jung (2017) have noted the role that militant organizations—many of which can be considered OCGs—across the world have played in providing public services to local populations. Militant extremist groups like Hezbollah and Hamas have been known to operate hospitals and other facets of critical infrastructure, fund and maintain public educational institutions, and engage in other sorts of philanthropy. Similarly, Pablo Escobar and other leaders of the Medellin Cartel were renowned for their community work, providing housing to the impoverished, constructing dozens of recreational facilities, and erecting clinics throughout conflict-ravaged regions of Colombia (Skaperdas 2001). There are several reasons that an OCG may choose to pursue such activities. Some of these, such as the provision of protection, are directly profitable—clients exchange money for a gray area service. Alternatively, more altruistic forms of provision can be used to curry legitimacy among the public, as well as favor with government officials (Heger and Jung 2017). Ultimately, these reputational benefits are a boon to the organization’s bottom line, reducing transaction costs and increasing the size of their client base (Grillo 2016; Skaperdas 2001).

Defining Behavioral Characteristics

Before discussing why organized crime persists, we must first understand how these groups operate. The following behavioral and organizational features are considered to be near-universal among OCGs.

Pursuit of Monopoly: One idea that has held firm over many decades of academic inquiry is that the pursuit of monopoly, or *exclusivity*, is a defining feature of organized crime groups—one that distinguishes them from run-of-the-mill "group crime" (Backhaus 1979; Buchanan 1974; Jennings 1984; LaLumia 1981; Milhaupt and West 2000; Reuter and Rubinstein 1983; Schelling 1971). While a group of burglars may seek to coordinate their activities in a way that maximizes profit, they *do not* generally seek the dominate the criminal underworld and become a monopolistic provider.

Though scholars previously identified a competitive advantage in efficiency as the reason for OCG dominance in the American gambling scene, Schelling (1971) argues that these organizations were not particularly good at providing gambling services. Rather, they were uniquely skilled at suppressing rival services in order to maintain monopoly. This has been echoed in recent years: violence and intimidation are essential components of the OCG toolkit, particularly if the group's business model requires control over territory or a captivate base of consumers (Koivu 2017; Konrad and Skaperdas 2010). Organized crime groups possess several incentives to pursue market dominance, and these largely mirror the incentives of licit corporations. With increasing size and market share, illicit commercial organizations can achieve economies of scale, reducing marginal production costs and maximizing profits (Backhaus 1979). Likewise, monopoly allows these criminal groups to act as price makers rather than price takers. When these monopolists deal in the trade of price-inelastic goods, such as highly

addictive narcotics, they can continue to artificially inflate prices ad infinitum without significant drops in demand.

Buchanan (1974) argues, perhaps controversially, that this pursuit of criminal monopoly is a normative good. Ordinary "licit" monopolies are socially inefficient because monopolists generally create artificial scarcity for the purpose of profit maximization. It follows that illicit monopolies should be socially desirable, constricting the size of the market for dangerous goods and services. While this may hold true in the trade of some goods, it seems less plausible in markets where goods are price-inelastic. Higher prices at the whim of the monopolist will do little to depress demand in these cases, and the only party worse-off is the consumer. Likewise, there is no clear social upside to monopoly in the market for personal and property protection. Protective monopoly diminishes disincentives for the "protector" to deploy violence indiscriminately, and encourages excessive violence when groups compete for the monopolization of turf (Skaperdas 2002).

Alliances with "Respectables": Academics have extensively documented the symbiotic relationship between organized criminals and corrupt members of the "overworld" (Berrittella 2018; Buscaglia and Van Dijk 2003; Daniele 2009; Dintino and Martens 1981; Donnelly 2003; Fijnaut 1990; Finckenauer and Voronin 2001; Koivu 2017; McIllwain 1999; Milhaupt and West 2000; Naim 2012; Neanidis, Rana, and Blackburn 2017; Reuter 1995; Ruth 1967; Shelley 1995; Skaperdas 2001; Sokolov 2004; Van Dijk 2007). Ruth (1967) explains that OCGs seek out alliances with "respectables" for intuitive reasons: these ties to officials, business leaders, and members of the legal apparatus facilitate group longevity and provide a competitive advantage against other groups. By enlisting the help of legitimate officials, OCGs are able to lower their risk of apprehension or prosecution by authorities, thereby reducing transaction costs significantly. These corrupt relationships can run quite deep, facilitated by endemic cultural

norms. In his analysis of the evolution of the Sicilian Mafia, Catanzaro (1985) notes the role that a longstanding local culture of *instrumental friendship* played in promoting the growth of this group, facilitating cooperation between government officials and local crime bosses. A similar culture existed within early 20th century American cities with significant European immigrant populations. In 1920s Chicago, thousands of mourners turned out to pay their respects to the late Vincenzo "Diamond Jim" Colosimo, leader of the Chicago Outfit. Colosimo built up an expansive criminal empire throughout the early 20th century, dominating local prostitution and gambling markets. He was known far-and-wide as a career criminal—but nonetheless, his pallbearers included three federal judges, nine city aldermen, an assistant state's attorney, two members of Congress, a state senator, three prominent physicians, and the most prominent members of the Chicago Opera Company (McIllwain 1999).

The nature of these relationships is complex, but they can often be characterized as the product of mutual financial benefit. In many developing states, criminals either hold positions within the government, or have taken over the operations of legal businesses, which can complicate efforts to distinguish the geopolitical motives of the state from the profit motives of OCGs. Naim (2012) terms these *mafia states*, citing Bulgaria, Guinea-Bissau, Montenegro, Myanmar, Ukraine, and Venezuela as prominent examples. It appears that this phenomenon is largely confined to weak states with poorly-developed or non-existent democratic institutions; however, organized crime control over legitimate *enterprise* is not unique to the developing world, nor is it unique to the past century. For generations, the Calabrian mafia exerted near-complete control over most legitimate industries, including construction, financial services, agriculture, and the labor market (Arlacchi 1988; Fijnaut 1990; Skaperdas 2001). In contemporary Japan, the *yakuza* hold massive stakes in publicly traded corporations (Kaplan and

Dubro 2012; Milhaupt and West 2000). Meanwhile criminal groups control an estimated 40% of the Russian economy (Milhaupt and West 2000; Volkov 1999).

Rational Firm Behavior & Use of Violence: Illicit organizations endure constant and varied threats to group continuity. Scholars interested in OCG behavior often refer to these groups as "firms," or exhibiting "firm behavior," alluding to their tendency to manage risk in highly rational and predictable ways—just as a private corporation in the licit economy would (Fijnaut 1990; LaLumia 1981; Skaperdas 2001). The use of violence is generally considered to be hallmark feature of organized crime, so much so that many refer to organized criminals as "violent entrepreneurs" (Gambetta 1996; Varese 2001: 18; Volkov 2002). Empirically, areas with a strong organized crime presence suffer from elevated violent crime rates (Marselli and Vannini 1997).

Backhaus (1979) identifies three primary threats to illicit transaction, all of which require some systematic mitigation strategy. The first threat is *interference* from other criminal groups seeking to dominate the same market or capture the same consumer base. Generally, OCGs address this through forms of preemptive or retaliatory violence, as well as other forms of subterfuge, such as coordinating with corrupt authorities to undercut the rival group (Dintino and Martens 1981; Konrad and Skaperdas 2010; LaLumia 1981; Phillips 2015). Violence should be more pronounced when control of physical territory is a precondition for maintaining market dominance—e.g., in protection racketeering and narcotics dealing (Koivu 2017).

The second threat is that posed by *interdiction* by state enforcement agents. This is mitigated through several techniques. While group crime commission does yield lower production costs, it also increases the risk of capture—more members in an operation creates more opportunities for authorities to detain a member and extract valuable information (Jennings 1984; Johnston et al. 2016; Shapiro 2013). Organized crime separates itself from more ordinary

forms of crime by devoting additional resources and attention to ensuring that members do not "squeal." Strict oaths are common within OCGs, and infractions of these oaths are met with harsh and often violent sanction (Jennings 1984). Gruesome punishments are an important tool for discouraging internal derogation and protecting the integrity of the group-at-large (Dintino and Martens 1981; Schelling 1971). Criminal firms also reduce the risk of interdiction by promoting role specialization. This is not only a productive asset, facilitating efficiency, but also a vital tool for disseminating information only on a need-to-know basis and thereby reducing the risk of leakage to authorities (Fijnaut 2010; Milhaupt and West 2000; Shapiro 2013).

The third and final major threat is that posed by potential *reneging*. By nature of being illicit, OCGs cannot turn to the state for protection or recourse when obligations are shirked, violence is committed, or contracts are breached (Phillips 2015). Like the threat of criminal interference, this threat is generally met with intimidation and violent enforcement, though elements of reciprocity and instrumental friendship may also come into play (LaLumia 1981). The vacuum in transactional enforcement creates a market among OCGs for protection and contract enforcement, and dispute resolution is pursued through extralegal means (Dintino and Martens 1981). This can facilitate a "race to the bottom" in which violent entrepreneurs jockey to be seen as the most credible guarantor, engaging in excessive or particularly grizzly forms of violence to prove their mettle (Phillips 2015). Despite this, many highly organized criminal groups have little tolerance for maverick violence, as it can draw undesired attention to the group or provoke unwanted retaliation (Gambetta 1996; LaLumia 1981; Phillips 2015). This is another example of highly rational behavior by OCGs, which are often, though not always, a far cry from the reckless images portrayed in the media.

Though the "firm behavior" framework found popularity in academic circles for many decades, a new school of scholars contend that OCGs more closely resemble a primitive state

than a modern corporation (Bandiera 2003; Konrad and Skaperdas 2010; Skaperdas 2001; Skaperdas and Syropoulos 1997). Rather than defining OCGs relative to their provision of illicit products such as drugs, alcohol, and prostitution, Skaperdas and his contemporaries believe *protection* to be the hallmark service offered by organized crime.

The Role of the State

Defining Responsibilities of the State

The defining attribute of a state is its ability to credibly provide protection (Konrad and Skaperdas 2010; Weber 1978). Without protection, there can be no other public goods, nor any sort of reliable exchange or market development (Acemoglu 2003; Becker 1974; Beckert 2007; Benson 1989; Besley and Ghatak 2010; North 1987; North 1990; Weber 1978; Weingast 1995). Olson (1993) argues that states arise out of civilian desire for a centralized authority to protect against "roving bandits." Skaperdas (2001) offers an answer to the question of why people do not simply band together in a sort of social contract and protect themselves: the problem of free-riding is too difficult to overcome, and coordination costs are far too high, particularly if the threat of violent conflict is salient.

Relatedly, institutions that assure transactions are generally considered to be an essential public good and responsibility of the state (Aboal, Noya, and Rius 2014; Acemoglu 2003; Besley and Ghatak 2010; Trebilcock and Leng 2006). Systems of dispute resolution, such as judiciaries, can be considered a form of protection, one that guards citizens against injustice, reneging on contracts, and other violations of transactional rights.

Expectations of the state have not remained static over time. Since the early 20th century, the burden on the state to provide social services has increased substantially as the "welfare state" became a prominent post-WWII mode of governance. Kaspersen (2006) theorizes that the welfare state came into being as a response to declining confidence in liberal economics. As the problems with free-market exchange—poverty and other negative externalities—became increasingly apparent, doubts about the status quo were met with increased service provision by the state. By 1980, average national expenditures on transfer payments in the wealthiest countries had ballooned to 14% of GDP, up from 7.5% in 1960 (Myles and Quadagno 2002).

Myles and Quadagno (2002) elaborate upon the argument presented by Kaspersen (2006), contending that the welfare state became a necessity as: a) people lived longer and agrarian kinship support structures had eroded with urbanization; and b) wage labor left vulnerable many who could not labor effectively, such as children and those with disabilities. Scholars have found that in many regions across the world, state legitimacy is now predicated upon the government's ability to meet demand for public services (Brass 2016; Stel and Ndayiragjie 2014). With increased expectation comes increased demand for government action. When expectations are not met, we can expect enterprising OCGs to capitalize and supply the demanded good or service (Milhaupt and West 2000; Skaperdas 2001).

State Capacity

Popularized by Skocpol (1985), *state capacity* is a term commonly used to describe how well a government is able to fulfill its obligations to its citizenry. While it is a valuable analytical concept, it has proven notoriously difficult to operationalize. Englehart (2009) offers a framework that breaks state capacity down into three constituent elements: law and order, corruption, and bureaucratic apparatus (typically proxied by tax revenues). State capacity is said to have evolved as a product of war exigency, which created structural incentives for central governments to invest in arms that raise revenue through taxation (Besley and Persson 2009). The creation of such a bureaucratic apparatus allowed the state to gradually expand over time, increasing the ability of regimes to provide goods and services while also expanding modes of law enforcement and social control. Hendrix (2010) provides an actionable roadmap for quantifying state capacity, conducting a sweeping factor analysis to determine the most robust operationalizations of state capacity. He recommends that future lines of inquiry use measures of either bureaucratic quality or revenue-generating capacity, rather than less-powerful indicators related to military strength and institutional coherence.

State capacity plays an instrumental role in preventing civil conflict, and it is not necessarily directly related to level of democracy. Interest in state capacity among civil conflict scholars has waxed in recent years as older "greed and grievance" theories of insurgency have given way to models built around political opportunity (Hendrix 2010). These new models place state capacity at the center, and recent studies have found that measures of grievance tend to be worse predictors than institutional variables (Fearon and Laitin 2003). Generally speaking, weak governments make insurgency more feasible due to poor policing and shoddy intelligence-gathering apparatuses (Bell et al. 2013; Fearon and Laitin 2003). States can successfully mitigate citizen unrest in one of two ways: repressively or accommodatively (Hendrix 2010). Both of these approaches require relatively high capacity. In order to repress, states must have a strong security apparatus that can identify threats and credibly coerce targets. In order to accommodate, states must be able to dispense with grievances institutionally and peacefully, which requires the bureaucratic capacity to redistribute resources and power to the aggrieved. State capacity is inextricably linked to a state's level of corruption and disorder. Poor bureaucratic quality, which complicates the process of collecting tax revenue, is generally associated with underfunded, undertrained, and under-intelligenced law enforcement apparatuses, and likewise, the inability to pay the salaries of officers (Englehart 2009).

How Do Organized Crime Groups Come to Exist? Theory & Hypotheses

Why does organized crime exist, and how do these groups gain power*?* Despite the longstanding state interest in eradicating illicit groups, experts have yet to find a compelling answer to this fundamental question. Old-school economists have taken the root cause of organized crime's existence to be a given: unmet demand for prohibited goods (Ruth 1967).

Skaperdas (2001) offers an addendum to this concept, explaining that the existence of illicit markets creates a secondary market among underground entrepreneurs for enforcement services, and other criminals opportunistically fill these gaps as contracted third-party enforcers. Given that these transactional arrangements occur extralegally and outside the purview of state oversight bodies, this illicit supply chain problem, elaborated upon as follows, should persist irrespective of a state's capacity to fulfill its basic functions:

> *Along the supply chain from primary producer to final consumer, however, there are a host of contractual enforcement and financing problems that have to be solved without recourse to the police, the legal system, or to mainstream financial institutions. That is, with prohibition, private parties cannot write and enforce contracts through the normal legal channels, and thus an effective power vacuum is created around the production, distribution, and financing of the prohibited commodity and its inputs* (Skaperdas 2001: 181).

Prohibition-centric theories do not hold up well when contextualized within the realities of organized crime finance. Over half of total OCG revenues come from activities that are either "gray" in nature, or expressly licit (Milhaupt and West 2000). Further, OCGs who do not deal *at all* in black market goods are not uncommon (Koivu 2017). With *H1*, I seek to test—and potentially falsify—the old economic dogma that *prohibition* can explain the existence of organized crime.

> ***H1 (prohibition): States with more stringent prohibitions (de facto and de juris) on vicious goods and services will experience higher levels of organized crime.***

In decades past, a number of scholars have used supply-side economic factors to explain the existence of organized crime—*economic failure* theories. Sung (2004: 113) offers a relevant distinction, contrasting *economic failure* from *market failure*:

> *Unlike the concept of market failure, which focuses on the breakdown of the fundamental mechanisms of a market economy (i.e., competition, perfect information…etc.), economic failure refers to the unsuccessful outcomes of a national economy.*

In essence, economic failure theories posit that economic downturn, sluggish growth, and widespread poverty suppress material welfare to the point of desperation—those who are most disadvantaged may turn to criminal enterprise when no other opportunities are available. While financial desperation may have some appreciable effect on commission of ordinary economic crimes (Raphael and Winter-Ebmer 2001; Edmark 2005; Oster and Agell 2007; Lin 2008), the entry costs associated with OCG membership are much higher than those associated with ordinary crime. OCGs devote significant resources toward ensuring that members are loyal and do not pose an existential risk to the organization, imposing steep costs on prospective members through initiation rites, rituals, and oaths (Berman 2011; Jennings 1984; Shapiro 2013; Skarbek 2011). As such, membership should be relatively prosperity-inelastic.

Likewise, *economic failure* theorists posit that when public education systems are weak or underfunded, resultant human capital deficiencies limit opportunities for employment and economic mobility, forcing people—particularly marginalized youths—into crime. Literature studying gang membership among low-income youth abounds (Phongpaichit, Piriyarangsan, and Treerat 1998; Rawlison 1998; Skaperdas and Syropolous 1997; Sobel and Osoba 2009; Sutton 2000). However, youth gang membership has less to do with economic opportunity and more to do with demand for protection and community. Sociological studies of youth gangs tend to find that gang membership tends to originate out of a perceived need for protection from police forces

that are either not trusted to respond to incidents, or are viewed as outright agents of oppression against marginalized groups (Skaperdas 2001; Sobel and Osoba 2009).

In their analysis of the determinants of Japanese organized crime membership, Milhaupt and West (2000) find no significant effect of fluctuations in unemployment and economic conditions on membership in the *yakuza*. H2 will assess economic failure theories cross-nationally.

> ***H2 (economic failure): States experiencing economic failure (low employment, low GDP per capita) will experience higher levels of organized crime.***

For decades, economists dominated in this academic vein, often neglecting critical consideration of the political and institutional factors that may underpin the proliferation of OCGs, a trend which has changed recently. Institutional theories of organized crime have emerged over the last fifteen years—at the core of these theories is the idea that state action, or inaction, dictates the way in which OCGs behave, grow, and endure. In his discussion of the birth of the Sicilian Mafia, Catanzaro (1985) observes three institutional factors that allowed mafiosos to gain power during the early years of the Italian state: a communication gap between the region's administrative center and the delegated authorities in the countryside; diffuse public administration structures; and a widespread patronage system that had emerged during previous periods of anarchy. Skaperdas (2001) echoes the importance of these factors, emphasizing the negative relationship between geographic and social distance and good governance.

The economic downturn of the late 2000s and accompanying surge in neoliberal austerity has paid dividends for criminal organizations. As governments, philanthropists, and intergovernmental organizations across the globe have scaled back funding for healthcare, education, and other critical public services, cash-flush OCGs, and other non-state actors, have stepped in to assist (Cammett and MacLean 2014; Naim 2012). In fragile African states, where government legitimacy is largely contingent upon the state's ability to credibly guarantee

essential services, illicit organizations engage in forms of sub-state governance. In Burundi, for example, criminal organizations fill grassroots service gaps in conjunction with NGOs, IGOs, and social entrepreneurs (Stel and Ndayiragjie 2014). The same holds true in the Democratic Republic of Congo, where years of brutal civil war have led to enormous deficits in the state's ability to provide public services. Rebel groups have seized on this vacuum, using benevolent acts as a way to curry public favor for their political cause, as well as creating new revenue channels to fund militant operations (Trefon 2009).

Skaperdas (2001), one of the most prominent institutionalists, offers a short answer to the question of why organized crime exists, one that unifies all the aforementioned cases—power vacuums. This was the case in the post-Soviet anarcho-capitalist landscape of Russia, where state institutions were too weak (or corrupt) to sufficiently enforce contracts, protect private property, and assure debt obligations were met (Shinar 2016; Sokolov 2004; Varese 1994; Varese 2001; Volkov 2002). In the absence of a watchful state, organized crime groups became the primary enforcers, sustaining the country's fledging private sector—though at relatively high cost to business owners. Similar trends have been identified in the context of Sicily, where mafiosos performed basic judicial functions when state dispute resolution mechanisms were inaccessible, and the state protective apparatus did not extend into the countryside (Blok 1988; Gambetta 1996; Skaperdas 2001). Some have argued that mafia groups have a competitive advantage over the state in the market for contract enforcement due to their ability to impose severe violent penalties without being constrained by laws or civil norms (Skaperdas 2001). This edge in administering wanton violence positions OCGs favorably to solve collective action problems vis-à-vis licit third parties. State actors are generally, though not always, bound by laws that limit the use of state violence and provide for some level of due process. OCGs on the other hand are not

subject to the same sort of restriction and may actually derive reputational benefits from engaging in indiscriminate violence and stoking fear.

In their case study of organized crime in Japan, Milhaupt and West (2000) offer a demand-side theory similar to that proposed by Skaperdas (2001). They refer to the gap-filling behavior of OCGs as the *dark side of private ordering*. *Private ordering* refers to the phenomenon by which intermediaries respond to state inefficiencies and step in as rights enforcement agents (Adolphson and Ramseyer 2009; Cammett and MacLean 2014; Friedman 1979; Landa 1981; McMillan and Woodruff 2000; Scott 2002). When state institutions are mismatched with individual rights, these agents may come from illicit corners of society—thus, the "dark side" of private ordering (Idler and Forest 2015; Milhaupt and West 2000). Milhaupt and West (2000) extend this argument further than Skaperdas (2001), framing their theory as one that explains why organized crime may exist in both low capacity and high capacity countries, and why the features of organized crime groups may vary so significantly between countries of similar institutional quality.

They look to the Japanese *yakuza* as an example, a group that plays a crucial role in standing in for state-supported property rights mechanisms, specifically in the context of dispute mediation, foreclosure, corporate monitoring, lending, and crime control. Each type of *yakuza* specialist originates to fill a very specific institutional gap. Japanese debt collection can only legally be carried out by licensed attorneys, and due to widespread personnel shortages, *toritateya*, or debt enforcers, exist to fill this void. Due to uniquely-strict tenant laws that make it difficult for developers and landlords to evict tenants, *jiageya* exist solely to force out tenants on behalf of landlords. Heavily-regulated financial markets have precipitated a loan shortage, and *sarakin* loan sharks have expanded access to capital for ordinary people. In their empirical modeling, Milhaupt and West (2000) find that as targeted institutional fixes were passed, the

number of relevant organized crime careerists dropped off in direct response. Simultaneously, they rule out the possibility that supply-side factors can explain variation in OCG membership—shifts in in-country economic conditions do not appear to funnel more people into organized crime as a profession of last resort. Though similar to Skaperdas (2001) in *overall* orientation, Milhaupt and West's theoretical framework requires an institution-by-institution assessment of institutional quality, and does not lend itself particularly well to cross-national analysis, though it does offer a potential explanation for null findings—if OCGs respond to minor inefficiencies in state processes, then these groups will exist and persist irrespective of overall state capacity.

I apply rigorous quantitative hypothesis testing to institution-centric demand-side theories. The singular Japanese case (Milhaupt and West 2000) is difficult to draw generalizable inferences from, and only once has this been attempted cross-nationally. Sung (2004) has applied cursory quantitative testing to "state failure" theories of organized crime, conducting a two-year panel regression across 120 country-year observations. They take an important first step, but this analysis is far from air-tight or comprehensive. There are several shortcomings in this study, including a severely limited sample, no consideration of potential endogeneity between variables, and a theoretical orientation that is only concerned with physical insecurity—one of many relevant dimensions of state capacity. As I attempt to round out our understanding of how political conditions create environments favorable to organized crime, I offer *H3* and *H4*, which will test the theoretical frameworks offered by Milhaupt and West (2000) and Skaperdas (2001) and adapted by others (Berrittella 2018; Van Dijk 2007).

> **H3 (contract enforcement and private property protection):** ***States with lower capacity to protect property rights and enforce contracts will experience higher levels of organized crime.***
>
> **H4: (broad state capacity)** ***States with lower capacity to deliver state services, broadly speaking, will experience higher levels of organized crime.***

The existence of law does not always equate to engagement with, or confidence in, the law (Anderson and Hill 2004; Hendley 1999). While states with superior capacity should inherently leave fewer opportunities for organized crime firms to fill institutional voids, there may still be demand for the services of these firms when *trust* in these institutions is poor, even if they are objectively competent. Particularly relevant here is the tendency of organized crime to deal in protective services. The Sicilian Mafia is widely-regarded as the original protection racket, gaining influence due to peasant distrust in the ruling class (Blok 1988; Milhaupt and West 2000; Skaperdas 2001). Likewise, 'Ndrangheta, the Calabrian mob, originated as a defense mechanism for impoverished peasants against landlord violence (Nicasio and Lamothe 1995). Throughout the developed west, a similar phenomenon occurs in impoverished inner-city areas, where minority youth are drawn to street gangs (Skaperdas and Syropolous 1997; Sobel and Osoba 2009). Gang membership tends to originate out of a perceived need for protection in communities where the police are either not trusted to respond to incidents, or even viewed as overt agents of oppression (Skaperdas 2001; Sobel and Osoba 2009). Given the significant coordination costs and free-riding problems associated with forming citizen protection cooperatives, organized crime offers a great deal of promise to insecure communities (Skaperdas 2001). Organized crime groups lower the cost of producing protection through economies of scale, solve free-riding problems through their own (often violent) collection mechanisms, and otherwise act as a reliable third-party guarantor of safety. It follows that in states where constituent confidence in the state's ability to meet its obligations are low, organized crime will thrive. H5 will test the role of *trust* in creating demand for organized crime.

> ***H5: States in which citizens have low trust in state institutions will experience higher levels of organized crime.***

Fein (1995) made waves in the civil conflict research community with her seminal "More Murder in the Middle" theory, which contends that physical integrity violations by regimes are

most prevalent in transitional states—not autocratic ones. According to Fein, in these transitional democracies (*anocracies*), new individual rights backed up by weak institutions can yield unrest. Unrest, and consequent support for insurgent populist leaders, can heighten repressive incentives, thereby increasing life-integrity violations. Relatedly, I propose a "More Mafia in the Middle" corollary to my overarching power vacuum framework. I suspect that, even when civil conflict and repression are controlled for, organized crime will be more prevalent in transitional states.

Scholars noted that states in transition are far more likely than autocracies or consolidated democracies to have gone through recent periods of rapid liberalization; however, these states rarely have institutions robust enough to effectively enforce these rights. Skaperdas (2001) explains that transitional states are likely to have recently undergone major political change—during which institutions are either non-existent, crumbling, or developing. This sort of hasty dynamism should create ideal conditions for organized crime groups to step in as "rights enforcement agents" (Alexeev, Gaddy, and Leitzel 1995; Milhaupt and West 2000; Skaperdas 2001). Examples of this phenomenon abound, among them: Japan after the conclusion of World War II, Russia after the collapse of the Soviet Union, and Italy after the fall of the longstanding feudal order. One may intuitively expect despotisms to play host to the largest organized crime sectors given rampant corruption—however, I believe this incorrect for two reasons. First, autocratic states do not necessarily host weak institutions. In fact, repressive despotisms often have quite robust institutions, as repression requires strong mechanisms for collecting taxes, a well-built intelligence-gathering apparatus, and strong law enforcement institutions (Hendrix 2010). These institutions should, to some extent, reduce the ability of organized crime to operate effectively. Second, citizens of autocratic states, where rights are scarce, should be less conscious of individual liberties. Because there is a baseline expectation in liberalizing or newly-liberalized states that individual rights will be guaranteed, there will be greater demand for

enforcement, which should be met with increased supply of criminal entrepreneurs. Just as citizens seek out new political leadership when fragile transitional states fail to deliver on promises, misalignment between legal expectations and institutional realities should prompt citizens to seek out alternative enforcement authorities, such as organized crime groups. *H6* will test this proposition.

> ***H6: Due to misalignment between rights and institutions, transitional democracies (anocracies) will be have higher levels of organized crime than autocracies or consolidated democracies.***

Data

Operationalizing "Organized Crime Presence"

It is notoriously difficult to accurately capture the prevalence of organized crime, and for many decades, this has precluded rigorous quantitative analysis of the subject (Levitt and Venkatesh 2000). The secretive nature of membership in OCGs complicates the task of measuring group size, and the relative opaqueness (or complete absence) of accounting procedures complicates efforts to estimate revenues, market share, and illicit market size. To measure the extent to which organized crime is present in a state-year, I leverage an indicator from the World Economic Forum's annual Global Competitiveness Report (GCR). GCR rankings are generated from a combination of publicly available data and the Executive Opinion Survey, which is administered annually to nearly 14,000 business executives in roughly 150 countries. Included in this survey is the following question:

> *In your country, to what extent does organized crime (mafia-oriented racketeering, extortion) impose costs on business? [1 = to a great extent—imposes huge costs; 7 = not at all—imposes no costs]*

For ease of interpretation, I invert these values such that higher values correspond to higher costs imposed by organized crime. This series spans from 2007 to 2017 ($N_{countries} = 150$; $N_{country-year} = 1{,}265$), though a full ten-year window is not available for every state. All other

variables will span this same country-year frame. Rarely has this dataset been used by organized crime scholars, and it has immense potential to produce highly-generalizable cross-national inferences about the determinants of organized crime prevalence.

Van Dijk (2007) appears to be the first to ever use this indicator to make cross-national comparisons of organized crime presence, and he makes a compelling case for its validity. The capacity of state law enforcement agencies varies significantly, and crime statistics are not reliable metrics. Similarly, household-level crime victimization surveys, which have gained popularity in recent years, are not helpful in this context because ordinary people do not always feel the effects of organized crime or recognize it as such. On the contrary, business executives experience firsthand the effects of organized extortion (Alexeev, Eckhard, and Osborne 2004; Konrad and Skaperdas 1997; Konrad and Skaperdas 1998; Pinotti 2015; Skaperdas 2002; Van Dijk 2007). Van Dijk (2007: 41) includes the caveat that *"the widespread perception among business executives and risk consultants that organized crime activities are relatively common in a country provides by itself no conclusive proof that this is actually the case, but it certainly provides ground for further examination."* But he largely dismisses these concerns after finding that the WEF indicator is highly correlated with incidence of mob-related violence, degree of public corruption, and incidence of money laundering. Berritella (2018) builds upon the case for validity, finding the WEF measure to be highly correlated with shadow markets ($r = 0.46$), corruption ($r = 0.76$), and somewhat-correlated with risk of money laundering ($r = 0.17$), arguing that it functions as a solid and reliable proxy for overall organized crime presence.

Admittedly, perception indices have limitations. In this specific context, surveyed executives have incentives to fib. This survey, commissioned by the World Economic Forum, is presumably used by well-connected global investors when evaluating opportunities to invest abroad. Accordingly, respondents may have financial incentives to artificially deflate country-

level risks to improve their own financial prospects. Similarly, in some states where the business class, mafia class, and political class are one, these very executives may be complicit in criminal activity (Naim 2012). I expect these incentives will be uniformly distributed such that any systematic bias induces a frame-shift, or *translation*, rather than warping, or *transformation*, of the distribution. If this is true, standard deviations would not change appreciably—rather, the mean of the distribution would simply shift downward, and results would not be biased in a significant way.

Interstate cultural differences also have the potential to introduce reliability issues. Between states and cultures, there may be significant differences in what constitutes an acceptable baseline of corruption and patronage (Goglio 2004). Further, the local conceptualization of "organized crime" could vary wildly from state to state; however, the phrasing of the WEF survey question does specify "mafia-oriented racketeering, extortion," which should provide some degree of definitional clarity. Though connotations surrounding the phrase "mafia-oriented" could create some uncertainty among respondents, "extortion" is a clear and unambiguous operator. While this does limit the question to one specific realm of OCG activity, I do not view this as an impediment—in fact, it is well-aligned with my overall conceptual orientation: protection rackets and extortion are more-or-less universal activities carried out by OCGs—from Islamic extremist groups (Peters 2012) to Pan-American drug cartels (Harbers, Jaffe, and Cummings 2016), to mafia groups in Japan, Russia, and Italy (Bandiera 2003; Daniele and Marani 2010; Koivu 2017; Mehlum, Moene, and Torvik 2003; Shinar 2016; Skaperdas 2001).

Figure 1: WEF Organized Crime Score by Country, 2016 (1 [worst] to 7 [best])

Explanatory Variables

To empirically test the influence of vulnerabilities in political institutions on the presence of organized crime, I use indicators that represent several different facets of state capacity and behavior. Descriptive statistics for these variables, as well as control variables, can be found in **Table 7**.

1. Prohibition: To assess longstanding theories that unmet demand for prohibited goods lies at the heart of organized crime power and proliferation, I develop a novel *cultural conservatism index*. The most common legally prohibited goods and services, as one may expect, are tobacco, drugs, alcohol, prostitution, and gambling—those traditionally considered to be vices (Skaperdas 2001). State monopoly has also invited smuggling in the past, though this is far less relevant in the 21st century, as most centrally-planned communist economic systems have fallen and elsewhere in the world, state monopolies on basic commodities like salt and tobacco are no longer common. Prohibition is often thought of as an institution that is solely legal in nature—but it can also be driven by conservative *culture*, such that goods can be effectively illicit without

formal government action. Accordingly, an optimal measure would capture both *de jure* prohibition and *de facto* prohibition, combining (1) a government's propensity to ban vicious goods and (2) the propensity of conservative cultural mores to effectively crowd vicious goods out of mainstream markets.

A review of relevant literature reveals a distinct dearth of operationalizations of prohibition. The most intuitive way of measuring national prohibition would be to record whether each state has banned certain classes of goods; however, the effort required to manually code this for over 200 states would be enormous—not to mention that the data would not capture *de facto* prohibition. To capture prohibition, I develop a novel *cultural conservatism index* (CCI), which is predicated upon the assumption that most prohibition movements are built upon conservative notions of morality—religious or otherwise. There is no doubt that some prominent prohibition movements have been driven by concerns pertaining to public health—the American temperance movement of the early 20th century was presented as a solution to a rising tide of intimate partner violence, though notably, the most vocal groups in support of alcohol prohibition were religious in orientation (Brown 1915).

The CCI includes one element related to the role that religious dogma plays in governance (*de jure)*, and two elements related to overall cultural conservatism *(de facto).* CCI scores, in theory, range from 0 to 100, with 50 points assigned based on *de jure* prohibition indicators, and 50 points assigned based on *de facto* prohibition indicators. To capture the role that cultural-religious conservatism plays in government policymaking, I use the *interference of religious dogma* (IRD) measure from Bertelsmann Stiftung's Transformation Index (BTI) (Teorell et al. 2018). BTI data is generated from surveys issued to country experts. With respect to religious dogma, researchers ask "*to what extent are legal order and political institutions*

defined without interference by religious dogmas?" They provide survey respondents with the following scoring guidelines:

> "*10— The state is secular. Religious dogmas have no noteworthy influence on legal order or political institutions.*
> *7— The state is largely secular. However, religious dogmas have considerable influence on legal order and political institutions.*
> *4— Secular and religious norms are in conflict about the basic constitution of the state or are forming a hybrid system.*
> *1— The state is theocratic. Religious dogmas define legal order and political institutions*" (Teorell et al. 2018: 116).

For ease of interpretation and index-creation, I invert these scores such that higher values denote a higher level of dogmatic interference. Over the 10-year sampling window, few countries made significant changes in IRD score, thus missing values (for sampled countries) were filled using available adjacent country-year values.

To capture at-large cultural conservatism, I use *female labor force participation rate (fLFPR)* and *religious conservatism*. I utilize fLFPR data from the World Bank World Development Indicators (WBWDI) as a proxy for "traditional" cultural values and paternalism. Karim and Hill (2018) urge caution when attempting to measure gender equality, and offer three distinct analytical concepts, each of which should be measured differently: women's inclusion, women's rights, and women's security. Ultimately, I am interested in women's *inclusion*, and in line with their recommendations, utilize a measure of women's inclusion in the public sphere—LFPR—as a proxy. To measure *religious conservatism*, I use data from the World Religion Project (Maov and Henderson 2013) to sum the proportion of inhabitants who identify as Catholic or Muslim (as percentage of total population). Among major religions, these two have traditionally imposed some of the strictest codes of personal conduct on practitioners, which includes abstention from earthly vices such as alcohol, narcotics, and extramarital sex. In no way do I claim that this is a perfect measure, and there is no doubt that levels of religious orthodoxy can certainly vary substantially; nonetheless, this measure should proxy the extent to which

vicious behavior (and by extension, vicious goods) are stigmatized in society at-large. **Table 1** displays correlations between the three indicators that comprise the CCI, indicating some degree of internal consistency. Fixed effects regression models that include the CCI as a regressor are robust against models that only include the *de jure* component or the *de facto* component. These models can be found in **Appendix A**.

Table 1: Correlation: Components of Cultural Conservatism Index (CCI)

	IRD	RC	FLFPR
Religious Dogma Influence on Government (IRD)	1.0000		
Religious Conservatism (RC)	0.3800	1.0000	
(inverted) Female Labor Force Participation (FLFPR)	0.4438	0.4352	1.0000

$$CCI\ score = (influence\ of\ religious\ dogma\ \times 5) +$$

$$(religious\ conservatism \times 10 \times 2.5) + (inverted\ female\ LFPR \times 10 \times 2.5)$$

2. Supply-Side Determinants: I test the explanatory power of basic supply-side determinants of organized crime: *employment* and *GDP per capita* (Berrittella 2018; Buonanno and Montolio 2008; Kollias et al. 2013). I expect each of these relationships to be negative, though I do not expect them to be significant. Some have posited that economic failure can prompt impoverished populations to turn to more-lucrative criminal vocations, increasing the supply of active organized criminals (Sung 2004). On the contrary, Milhaupt and West (2000) provide reason to be skeptical of these supply-side determinants of organized crime, using data from Japan to demonstrate that shifts in economic fortune do not have appreciable effects on organized crime membership. While financial desperation may have some appreciable effect on commission of ordinary economic crimes (Raphael and Winter-Ebmer 2001; Edmark 2005; Oster and Agell 2007; Lin 2008), I suspect that because the entry costs associated with OCG membership are much higher than those associated with ordinary crime (Jennings 1984; Shapiro 2013; Skarbek

2011), membership should be relatively inelastic. All economic data is derived from the WBWDI.

3. Contract & Property Rights Enforcement ("cpprights"): To capture a state's ability to effectively enforce contracts and be a reliable steward of private property rights, I make use of the contract-intensive money (CIM) measure developed by Clague et al. (1999). The creators of this indicator have described it explicitly as a *"measure of the enforceability of contracts and security of property rights."* CIM represents the ratio of money held in banks to the total money supply, and higher CIM values indicate that more citizens opt to store their assets in financial institutions, and therefore trust that the state will be able to enforce laws protecting personal property (Reenock, Staton, and Radean 2013). All bank transactions are underpinned by some sort of contract that requires third-party enforcement, and we can expect that high CIM values indicate strong state capacity to enforce these arrangements, therefore yielding a lower presence of organized crime. I generate CIM values using available M2 ("Monetary, M2, Domestic Currency") and C ("Monetary, Depository Corporations Survey, Broad Money Liabilities, Currency Outside Depository Corporations (refers to the Depository Corporations), Domestic Currency") values from the International Monetary Fund International Financial Statistics.

$$Contract\ Intensive\ Money = \frac{(M2 - C)}{M2}$$

To validate these calculated values, I compare my CIM dataset (n = 645) against Staton's CIM dataset (n = 272).

Table 2: Comparison of CIM Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Ribel CIM	645	0.8329986	0.1233301	0.3182578	0.980601
Staton CIM	272	0.8662082	0.0910476	0.5067627	1

Table 3: Correlation: CIM Datasets

	RibelCIM	StatonCIM
RibelCIM	1.000	
StatonCIM	0.890	1.000

Table 4: Alpha Value: CIM Datasets

Average interitem covariance:	0.0108087
No. items:	2
Scale reliability coefficient:	0.902

4. Service Delivery: I seek to test whether a state's ability to deliver public goods and services has a significant effect on the presence of OCGs in that state. To capture this, I use a measure of *taxes on income, profits, and capital gains (as % of revenue)* from the World Bank World Development Indicators (WBWDI). In a factor analysis of the many operationalizations of "state capacity," Hendrix (2010) finds empirically that the two most robust indicators for general state capacity are (1) revenue-generating capacity and (2) bureaucratic quality, each functioning as a direct proxy for how well a state can deliver basic goods and services. Employing taxation measures is not only empirically sound, it is supported by a solid theoretical foundation. Besley and Persson (2009) build upon previous scholars who contend that state capacity evolved as a means of generating state revenues in the face of war exigency. They conclude that the creation of a defense-oriented bureaucratic arm allowed the state to gradually expand over the following centuries, increasing the ability of regimes to provide goods and services.

In order to collect taxes, a state must have a competent bureaucratic apparatus. Tax collection is a multi-faceted process: states must be able to craft tax policy, effectively monitor transactions, administer its laws, and ensure that its judiciary punishes the infraction of those laws (Lieberman 2002). It follows that variation in tax revenue should reflect variation in a state's capacity to perform these various functions; however, using *total tax revenue (as % of GDP)* as an indicator of state capacity can be a fraught approach due to variation in the dominant type of taxation. Hendrix (2010: 279) cautions the following:

> *Basic measures of tax capacity…do not distinguish between states that rely on administratively sophisticated revenue instruments and those that do not…According to World Bank data (1980-2002), countries as diverse as Algeria, Lesotho, and Sweden had average total taxes/GDP values near 31%. By this measure, the states have comparable capacity, yet the Algerian economy has larger proportions of its GDP from mining, a more convenient – and thus less administratively demanding – tax handle.*

To avoid this pitfall, I instead use the percentage of all state revenue coming from *taxes on income, profit, and capital gains*. I expect that all else equal, increases in this value will precipitate decreases in organized crime.

5. Trust in State Protective Organs: As discussed, even if a state's capacity is objectively high and the bureaucracy efficient and professional, citizens may not perceive that to be the case. I am interested in whether public perceptions of institutional weakness precipitate increases in organized crime. In this paper, I opt to focus specifically on perception of institutions related to physical security, rather than economic security, which is a many-dimensional latent concept that is more difficult to measure. While contract-intensive money does, to some extent, capture confidence in the judicial system's ability to uphold basic economic protections, it does not capture other indicators of economic stability and social safety net strength. Alternatively, more general *trust in government* measures are overly-broad and not reliable, as perceptions of central political institutions can differ significantly from perceptions of politicians, regional and local

political institutions, protective institutions, and legal institutions (Schneider 2017). Likewise, *trust in judiciary* measures are inappropriate in this context due to issues of proximity. Interaction between ordinary citizens and the judiciary is limited, and courts do not deal in the everyday, front-line administration of protection. Police do.

To capture *trust*, I use the WEF GCR indicator of *reliability of police services*. In the WEF's annual Executive Opinion Survey, business executives are asked the following question:

> *"To what extent can police services be relied upon to enforce law and order in your country [1 = cannot be relied upon at all; 7 = can be completely relied upon]?"*

This variable directly captures citizen perception of law enforcement competence, and I expect that in states where police are perceived to be more reliable, organized crime will be lower. Compared to other indicators from the European Social Survey and World Values Survey, the WEF measure has significantly better country coverage. The only potential issue with the WEF measure is that responses are collected solely from business executives, and as such, the data could be skewed. Theoretically, members of the entrepreneurial class may be more attuned to police deficiencies given that many business executives own valuable capital goods which they must protect. Alternatively, entrepreneurs may be less sensitive to police deficiencies because they are more likely to be economic elites who can more reliably depend on the attention of law enforcement.

To alleviate these concerns, I compare WEF values to *police confidence* values from the World Values Survey (N = 53) and European Social Survey (N = 28). **Table 2** demonstrates strong correlation between the three different indicators, and we can reasonably infer that the WEF measure of executive trust in police is a reasonable proxy for the trust of the public at-large.

Table 5: Correlation: Survey Measures of Trust in Police Services

	WEF	ESS	WVS
World Economic Forum (WEF) Reliability of Police Services	1.0000		
European Social Survey (ESS) Trust in Police	0.9018	1.0000	
World Values Survey (WVS) Confidence: Police	0.8708	0.9352	1.0000

6. Anocracy: To assess whether transitional states (anocracies) are more vulnerable to organized crime, I use a common Polity IV measure of *democracy* (Marshall 2018). Polity scores are calculated by summing *institutionalized democracy* (ID) scores (0 to +10) and *institutionalized autocracy* (IA) scores (-10 to 0). Marshall (2018: 14) conceives democracy as comprised of:

> *"…three essential, interdependent elements…the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders…the existence of institutionalized constraints on the exercise of power by the executive…[and] the guarantee of civil liberties…"*

Marshall (2018: 15) continues, explaining that autocracy is defined operationally in terms of distinctive political characteristics:

> *"In mature form, autocracies sharply restrict or suppress competitive political participation. Their chief executives are chosen in a regularized process of selection within the political elite, and once in office they exercise power with few institutional constraints. Most modern autocracies also exercise a high degree of directivenesss over social and economic activity, but we regard this as a function of political ideology and choice, not a defining property of autocracy."*

Accordingly, ID and IA scores are coded based on political participation, openness and competitiveness of executive recruitment, and constraints on executive power.

Specifically, I use the *polity2* indicator, which assigns each state a value between -10 and +10. The architects of this index provide their own guidelines for interpreting Polity scores: -10 to -6 indicates autocracy, -5 to +5 indicates anocracy, and +6 to +10 indicates consolidated democracy. To generate a dummy variable for *anocracy*, I code all observations with a Polity value between -5 and +5 with a one and all else as a zero. Polity IV did not include values for Iceland, Malta, and Brunei—each was manually coded as non-transitional, as Malta and Iceland

are universally considered consolidated democracies, and Brunei an absolute monarchy. Recall, I expect that anocracy, a political condition heavily associated with misaligned rights and institutions (Fein 1995), will be positively related to organized crime.

Control Variables

Models include a variety of control variables, all selected due to their potential to exert influence over both *x* and *y* as a confounder.

I control for *internal conflict*, using a measure from the International Country Risk Guide (ICRG). ICRG assigns a monthly *internal conflict* score, from 0 to 12, broken down into three subcomponents: civil war/coup threat, terrorism/political violence, and civil disorder. Highest scores are assigned to "*those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people*" (PRS Group 2018). This indicator captures both civil war and repressive regime activity, increasing its utility. Civil war not only disrupts basic governance functions and encourages illicit entrepreneurship (Trefon 2009), but rebel groups are often forced to turn to criminal means of revenue generation. Simultaneously, physical integrity violations (and other forms of repressive activity) can encourage insecure citizens to seek out alternative sources of protection, and can also confer legitimacy to OCGs, further increasing their influence (Bandiera 2003; Gambetta 1996). I expect that a higher *internal conflict* score (indicating stability), will yield lower levels of organized crime. I have aggregated monthly *internal conflict* scores into yearly ones.

I also control for three additional variables: *law and order*, *corruption*, and *urbanization*. ICRG assigns monthly *corruption* scores, from 0 to 6 (best), and monthly *law and order* scores, from 0 to 6 (best). The ICRG corruption measure is quite inclusive, covering bribery demands by state officials, as well as "*excessive patronage, nepotism, job reservations, quid pro quo, secret*

party funding, and suspiciously close ties between politics and business" (PRS Group 2018). *Law and order* scores are the sum of component "law" and "order" scores, each of which is assessed separately on a scale of 0 to 3. The "law" element weighs the impartiality of the legal system, while the "order" element is an assessment of whether the law is "routinely ignored without effective sanction" (PRS Group 2018). These two measures can be disparate—a country can enjoy a high "law" score and a low "order" score, and vice versa. I include *law and order* in models for the purpose of controlling for a state's ability to apprehend criminals and interdict illicit activity, and I expect that *law and order* and organized crime will be negatively correlated. While law enforcement capabilities can readily be classified as a facet of state capacity, I believe it important to parse it out from broader capacity indicators. The quality of a state's policing apparatus exerts influence not only over the ability of criminals to conduct illicit activity (*y)*, but also the ability of a state to carry out its other basic functions (*x)*. Konrad and Skaperdas (2010) aptly explain that "*the collective good variously referred to as security, order, protection of property rights, or simply, protection, is a precondition for the provision of ordinary infrastructural public goods and generally for facilitating trade and economic development*."

To capture the extent to which a state is urbanized, I use *urban population (as % of total population)* from the WBWDI. Skaperdas (2001) identifies geographic distance from administrative centers as a key determinant of organized crime, as these areas generally have weaker local institutions and exist outside the reach of the central government. In peripheral regions, power vacuums exist that can be filled by sub-state governance entities such as OCGs (Cammett and MacLean 2014). This phenomenon has been observed in the jungles of South America (Skaperdas 2001), rural Italy (Bandiera 2003; Catanzaro 1985; Gambetta 1996; LaLumia 1981; Nicasio and Lamothe 1995; Skaperdas 2001), and Central Africa (Ellis and Shaw 2015; Trefon 2009). In sum, states with more centralized population centers should be easier to

govern (Belokurova 2018; Fearon and Laitin 2003). Simultaneously, states with larger rural populations have larger proportions of traditional industry. Lavezzi (2008) finds empirically that these low-tech sectors are particularly susceptible to organized crime penetration. I expect that the relationship between urbanization and organized crime will be negative.

Table 6: Descriptive Statistics

	n	Mean	SD	Min.	Max.
Organized Crime	1,265	5.017	1.087	1.527	6.905
Cultural Conservatism Index	1,254	39.496	17.222	12.592	96.330
(1) Religious Conservatism	1,265	0.535	0.333	0.000	0.993
(2) Female Labor Force Participation	1,265	2.572	1.278	1.15	6.719
(3) Interference of Religious Dogma in Gov't	1,254	51.097	14.584	5.998	87.118
Contract & Private Property Enforcement	645	0.833	0.123	0.318	0.981
Service Delivery	1,133	26.162	13.085	0.000	66.475
Trust in Government	1,254	4.366	1.179	1.888	6.813
Anocracy	1,265	0.177	0.382	0	1
Employment	1,265	57.957	10.426	31.976	87.817
Education	1,260	78.690	22.809	11.706	118.792
Log GDP Per Capita	1,257	8.914	1.476	5.494	11.689
Ethnic Tension	1,265	4.055	1.147	1	6
Internal Conflict	1,265	9.201	1.483	5.333	12
Law & Order	1,265	3.792	1.285	1	6
Corruption	1,265	2.782	1.178	0	6
Urbanization	1,265	63.894	20.762	15.326	100

Table 7: Explanatory and Control Variables

	Variable	Selected Indicator	Source	Expected Relationship
Demand-Side Explanatory Variables	*Prohibition*	Cultural Conservatism Index	Various	+
	Contract & Property Rights Enforcement	Contract Intensive Money (0 to 100%)	Clague et al. (1999); IMF Int'l Financial Statistics	–
	Service Delivery	Taxes on income, profits, and capital gains (% of total revenue)	World Development Indicators, World Bank	–
	Trust in State Protective Organs	Perception: Reliability of Police Services (1 [worst] to 7 [best])	Executive Opinion Survey, World Economic Forum	–
	Anocracy	Binary Derived from Polity Score	Polity IV	+
Supply-Side Determinants	*Employment*	Employment to population ratio, 15+, total (%) (modeled ILO estimate)	World Development Indicators, World Bank	–
	GDP Per Capita	GDP Per Capita (current US$)	World Development Indicators, World Bank	–
Controls	*Internal Conflict*	ICRG Internal Conflict Score (0 [worst] to 12 [best])	International Country Risk Guide	–
	Law and Order	ICRG Law and Order Score (0 [worst] to 6 [best])	International Country Risk Guide	–
	Corruption	ICRG Corruption Score (0 [worst] to 6 [best])	International Country Risk Guide	–
	Urbanization	Urban Population (% of total)	World Development Indicators, World Bank	–

Model Specification

To explore the relationship between institutional indicators and organized crime presence, I analyze a panel dataset spanning 150 countries and 11 years (2007-2017). Panel analysis is particularly useful in cross-national contexts, running a regression over both the cross-sectional (country) and longitudinal (time) dimensions of the data. The basic model is specified as follows:

$$Y_{it} = \alpha_i + \beta X_{it} + \gamma Z_{it} + \mu_i + \delta_t + \varepsilon_{it}$$

where the subscripts denote country *i* and time-period *t*, μ_i is a country-specific effect, δ_t is a year-specific effect, and ε_{it} is the stochastic error term. *Y* represents the dependent variable organized crime, *Z* represents the set of control variables, and *X* represents the set of independent institutional variables.

Results

Table 8: Diagnostic Tests

Test	Purpose	Result	Conclusion
F-Test	FE or OLS?	prob>F = 0.0000	Fixed Effects > OLS
Hausman	FE or RE?	prob>chi2 = 0.0000	Fixed Effects > Random Effects
Breusch-Pagan	RE or OLS?	Prob > chibar2 = 0.0000	Random Effects > OLS
Wald	Heteroskedasticity?	Prob>chi2 = 0.0000	Heteroskedasticity Present
White	Heteroskedasticity?	Prob > chi2 = 0.0000	Heteroskedasticity Present

Ultimately, the purpose of this research is draw highly-generalizable inferences about the demand-side determinants of organized crime by leveraging a wide-reaching cross-national panel analysis. Given the diagnostic results, I run each iteration as both FE and RE (with cluster-robust standard errors), giving primary consideration to the FE models.[1] As a general robustness check, I test each variable in both a bivariate and multivariate model.

[1] To determine the most appropriate model specification, I conduct a series of diagnostic tests on a dataset that includes all variables of interest—these serve to determine whether pooled ordinary least squares (OLS) estimates, fixed effects (FE) estimates, or random effects (RE) estimates are the most empirically sound. Returns for these tests can be found in **Table 8**, and they include: (1) an *F*-test of joint significance to determine whether FE is generally preferable to OLS; (2) a Hausman test to determine whether FE is generally preferable to RE; and (3) Wald and White tests to assess whether homoscedasticity assumptions are met. Each test statistic was significant at the $p < 0.0001$ level. The Wald and White tests indicate that my data contains non-negligible heteroskedasticity, and the basic homoskedasticity assumptions for OLS regression are not met, rendering OLS an inferior option. Breusch-Pagan Lagrangian multiplier tests and an F-test for joint significance both indicate that OLS is less suitable than both RE and FE models, and a Hausman test indicates that FE is preferable to RE. This is intuitive enough—FE models account for unique country-specific attributes that are either difficult to measure or difficult to observe. FE superiority in this context aligns with the findings of Berrittella (2018), who analyzes the impact of public spending priorities on organized crime, proxied by the same WEF indicator.

Table 9: Selected Fixed Effects Models

	FEC2	FEC5	FEC8	FEC11	FEC12	FEC13	FEC14	FEC17	FEC18	FEC19	FEC20	FEC21	FEC22
CCI	0.023*								0.012	0.012	0.013	0.016	0.017*
	(0.010)								(0.010)	(0.009)	(0.009)	(0.012)	(0.008)
CIM		-2.153							-2.406*	-1.708		-3.282*	
		(1.192)							(1.127)	(1.112)		(1.258)	
Tax Revenue			0.010*						0.008		0.004	0.014**	
			(0.004)						(0.006)		(0.004)	(0.005)	
WEF RPS				-0.395***	-0.406***				-0.378***	-0.412***	-0.388***		-0.395***
				(0.061)	(0.065)				(0.100)	(0.097)	(0.067)		(0.060)
Anocracy						-0.079	-0.107		-0.167	-0.147	-0.107	-0.199	-0.065
						(0.160)	(0.131)		(0.142)	(0.147)	(0.109)	(0.140)	(0.101)
Employment					-0.006			-0.000	0.003	0.002	-0.004	0.009	-0.005
					(0.012)			(0.014)	(0.018)	(0.018)	(0.011)	(0.020)	(0.011)
log GDP per capita					0.110			-0.016	0.333	0.290	0.167	0.240	0.096
					(0.145)			(0.159)	(0.244)	(0.235)	(0.149)	(0.266)	(0.139)
Internal Conflict	-0.114*	-0.129	-0.120*	-0.091*	-0.097*		-0.125*	-0.125*	-0.120	-0.123	-0.100*	-0.144	-0.093*
	(0.044)	(0.092)	(0.054)	(0.039)	(0.042)		(0.049)	(0.053)	(0.089)	(0.082)	(0.047)	(0.104)	(0.041)
Law and Order	0.092	0.033	0.104	0.085	0.081		0.064	0.087	0.003	0.015	0.056	0.023	0.076
	(0.111)	(0.111)	(0.114)	(0.094)	(0.095)		(0.110)	(0.110)	(0.106)	(0.108)	(0.096)	(0.112)	(0.095)
Corruption	-0.030	0.032	-0.023	0.025	0.032		-0.040	-0.034	0.068	0.086	0.057	0.007	0.037
	(0.057)	(0.098)	(0.060)	(0.057)	(0.057)		(0.056)	(0.056)	(0.112)	(0.095)	(0.064)	(0.109)	(0.057)
Urbanization	-0.016	-0.009	-0.012	-0.012	-0.014		-0.010	-0.009	-0.024	-0.014	-0.023	-0.028	-0.019
	(0.019)	(0.032)	(0.019)	(0.017)	(0.017)		(0.019)	(0.019)	(0.029)	(0.029)	(0.018)	(0.032)	(0.018)
2007	-0.267**	-0.161	-0.283***	-0.358***	-0.332***	-0.294***	-0.268**	-0.264**	-0.198	-0.162	-0.326***	-0.161	-0.333***
	(0.084)	(0.149)	(0.083)	(0.074)	(0.075)	(0.056)	(0.080)	(0.086)	(0.136)	(0.135)	(0.081)	(0.146)	(0.078)
2008	-0.411***	-0.301*	-0.432***	-0.483***	-0.472***	-0.452***	-0.419***	-0.411***	-0.373**	-0.331**	-0.469***	-0.342*	-0.466***
	(0.077)	(0.132)	(0.078)	(0.068)	(0.067)	(0.052)	(0.074)	(0.075)	(0.125)	(0.122)	(0.073)	(0.130)	(0.069)
2009	-0.453***	-0.316*	-0.465***	-0.531***	-0.512***	-0.494***	-0.457***	-0.452***	-0.349**	-0.331**	-0.508***	-0.304*	-0.510***
	(0.075)	(0.122)	(0.076)	(0.069)	(0.070)	(0.052)	(0.073)	(0.077)	(0.121)	(0.119)	(0.075)	(0.123)	(0.071)
2010	-0.478***	-0.365***	-0.489***	-0.566***	-0.559***	-0.513***	-0.482***	-0.478***	-0.422***	-0.421***	-0.560***	-0.358**	-0.555***
	(0.068)	(0.106)	(0.069)	(0.066)	(0.066)	(0.051)	(0.066)	(0.068)	(0.115)	(0.112)	(0.069)	(0.111)	(0.067)
2011	-0.378***	-0.241*	-0.374***	-0.447***	-0.448***	-0.374***	-0.372***	-0.361***	-0.358**	-0.341**	-0.459***	-0.297*	-0.453***
	(0.066)	(0.109)	(0.067)	(0.066)	(0.068)	(0.053)	(0.065)	(0.068)	(0.131)	(0.124)	(0.070)	(0.132)	(0.067)
2012	-0.369***	-0.210*	-0.362***	-0.429***	-0.432***	-0.372***	-0.369***	-0.361***	-0.300**	-0.296**	-0.432***	-0.248*	-0.432***
	(0.058)	(0.086)	(0.059)	(0.056)	(0.058)	(0.050)	(0.058)	(0.060)	(0.109)	(0.103)	(0.058)	(0.108)	(0.056)
2013	-0.250***	-0.064	-0.223***	-0.305***	-0.311***	-0.228***	-0.238***	-0.230***	-0.156	-0.170	-0.318***	-0.091	-0.320***
	(0.050)	(0.069)	(0.052)	(0.048)	(0.052)	(0.044)	(0.050)	(0.053)	(0.103)	(0.097)	(0.052)	(0.098)	(0.051)
2014	-0.093*	0.066	-0.091	-0.162***	-0.168**	-0.066	-0.085	-0.078	-0.026	-0.039	-0.184***	0.045	-0.171***
	(0.046)	(0.061)	(0.047)	(0.044)	(0.050)	(0.043)	(0.046)	(0.050)	(0.096)	(0.091)	(0.049)	(0.092)	(0.049)
2015	-0.134***	-0.012	-0.117**	-0.209***	-0.204***	-0.123***	-0.129***	-0.126***	-0.074	-0.091	-0.200***	-0.012	-0.208***
	(0.034)	(0.031)	(0.034)	(0.032)	(0.033)	(0.034)	(0.033)	(0.035)	(0.046)	(0.046)	(0.034)	(0.033)	(0.033)
2016	-0.067**	0.000	-0.064*	-0.069**	-0.057*	-0.062*	-0.066*	-0.062*	0.000	0.000	-0.066*	0.000	-0.060*
	(0.025)	(.)	(0.027)	(0.023)	(0.027)	(0.026)	(0.025)	(0.030)	(.)	(.)	(0.029)	(.)	(0.028)
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Constant	4.099**	6.692*	4.516**	6.190***	5.861***	3.266***	4.933**	4.906**	5.730*	5.133*	5.169**	5.504	5.481***
	(1.496)	(2.947)	(1.602)	(1.461)	(1.568)	(0.044)	(1.573)	(1.719)	(2.639)	(2.524)	(1.644)	(2.968)	(1.566)
N	1254	645	1133	1254	1249	1265	1265	1257	593	638	1118	593	1238
N_Countries	123	71	108	123	123	124	124	124	63	70	107	63	122
R-sqrW	0.2576	0.1618	0.2489	0.3341	0.3371	0.2125	0.2420	0.2384	0.2784	0.2710	0.3542	0.2078	0.3504
R-sqrB	0.0487	0.1078	0.0732	0.5050	0.4846	0.0028	0.1775	0.1320	0.3568	0.3437	0.3733	0.0906	0.3344
R-sqrO	0.0586	0.1068	0.0874	0.4795	0.4693	0.0235	0.1670	0.1331	0.3343	0.3239	0.3861	0.0933	0.3536
F	13.60	5.74	10.99	21.11	19.15	17.44	13.46	12.65	5.42	5.93	14.96	4.78	17.42
P_F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 9 reports selected fixed effects models. Expanded regression results can be found in **Appendix B**.

In univariate models (with controls and year effects included), I find that prohibition is weakly significant ($p < 0.05$) in the expected direction, such that increases in cultural conservatism yield mild increases in organized crime; however, in expanded multivariate models, this significance disappears and coefficients lessen, as expected. This is in line with my expectation that prohibition on vicious goods is a weak predictor of the strength of organized crime groups, and alone cannot explain the proliferation of such groups. When the CCI is separated its constituent elements—state conservatism and societal conservatism—multivariate models produce the same results (**Appendix A**).

Supply-side variables—*employment* and *log GDP per capita*—proved insignificant across all fixed effects models, in line with expectations that organized crime membership should prove inelastic in the face of changing economic conditions and shifts in material welfare. Milhaupt and West (2000) reached a congruent conclusion in their empirical study of Japanese organized crime membership, finding that higher barriers to entry vis-à-vis "ordinary" crime deterred opportunistic "last resort" membership. Initially, an *education* variable (lower secondary completion rate) was included in this grouping, though was later removed from models for several reasons. This indicator was remarkably insignificant across all fixed effects models ($p > 0.90$) and highly correlated with *log GDP per capita* ($r = 0.74$). On a theoretical level, including *education* was problematic insofar as it itself is a measure of a state's capacity to deliver public goods, and therefore introduces multicollinearity concerns into the model, and can dampen the effects of other similar variables.

Irrespective of the would-be *education* variable, multicollinearity concerns abound. Contract-intensive money, tax revenue, trust in state institutions, corruption, internal conflict,

and urbanization all capture *to some extent* a state's capacity to perform its functions. This collinearity can substantially depress significance through included variable bias, and for this reason, I run a number of model permutations that omit certain variables.

These permutations are particularly important in interpreting the effect of contract and private property rights enforcement on organized crime prevalence, as well as the effect of state capacity to delivery essential services. When tested bivariately (including controls and year effects), *CIM* has a strong negative effect on organized crime, with a coefficient of -2.16; however, the large standard error dampens the significance to $p = 0.068$. This said, the cluster-robust standard error approach is a conservative one, and an ordinary fixed effects model produces a p-value of 0.002. I expect that with an expanded CIM sample, this standard error would decrease and the variable would exhibit bivariate significance. As is, CIM data (n = 645) only spans roughly half of the total panel (n = 1,265). Nonetheless, in the full fixed effects model ("FEC18"), *CIM* is significant at the $p < 0.05$ level with an equally consequential coefficient ($b = -2.425$). The effect of *tax revenue* is similarly nuanced—bivariately, *tax revenue* is modestly significant at $p < 0.05$; however, this significance disappears in the full fixed effects model.

Notably, for both *CIM* and *tax revenue*, when the *trust* proxy ("WEF Reliability of Police Services (RPS)") is removed from the full fixed effects model, significance reappears at the $p < 0.01$ level. While the effect of *CIM* is significant in the expected direction, the effect of *tax revenue* is counterintuitive—increases in the proportion of government revenue coming from taxes on income, profit, and capital gains (a proxy for overall service delivery capacity) yield a very minute increase in the presence of organized crime ($b = 0.01$). I propose two potential explanations for this. First, that this specific indicator is a flawed one. There are a number of examples of high-capacity countries with relatively low proportions of government revenue coming from income taxes. Advanced European states like Iceland, Finland, Sweden, and

Switzerland, among others, derive a great deal of federal income from alternative sources such as value-added taxes and state-managed sovereign wealth funds. Likewise, high-capacity oil states like the UAE, Qatar, and Bahrain impose virtually no taxes on income due to nationalized oil revenues. The second possible explanation is that Milhaupt and West (2000) may have been correct in their assertion that organized crime groups will exist and persist irrespective of overall development and state capacity, opportunistically filling specific holes—accordingly, it would make more theoretical sense to test the effect of *specific* institutional deficiencies, such as the state's contract enforcement apparatus.

Fijnaut (1990) offers a third possible explanation for depressed significance: when organized crime gains power, capital, and influence, groups can be difficult to dismantle even if underlying conditions change and institutional deficiencies are remedied. Groups that are organizationally resilient and operate diverse criminal portfolios, may be able to refocus business efforts. Likewise, in some instances, corruption can become to profitable that even with material improvements to the bureaucratic landscape, incentives to change behavior can be scant (Skaperdas 2001). The implication of this is that models *may* be more sensitive to deteriorating institutions than improving institutions. While this is not ideal, it is not an empirical death knell. While the effects may be *distorted* in regression, they should not be undetectable entirely. On a theoretical level, institutional fixes should have an appreciable effect on organized crime activity—that is to say that organized crime levels are not prohibitively "sticky." We have strong empirical evidence from Japan indicating that as the state put institutional patches in place that reduced the demand for OCG services, the supply of relevant *yakuza* careerists dropped off substantially (Milhaupt and West 2000).

The *trust* variable is highly significant at the $p < 0.001$ level across every model that it is included in, and its effect size is substantial, reducing organized crime costs by roughly 0.4

points (out of a 6-point scale) for each one-point increase (out of a 6-point scale) in trust in police services. Not only does *trust* substantially depress the significance of the primary capacity measures, but it also comprises a majority of the model's r^2 value. When *trust* is removed from the full fixed effects model, overall r^2 drops from 0.335 to 0.106. A reasonable takeaway from this would be that *trust* in the state matters significantly more than a state's objective capacity to perform its functions. This makes intuitive sense—at the end of the day, even if a state *can* protect its citizens, this is for naught if those citizens do not perceive that to be the reality. If citizens *feel* unsafe, they will seek out a third-party guarantor of protection.

The binary *anocracy* variable was insignificant across all fixed effects models, indicating that states in transition may not be any more likely to experience elevated levels of crime than non-transitionary states. *Law and order*, *corruption*, and *urbanization* also held insignificant across all models—surprising given that these should intuitively play a determinant role in the level of organized crime. *Internal conflict* was moderately significant ($p < 0.05$) in the expected direction, and improvements in the level of internal conflict precipitated modest reductions in the level of organized crime. This is in line with theoretical expectations, as civil conflict—and consequent breakdown in basic institutions—can not only increase demand for personal protection and property protection, but also create opposition groups that finance their activities through illicit activity.

Endogeneity & Two-Stage Least Squares Regression

I have discussed at length the *forward* causal pathway between weak state institutions and organized crime; however, this relationship is likely bidirectional, and organized crime may also depress institutional development and reduce quality, thereby simultaneously exerting *backward* influence. We can state with theoretical confidence that institutional deficiencies are a necessary

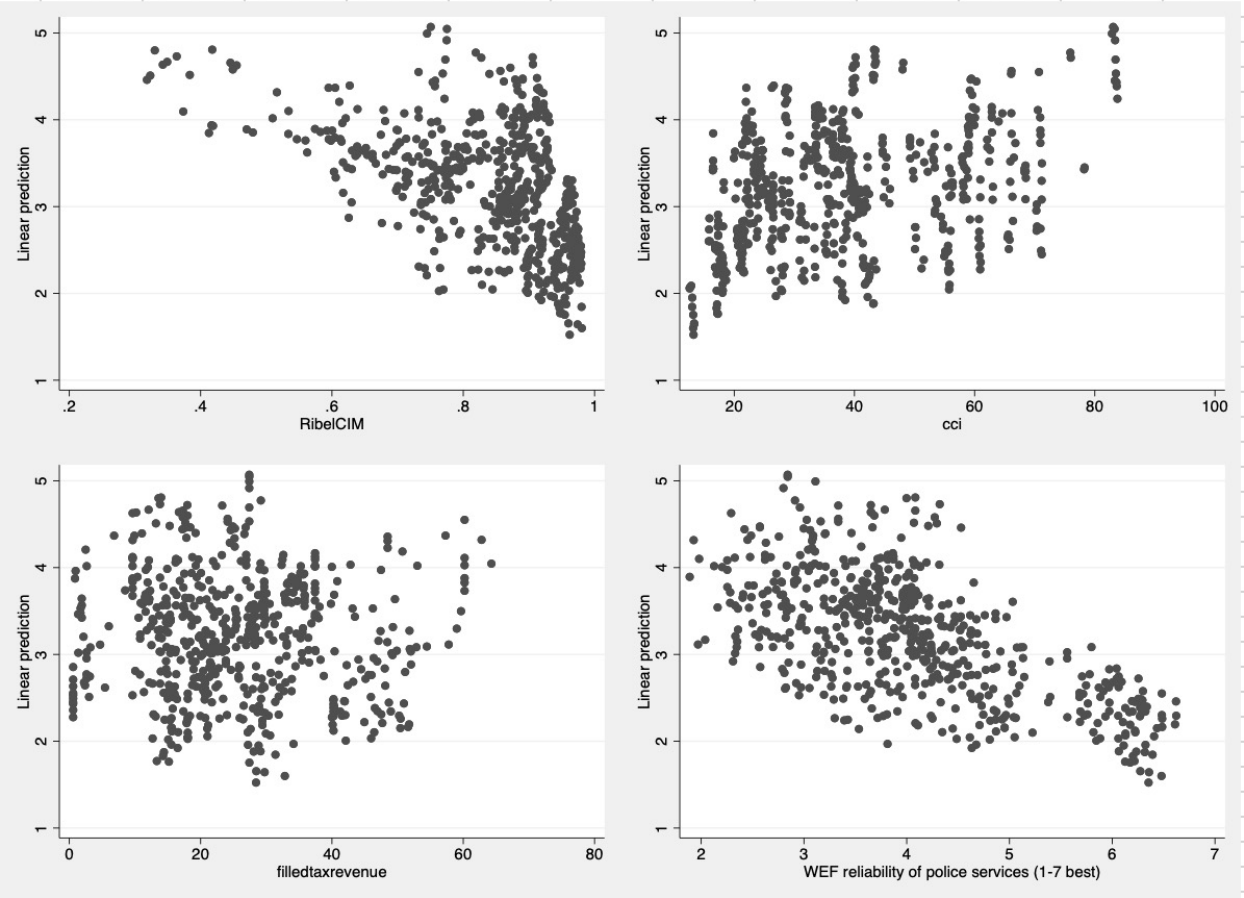
precondition to the emergence of organized crime, but the opposite is not true—organized crime is not a necessary precondition for deficient institutions. Theory predicts that organized crime groups are opportunists filling vacuums, and as such, a vacuum of some sort must predate the group's emergence. This causal sequence is sound, but it is nonetheless susceptible to feedback looping. Put simply, if states have weak capacity, and therefore cannot a) reliably enforce legal disincentives to engage in corruption; and b) provide positive inducements (wages, etc.) sufficient to render illegal modes of accumulation too risky; then organized crime can promote corrupt dealings, which further undermine institutions. To obtain competitive advantages and reduced transaction costs in the commission of crimes, OCGs commonly solicit favors and preferential treatment from bureaucrats in exchange for bribes (Dick 1995). In turn, highly corrupt bureaucracies are generally worse at carrying out their administrative and governance responsibilities, and public funds are more likely to be mismanaged or misallocated, further reducing state efficacy. OLS, FE, and RE models will likely pick up both forward and backward effects.

Initial regressions provide some reason to believe that endogeneity is present between regressors and organized crime perception. **Table 10** displays simple correlation between independent variables and the dependent variable. *Trust* exhibits the strongest and most notable correlation at -0.629, warranting a closer look at corresponding residual plots (**Figure 2**).

Table 10: Correlation: Explanatory Variables and Full-Model Fixed Effects Residuals

CCI	0.3576
CIM	-0.5147
Tax Revenue	-0.0212
WEF RPS	-0.629
Anocracy	0.214

Figure 2: Residual Plots for CIM, CCI, Tax Revenue, Trust



The only residual plot exhibiting significant irregularities is that including *trust*, indicating that endogeneity may be a concern worth taking seriously. Though there are real concerns about simultaneity bias, there are reliable methods for identifying and mitigating this sort of endogeneity. Social scientists have widely adopted two-stage least squares (2SLS) regression as a tool for drawing causal inference in the face of simultaneity (Acemoglu, Johnson, and Robinson 2001; Bascle 2008; Ritter and Conrad 2016). 2SLS leverages instrumental variable (IV) techniques to isolate the variation in *x* that is *not* correlated with the error term. A strong instrument should be strongly correlated with the endogenous regressor but unlinked in theory to the response variable. An *F*-test of joint significance should be conducted to determine

instrument strength, with *F*-statistic values greater than 10 indicating adequate predictive power (Staiger and Stock 1997).

I leverage *ethnic tension* as an instrument for trust in state institutions—specifically, trust in protective organs of the state. International Country Risk Guide (ICRG) experts assign each state a monthly *ethnic tension* score, from 0 to 6, where lower scores are assigned to countries where racial and nationalistic tensions are high and friction between groups exists. Higher scores are assigned to countries with minimal tensions, but not necessarily minimal difference. Skaperdas (2001) discusses the role that ethnic and social distance can play in increasing demand for organized crime services, explaining that minority populations are more likely to seek out the protective services of organized crime; non-state actors engaging in forms of ethnic oppression or violence would work to the same effect. In states where ethnic tensions are higher, we can reasonably expect that out-group citizens are more likely to experience feelings of marginalization at the hands of in-group state agents. Examples abound of disenfranchised groups turning to organized crime in the face of state predation, including ethnic minority groups in the Russian Urals (Finckenauer and Voronin 2001), as well as low-income urban neighborhoods in the developed west (Phongpaichit, Piriyarangsan, and Treerat 1998; Rawlison 1998; Skaperdas 2001; Skaperdas and Syropolous 1997; Sobel and Osoba 2009; Sutton 2000). Ethnic gangs and criminal groups generally serve as a way to protect members of the in-group from the out-group. This instrument is theoretically sound on the grounds that the relationship between instrument z and endogenous regressor x is well-defined, yet there is no clear pathway from z to y that does not go through x.

Figure 3: Instrumental Variable Pathway

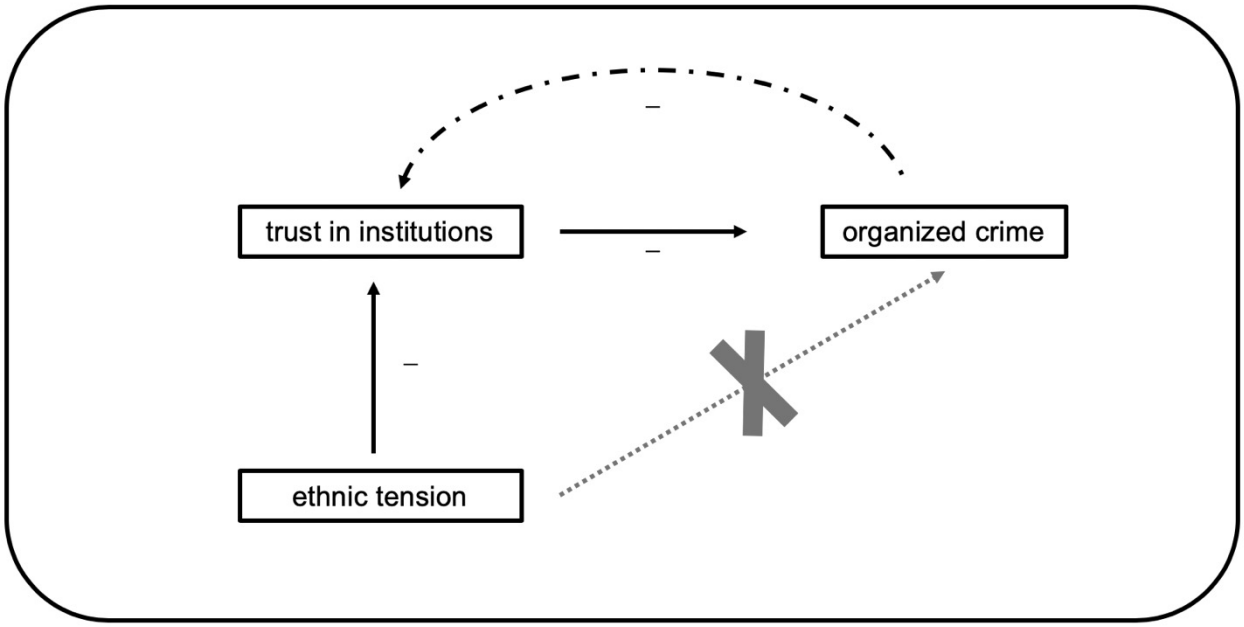


Table 11: Two-Stage Least Squares Regression

	IV1	IV2
CIM		0.42
		-0.25
Tax Revenue		0.011***
		0
WEF RPS	-0.513**	-0.728***
	-0.17	-0.14
CCI	-0.003	-0.005
	0	0
Anocracy	-0.245***	-0.176*
	-0.06	-0.08
Employment	-0.006**	0
	0	0
log GDP per capita	0.068*	0.01
	-0.03	-0.04
Internal Conflict	-0.111***	-0.156***
	-0.02	-0.03
Law and Order	-0.345***	-0.229***
	-0.06	-0.06
Corruption	0.153	0.118
	-0.08	-0.07
Urbanization	-0.003	0.002
	0	0
2007	-0.246**	-0.108
	-0.09	-0.12
2008	-0.384***	-0.243*
	-0.09	-0.12
2009	-0.444***	-0.290*
	-0.09	-0.12
2010	-0.506***	-0.364**
	-0.09	-0.12
2011	-0.413***	-0.288*
	-0.09	-0.11
2012	-0.423***	-0.241*
	-0.08	-0.11
2013	-0.297***	-0.121
	-0.08	-0.11
2014	-0.156	-0.021
	-0.09	-0.11
2015	-0.210*	-0.099
	-0.09	-0.12
2016	-0.067	0
	-0.08	(.)
2017	0	0
	(.)	(.)
Constant	7.528***	7.604***
	-0.25	-0.41
Adj. R2 (WEF_RPS)	0.752	0.711
F-Test (JS)	36.233***	58.391***
Durbin:	0.108	4.581***
p_durbin	0.743	0.0323
Wu-Hausman	0.106	4.445***
p_WH	0.745	0.0354
N	1,238	593

Table 11 displays the returns from two 2SLS instrumental variable models, the first of which does not include the CIM or tax revenue variables, and the second of which does. In both models, *trust* is instrumented by *ethnic tension*. In both models, the *F*-statistic far exceeds the prescribed threshold, at $F = 36.233$ and $F = 58.391$, respectively; this indicates significant instrumental strength—instrument *z* is strongly and sufficiently correlated with endogenous regressor *x*. I run a series of post-estimation tests to confirm the endogenous relationship, including a Durbin test and Wu-Hausman test. Notably, there is a substantial difference in the Durbin-Wu-Hausman statistics between Model 1 and Model 2. Model 1's Wu-Hausman *p*-value of 0.745 indicates that *trust* and *organized crime* are not endogenous, but the Wu-Hausman *p*-value of Model 2 suggests otherwise at $p = 0.035$ Though this clouds the picture of whether the variables are actually endogenous, this is largely inconsequential—even when run through a 2SLS model, *trust* is still highly significant in the expected direction, at the $p < 0.001$ level. Worth highlighting is the near 50% difference in sample size between the two models, due to the inclusion of the CIM variable in Model 2.

Model 2, in which the regressor is purportedly endogenous, indicates that the effects of *corruption* and *urbanization*, as well as the supply-side economic variables, remain statistically insignificant. Likewise, the effect of prohibition on organized crime is insignificant. On the contrary, *internal conflict* remains strongly significant in the expected direction—improvements in internal security facilitate reductions in organized crime. Counter to the one-stage panel regressions, the 2SLS models produce a statistically significant result for the *law and order* variable in the expected direction, indicating that improvements in a state's ability to enforce the rule of law and maintain order. This causal sequence is intuitive—stronger rule of law apparatuses yield stronger interdiction efforts, hampering the ability of OCGs to carry out operations, as well as improved ability to root out corruption within the ranks of state agents.

Curiously, in these models, *contract and private property enforcement* becomes insignificant, while *service delivery* becomes significant, though not in the expected direction. In Model 2, *service delivery* is significant at the $p < 0.001$ level, such that more sophisticated modes of tax collection are associated with higher levels of organized crime. I do have concerns about potential biases in this sample—many of the world's wealthiest states are excluded from the CIM dataset due to issues with data availability, which could systematically bias the results, as these excluded countries generally trend toward lower rates of organized crime. The multicollinearity caveats offered in the fixed effects analysis apply here as well. Further, given that there is divergence between 2SLS Model 1 and Model 2 results—and significant discrepancies between Hausman test statistics—these particular regression returns should be interpreted with great caution, and the key takeaway from this instrumental variable analysis should be that *trust in institutions* is a uniquely strong predictor of organized crime presence, even after potential endogeneity is statistically mitigated.

Discussion and Implications

For decades, causal clarity has eluded scholars of organized crime. Hampered by massive deficits in global law enforcement and data-gathering capacities, academics have been pigeonholed into a cycle of single-state case-based research. Studies have not only suffered from limited cross-national generalizability, but many have also narrowly fixated on either prohibition or economic turmoil as the root of organized crime growth. In this thesis, I conducted a first-of-its-kind panel analysis spanning nearly 150 countries over 10 years, issuing a direct empirical challenge to longstanding academic dogmas by pitting supply-side and demand-side determinants against one another in an empirical model.

Nevertheless, this research is not without its flaws. A larger contract-intensive money cross-section would likely clear up some of the empirical ambiguities arising from this thesis—the CIM data series covers only roughly half of the entire panel, inflating standard errors and reducing significance between models. Likewise, a longer time-series would be beneficial in teasing out the nuances of supply-side effects. While it is apparent that short-term fluctuations in unemployment do not have any appreciable effect on organized crime, this may not be the case under long-term economic depression. A different approach to assessing the effect of political transition on organized crime would also be beneficial, starting with a more careful definition of a transitional state. My operative definition characterizes any "transitional democracy" as a state-in-transition—the most obvious issue with this is that many states exist in this democratic middle-ground for decades, if not generations, perhaps dulling the effect on organized crime and overstating the degree to which expectations and reality are misaligned. It would also be worthwhile to test for differential effects between 'forward' and 'backward' democratic progress. Finally, I lament (in vain) the data sources currently available to us—intergovernmental organizations should continue to push countries to build capacity at the state and local level to

collect high-quality data on the scale of organized crime on the ground. Follow-up work should consider: a) the extent to which organized crime service provision may stabilize the political situation in fragile or autocratic states, cooperating with the regime to satiate mass grievance; b) the impact of a generous and inclusive welfare state on demand for organized crime services; and c) whether there is a differential effect between institutional improvement and deterioration, effectively testing the inertia of organized crime.

This research has significant implications for governance and policymaking. For one, longstanding dogma surrounding prohibition does not hold water—while cutting back on illicit markets could certainly help to reduce organized crime power, interdiction alone will not solve the problem. State agents must fundamentally reorient their view of organized crime such that they are not viewed solely as illicit dealers, but rather direct competitors with the state. We must focus less on the demand for illicit goods and more on demand for *licit* goods and services, pivoting toward a "political opportunity" model of organized crime proliferation, much like civil conflict scholars have done in recent years. Likewise, contract enforcement and private property rights matter—people must feel that their debt obligations, agreements, and transactions will be assured by the state apparatus and that their property will be free from theft or expropriation. As such, it is important that states invest in an independent, professionalized judiciary and a climate that instills confidence in its business owners. Above all else, it is trust in state institutions that dictates whether organized crime will thrive—irrespective of the quality of a state's institutions, if those institutions are not viewed as competent or egalitarian by citizens, they will turn to third-party enforcers to protect them from perceived insecurity. Accordingly, states should make active efforts to bolster legitimacy, particularly among historically-marginalized populations, and continue to make active efforts to improve general social welfare.

These findings are particularly relevant in our present age of austerity. As neoliberal regimes pare back longstanding welfare institutions and curtail social spending, they not only directly undermine human security by reducing state-provided benefits, but also indirectly endanger social welfare by encouraging the growth of predatory organized crime groups. The primary takeaway for policymakers is a stark one: if states do not meet the expectations of their citizenry, a non-state actor will. At some point, a group—nefarious or otherwise—will step in to fulfill demand for essential goods and services, and a government can only do so much to promote the growth of licit civil society actors.

Appendix A: *Robustness: Cultural Conservatism Index*

	CCI	State Component	Society Component
CCI	0.0005		
	(0.00)		
IRD		0.0018	
		(0.03)	
fLFPR			-0.0005
			(0.01)
CIM	-0.8086	-0.7240	-0.8580
	(0.60)	(0.58)	(0.62)
Tax Revenue	0.0076*	0.0076*	0.0076*
	(0.00)	(0.00)	(0.00)
WEF RPS	-0.4548***	-0.4574***	-0.4524***
	(0.08)	(0.08)	(0.08)
Anocracy	-0.2314	-0.2314	-0.2313
	(0.14)	(0.14)	(0.14)
Employment	0.0003	0.0002	-0.0001
	(0.01)	(0.01)	(0.01)
log GDP per Capita	0.1360	0.1269	0.1400
	(0.13)	(0.12)	(0.13)
Internal Conflict	-0.1041	-0.1045	-0.1060
	(0.07)	(0.07)	(0.08)
Ethnic Tension	-0.0370	-0.0377	-0.0382
	(0.07)	(0.07)	(0.07)
Law and Order	-0.2513***	-0.2611***	-0.2450**
	(0.08)	(0.08)	(0.08)
Corruption	0.0650	0.0642	0.0642
	(0.10)	(0.09)	(0.10)
Urbanization	-0.0078	-0.0071	-0.0081
	(0.01)	(0.01)	(0.01)
2007	-0.1254	-0.1211	-0.1274
	(0.08)	(0.08)	(0.09)
2008	-0.2908***	-0.2859***	-0.2927**
	(0.08)	(0.09)	(0.09)
2009	-0.3123***	-0.3096***	-0.3134***
	(0.08)	(0.08)	(0.08)
2010	-0.3737***	-0.3706***	-0.3752***
	(0.09)	(0.08)	(0.09)
2011	-0.2946**	-0.2914**	-0.2960**
	(0.10)	(0.10)	(0.10)
2012	-0.2526**	-0.2502**	-0.2539**
	(0.09)	(0.09)	(0.09)
2013	-0.1123	-0.1104	-0.1132
	(0.08)	(0.08)	(0.08)
2014	0.0045	0.0057	0.0038
	(0.08)	(0.08)	(0.08)
2015	-0.0727	-0.0725	-0.0726
	(0.04)	(0.04)	(0.04)
2016	0.0000	0.0000	0.0000
	(.)	(.)	(.)
2017	0.0000	0.0000	0.0000
	(.)	(.)	(.)
Constant	6.8168***	6.8566***	6.9031***
	(0.83)	(0.72)	(1.28)
N	593	593	593
N_Countries	63	63	63
R-sqrW	0.2509	0.2489	0.2517
R-sqrB	0.7311	0.7372	0.7289
R-sqrO	0.6578	0.6630	0.6560

Appendix B: *Expanded Fixed Effects Regressions*

	FEC1	FEC2	FEC3	FEC4	FEC5	FEC6	FEC7	FEC8	FEC9	FEC10	FEC11	FEC12	FEC13	FEC14	FEC15	FEC16	FEC17	FEC18	FEC19	FEC20	FEC21	FEC22
CCI	0.026*	0.023*	0.023*															0.012	0.012	0.013	0.016	0.017*
	(0.011)	(0.010)	(0.010)															(0.010)	(0.009)	(0.009)	(0.012)	(0.008)
CIM				-2.146	-2.153	-2.302												-2.406*	-1.708		-3.282*	
				(1.194)	(1.192)	(1.236)												(1.127)	(1.112)		(1.258)	
Tax Revenue							0.009*	0.010*	0.010*									0.008		0.004	0.014**	
							(0.004)	(0.004)	(0.004)									(0.006)		(0.004)	(0.005)	
WEF RPS										-0.413***	-0.395***	-0.406***						-0.378***	-0.412***	-0.388***		-0.395***
										(0.067)	(0.061)	(0.065)						(0.100)	(0.097)	(0.067)		(0.060)
Anocracy													-0.079	-0.107	-0.113			-0.167	-0.147	-0.107	-0.199	-0.065
													(0.160)	(0.131)	(0.130)			(0.142)	(0.147)	(0.109)	(0.140)	(0.101)
Employment			-0.000			0.011			0.001			-0.006			-0.000	-0.006	-0.000	0.003	0.002	-0.004	0.009	-0.005
			(0.013)			(0.021)			(0.013)			(0.012)			(0.014)	(0.014)	(0.014)	(0.018)	(0.018)	(0.011)	(0.020)	(0.011)
log GDP per capita			-0.032			0.174			0.083			0.110			-0.015	-0.117	-0.016	0.333	0.290	0.167	0.240	0.096
			(0.150)			(0.262)			(0.172)			(0.145)			(0.159)	(0.149)	(0.159)	(0.244)	(0.235)	(0.149)	(0.266)	(0.139)
Internal Conflict		-0.114*	-0.114*		-0.129	-0.143		-0.120*	-0.127*		-0.091*	-0.097*		-0.125*	-0.127*		-0.125*	-0.120	-0.123	-0.100*	-0.144	-0.093*
		(0.044)	(0.049)		(0.092)	(0.101)		(0.054)	(0.059)		(0.039)	(0.042)		(0.049)	(0.053)		(0.053)	(0.089)	(0.082)	(0.047)	(0.104)	(0.041)
Law and Order		0.092	0.092		0.033	0.037		0.104	0.105		0.085	0.081		0.064	0.064		0.087	0.003	0.015	0.056	0.023	0.076
		(0.111)	(0.111)		(0.111)	(0.112)		(0.114)	(0.115)		(0.094)	(0.095)		(0.110)	(0.109)		(0.110)	(0.106)	(0.108)	(0.096)	(0.112)	(0.095)
Corruption		-0.030	-0.026		0.032	0.031		-0.023	-0.025		0.025	0.032		-0.040	-0.036		-0.034	0.068	0.086	0.057	0.007	0.037
		(0.057)	(0.057)		(0.098)	(0.096)		(0.060)	(0.060)		(0.057)	(0.057)		(0.056)	(0.056)		(0.056)	(0.112)	(0.095)	(0.064)	(0.109)	(0.057)
Urbanization		-0.016	-0.015		-0.009	-0.014		-0.012	-0.015		-0.012	-0.014		-0.010	-0.010		-0.009	-0.024	-0.014	-0.023	-0.028	-0.019
		(0.019)	(0.020)		(0.032)	(0.032)		(0.019)	(0.020)		(0.017)	(0.017)		(0.019)	(0.020)		(0.019)	(0.029)	(0.029)	(0.018)	(0.032)	(0.018)
2007	-0.261***	-0.267**	-0.264**	-0.198*	-0.161	-0.125	-0.293***	-0.283***	-0.266**	-0.371***	-0.358***	-0.332***	-0.294***	-0.268**	-0.262**	-0.319***	-0.264**	-0.198	-0.162	-0.326***	-0.161	-0.333***
	(0.056)	(0.084)	(0.090)	(0.099)	(0.149)	(0.147)	(0.058)	(0.083)	(0.089)	(0.051)	(0.074)	(0.075)	(0.056)	(0.080)	(0.086)	(0.067)	(0.086)	(0.136)	(0.135)	(0.081)	(0.146)	(0.078)
2008	-0.415***	-0.411***	-0.405***	-0.342***	-0.301*	-0.294*	-0.451***	-0.432***	-0.426***	-0.501***	-0.483***	-0.472***	-0.452***	-0.419***	-0.412***	-0.459***	-0.411***	-0.373**	-0.331**	-0.469***	-0.342*	-0.466***
	(0.051)	(0.077)	(0.078)	(0.092)	(0.132)	(0.131)	(0.053)	(0.078)	(0.079)	(0.047)	(0.068)	(0.067)	(0.052)	(0.074)	(0.075)	(0.054)	(0.075)	(0.125)	(0.122)	(0.073)	(0.130)	(0.069)
2009	-0.463***	-0.453***	-0.451***	-0.362***	-0.316*	-0.282*	-0.488***	-0.465***	-0.450***	-0.551***	-0.531***	-0.512***	-0.494***	-0.457***	-0.451***	-0.515***	-0.452***	-0.349**	-0.331**	-0.508***	-0.304*	-0.510***
	(0.051)	(0.075)	(0.079)	(0.089)	(0.122)	(0.123)	(0.055)	(0.076)	(0.080)	(0.049)	(0.069)	(0.070)	(0.052)	(0.073)	(0.077)	(0.058)	(0.077)	(0.121)	(0.119)	(0.075)	(0.123)	(0.071)
2010	-0.485***	-0.478***	-0.474***	-0.400***	-0.365***	-0.351**	-0.508***	-0.489***	-0.482***	-0.582***	-0.566***	-0.559***	-0.513***	-0.482***	-0.476***	-0.526***	-0.478***	-0.422***	-0.421***	-0.560***	-0.358**	-0.555***
	(0.050)	(0.068)	(0.069)	(0.083)	(0.106)	(0.108)	(0.054)	(0.069)	(0.070)	(0.052)	(0.066)	(0.066)	(0.051)	(0.066)	(0.067)	(0.051)	(0.068)	(0.115)	(0.112)	(0.069)	(0.111)	(0.067)
2011	-0.363***	-0.378***	-0.367***	-0.248**	-0.241*	-0.253*	-0.369***	-0.374***	-0.374***	-0.444***	-0.447***	-0.448***	-0.374***	-0.372***	-0.360***	-0.372***	-0.361***	-0.358**	-0.341**	-0.459***	-0.297*	-0.453***
	(0.050)	(0.066)	(0.068)	(0.085)	(0.109)	(0.124)	(0.054)	(0.067)	(0.070)	(0.055)	(0.066)	(0.068)	(0.053)	(0.065)	(0.068)	(0.053)	(0.068)	(0.131)	(0.124)	(0.070)	(0.132)	(0.067)
2012	-0.357***	-0.369***	-0.359***	-0.223**	-0.210*	-0.228*	-0.360***	-0.362***	-0.364***	-0.432***	-0.429***	-0.432***	-0.372***	-0.369***	-0.360***	-0.368***	-0.361***	-0.300**	-0.296**	-0.432***	-0.248*	-0.432***
	(0.049)	(0.058)	(0.060)	(0.071)	(0.086)	(0.101)	(0.051)	(0.059)	(0.061)	(0.049)	(0.056)	(0.058)	(0.050)	(0.058)	(0.060)	(0.050)	(0.060)	(0.109)	(0.103)	(0.058)	(0.108)	(0.056)
2013	-0.231***	-0.250***	-0.240***	-0.069	-0.064	-0.088	-0.213***	-0.223***	-0.229***	-0.302***	-0.305***	-0.311***	-0.228***	-0.238***	-0.229***	-0.220***	-0.230***	-0.156	-0.170	-0.318***	-0.091	-0.320***
	(0.043)	(0.050)	(0.052)	(0.060)	(0.069)	(0.089)	(0.046)	(0.052)	(0.054)	(0.042)	(0.048)	(0.052)	(0.044)	(0.050)	(0.053)	(0.045)	(0.053)	(0.103)	(0.097)	(0.052)	(0.098)	(0.051)
2014	-0.068	-0.093*	-0.083	0.070	0.066	0.040	-0.076	-0.091	-0.098	-0.155***	-0.162***	-0.168**	-0.066	-0.085	-0.076	-0.058	-0.078	-0.026	-0.039	-0.184***	0.045	-0.171***
	(0.042)	(0.046)	(0.049)	(0.053)	(0.061)	(0.085)	(0.043)	(0.047)	(0.049)	(0.039)	(0.044)	(0.050)	(0.043)	(0.046)	(0.050)	(0.045)	(0.050)	(0.096)	(0.091)	(0.049)	(0.092)	(0.049)
2015	-0.124***	-0.134***	-0.132***	-0.007	-0.012	-0.018	-0.111**	-0.117**	-0.114**	-0.205***	-0.209***	-0.204***	-0.123***	-0.129***	-0.126***	-0.126***	-0.126***	-0.074	-0.091	-0.200***	-0.012	-0.208***
	(0.034)	(0.034)	(0.035)	(0.027)	(0.031)	(0.033)	(0.035)	(0.034)	(0.036)	(0.031)	(0.032)	(0.033)	(0.034)	(0.033)	(0.035)	(0.035)	(0.035)	(0.046)	(0.046)	(0.034)	(0.033)	(0.033)
2016	-0.062*	-0.067**	-0.065*	0.000	0.000	0.000	-0.062*	-0.064*	-0.059	-0.064**	-0.069**	-0.057*	-0.062*	-0.066*	-0.062*	-0.066*	-0.062*	0.000	0.000	-0.066*	0.000	-0.060*
	(0.026)	(0.025)	(0.030)	(.)	(.)	(.)	(0.028)	(0.027)	(0.031)	(0.024)	(0.023)	(0.027)	(0.026)	(0.025)	(0.030)	(0.031)	(0.030)	(.)	(.)	(0.029)	(.)	(0.028)
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Constant	2.215***	4.099**	4.314*	5.194***	6.692*	5.106	2.991***	4.516**	3.974*	5.094***	6.190***	5.861***	3.266***	4.933**	5.058**	4.620***	4.906**	5.730*	5.133*	5.169**	5.504	5.481***
	(0.443)	(1.496)	(1.718)	(1.015)	(2.947)	(2.898)	(0.121)	(1.602)	(1.720)	(0.306)	(1.461)	(1.568)	(0.044)	(1.573)	(1.741)	(1.247)	(1.719)	(2.639)	(2.524)	(1.644)	(2.968)	(1.566)
N	1254	1254	1246	645	645	645	1133	1133	1129	1254	1254	1249	1265	1265	1257	1257	1257	593	638	1118	593	1238
N_Countries	123	123	123	71	71	71	108	108	108	123	123	123	124	124	124	124	124	63	70	107	63	122
R-sqrW	0.2323	0.2576	0.2555	0.1414	0.1618	0.1663	0.2224	0.2489	0.2503	0.3184	0.3341	0.3371	0.2125	0.2420	0.2404	0.2115	0.2384	0.2784	0.2710	0.3542	0.2078	0.3504
R-sqrB	0.0000	0.0487	0.0552	0.0353	0.1078	0.0183	0.0006	0.0732	0.0266	0.6256	0.5050	0.4846	0.0028	0.1775	0.1823	0.2755	0.1320	0.3568	0.3437	0.3733	0.0906	0.3344
R-sqrO	0.0043	0.0586	0.0716	0.0438	0.1068	0.0294	0.0215	0.0874	0.0435	0.5790	0.4795	0.4693	0.0235	0.1670	0.1795	0.2289	0.1331	0.3343	0.3239	0.3861	0.0933	0.3536
F	17.78	13.60	12.23	7.56	5.74	5.25	14.43	10.99	10.13	25.56	21.11	19.15	17.44	13.46	12.24	15.87	12.65	5.42	5.93	14.96	4.78	17.42
P_F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix C: Expanded Random Effects Regressions

	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20	REC21	REC22
CCI	0.014*	0.003	0.002															0.001	-0.000	0.002	0.000	0.001
	(0.007)	(0.004)	(0.004)															(0.004)	(0.004)	(0.004)	(0.005)	(0.003)
CIM				-2.028*	-0.892	-0.909												-0.803	-0.417		-1.434	
				(0.867)	(0.694)	(0.777)												(0.618)	(0.609)		(0.786)	
Tax Revenue							0.007	0.008*	0.008*									0.008*		0.005	0.011**	
							(0.004)	(0.003)	(0.003)									(0.003)		(0.003)	(0.004)	
WEF RPS										-0.491***	-0.435***	-0.444***						-0.458***	-0.483***	-0.442***		-0.440***
										(0.049)	(0.051)	(0.053)						(0.080)	(0.079)	(0.057)		(0.052)
Anocracy													-0.039	-0.199	-0.208			-0.229	-0.208	-0.179	-0.298	-0.145
													(0.155)	(0.131)	(0.130)			(0.143)	(0.131)	(0.111)	(0.161)	(0.103)
Employment			-0.002			-0.002			-0.002			-0.004			-0.003	-0.004	-0.003	0.000	-0.001	-0.003	0.001	-0.003
			(0.007)			(0.009)			(0.007)			(0.005)			(0.007)	(0.008)	(0.007)	(0.008)	(0.006)	(0.006)	(0.010)	(0.006)
log GDP per capita			-0.066			0.008			-0.023			0.055			-0.067	-0.282***	-0.066	0.140	0.084	0.091	0.060	0.056
			(0.096)			(0.142)			(0.103)			(0.085)			(0.095)	(0.057)	(0.095)	(0.125)	(0.114)	(0.091)	(0.149)	(0.086)
Internal Conflict		-0.109**	-0.108*		-0.111	-0.111		-0.105*	-0.106*		-0.079*	-0.084*		-0.117**	-0.114*		-0.107*	-0.109	-0.110	-0.090*	-0.134	-0.091*
		(0.042)	(0.045)		(0.068)	(0.071)		(0.046)	(0.050)		(0.034)	(0.036)		(0.043)	(0.046)		(0.045)	(0.068)	(0.063)	(0.041)	(0.082)	(0.038)
Law and Order		-0.277***	-0.270***		-0.330***	-0.329***		-0.276***	-0.272***		-0.151*	-0.170**		-0.300***	-0.289***		-0.269***	-0.254***	-0.230***	-0.214***	-0.347***	-0.180**
		(0.066)	(0.072)		(0.075)	(0.081)		(0.071)	(0.078)		(0.059)	(0.063)		(0.062)	(0.069)		(0.071)	(0.075)	(0.068)	(0.065)	(0.086)	(0.061)
Corruption		-0.065	-0.056		-0.035	-0.034		-0.068	-0.065		0.041	0.044		-0.074	-0.063		-0.061	0.069	0.078	0.064	-0.041	0.046
		(0.050)	(0.050)		(0.080)	(0.079)		(0.053)	(0.054)		(0.050)	(0.051)		(0.047)	(0.048)		(0.048)	(0.095)	(0.080)	(0.060)	(0.092)	(0.052)
Urbanization		-0.008*	-0.004		-0.006	-0.006		-0.008*	-0.007		-0.003	-0.006		-0.008*	-0.005		-0.004	-0.009	-0.006	-0.008	-0.010	-0.006
		(0.004)	(0.005)		(0.005)	(0.008)		(0.004)	(0.006)		(0.003)	(0.004)		(0.004)	(0.005)		(0.005)	(0.008)	(0.007)	(0.005)	(0.009)	(0.004)
2007	-0.277***	-0.214***	-0.220***	-0.191*	-0.044	-0.046	-0.294***	-0.226***	-0.232***	-0.387***	-0.305***	-0.294***	-0.295***	-0.213***	-0.219***	-0.363***	-0.222***	-0.127	-0.137	-0.283***	-0.057	-0.293***
	(0.055)	(0.063)	(0.066)	(0.094)	(0.093)	(0.092)	(0.058)	(0.066)	(0.070)	(0.049)	(0.055)	(0.055)	(0.056)	(0.062)	(0.066)	(0.056)	(0.066)	(0.081)	(0.078)	(0.059)	(0.093)	(0.056)
2008	-0.432***	-0.372***	-0.366***	-0.336***	-0.208*	-0.211*	-0.450***	-0.383***	-0.383***	-0.513***	-0.439***	-0.432***	-0.452***	-0.376***	-0.370***	-0.478***	-0.370***	-0.292***	-0.289***	-0.425***	-0.234**	-0.430***
	(0.051)	(0.057)	(0.058)	(0.088)	(0.084)	(0.085)	(0.053)	(0.061)	(0.062)	(0.046)	(0.052)	(0.052)	(0.052)	(0.057)	(0.057)	(0.052)	(0.057)	(0.085)	(0.080)	(0.056)	(0.090)	(0.052)
2009	-0.478***	-0.420***	-0.422***	-0.357***	-0.242**	-0.245**	-0.489***	-0.425***	-0.428***	-0.563***	-0.494***	-0.484***	-0.494***	-0.420***	-0.423***	-0.547***	-0.426***	-0.313***	-0.327***	-0.476***	-0.247**	-0.481***
	(0.051)	(0.056)	(0.058)	(0.087)	(0.081)	(0.080)	(0.055)	(0.059)	(0.061)	(0.048)	(0.053)	(0.053)	(0.052)	(0.056)	(0.058)	(0.051)	(0.057)	(0.082)	(0.079)	(0.056)	(0.084)	(0.053)
2010	-0.500***	-0.450***	-0.448***	-0.395***	-0.295***	-0.299***	-0.510***	-0.452***	-0.454***	-0.596***	-0.536***	-0.530***	-0.514***	-0.447***	-0.445***	-0.543***	-0.450***	-0.374***	-0.400***	-0.529***	-0.291***	-0.529***
	(0.050)	(0.053)	(0.053)	(0.081)	(0.073)	(0.074)	(0.054)	(0.055)	(0.054)	(0.051)	(0.053)	(0.052)	(0.051)	(0.053)	(0.053)	(0.050)	(0.053)	(0.085)	(0.083)	(0.054)	(0.077)	(0.052)
2011	-0.371***	-0.354***	-0.340***	-0.244**	-0.191*	-0.195*	-0.370***	-0.349***	-0.345***	-0.457***	-0.424***	-0.421***	-0.375***	-0.348***	-0.334***	-0.370***	-0.337***	-0.297**	-0.299**	-0.427***	-0.220*	-0.426***
	(0.051)	(0.054)	(0.054)	(0.084)	(0.079)	(0.088)	(0.054)	(0.054)	(0.055)	(0.054)	(0.054)	(0.055)	(0.053)	(0.054)	(0.055)	(0.053)	(0.054)	(0.100)	(0.094)	(0.057)	(0.097)	(0.054)
2012	-0.367***	-0.364***	-0.352***	-0.221**	-0.188**	-0.191*	-0.361***	-0.351***	-0.350***	-0.443***	-0.413***	-0.413***	-0.372***	-0.356***	-0.344***	-0.364***	-0.349***	-0.255**	-0.269**	-0.413***	-0.198*	-0.418***
	(0.049)	(0.052)	(0.052)	(0.071)	(0.070)	(0.076)	(0.051)	(0.054)	(0.054)	(0.048)	(0.049)	(0.049)	(0.050)	(0.053)	(0.053)	(0.050)	(0.052)	(0.088)	(0.082)	(0.051)	(0.085)	(0.049)
2013	-0.232***	-0.236***	-0.223***	-0.068	-0.052	-0.054	-0.213***	-0.216***	-0.214***	-0.316***	-0.293***	-0.295***	-0.228***	-0.229***	-0.215***	-0.211***	-0.218***	-0.114	-0.138	-0.298***	-0.044	-0.300***
	(0.043)	(0.046)	(0.046)	(0.059)	(0.063)	(0.068)	(0.046)	(0.049)	(0.049)	(0.041)	(0.042)	(0.044)	(0.044)	(0.046)	(0.047)	(0.044)	(0.046)	(0.083)	(0.077)	(0.046)	(0.075)	(0.044)
2014	-0.069	-0.087*	-0.073	0.070	0.071	0.069	-0.076	-0.089*	-0.087*	-0.171***	-0.157***	-0.159***	-0.066	-0.079	-0.065	-0.047	-0.070	0.003	-0.013	-0.173***	0.080	-0.160***
	(0.042)	(0.042)	(0.044)	(0.052)	(0.056)	(0.065)	(0.043)	(0.043)	(0.043)	(0.038)	(0.038)	(0.042)	(0.043)	(0.042)	(0.044)	(0.044)	(0.044)	(0.076)	(0.072)	(0.042)	(0.070)	(0.042)
2015	-0.124***	-0.125***	-0.123***	-0.006	0.000	-0.000	-0.110**	-0.110**	-0.111**	-0.219***	-0.208***	-0.204***	-0.123***	-0.123***	-0.121***	-0.132***	-0.121***	-0.074	-0.087*	-0.202***	0.002	-0.207***
	(0.034)	(0.033)	(0.034)	(0.026)	(0.028)	(0.029)	(0.035)	(0.034)	(0.035)	(0.031)	(0.031)	(0.031)	(0.033)	(0.033)	(0.034)	(0.034)	(0.033)	(0.043)	(0.043)	(0.032)	(0.030)	(0.031)
2016	-0.063*	-0.065*	-0.064*	0.000	0.000	0.000	-0.062*	-0.061*	-0.062*	-0.064**	-0.066**	-0.058*	-0.063*	-0.064*	-0.064*	-0.076**	-0.063*	0.000	0.000	-0.066*	0.000	-0.059*
	(0.026)	(0.026)	(0.029)	(.)	(.)	(.)	(0.028)	(0.028)	(0.030)	(0.024)	(0.024)	(0.026)	(0.026)	(0.026)	(0.029)	(0.028)	(0.029)	(.)	(.)	(0.028)	(.)	(0.027)
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Constant	2.701***	5.816***	6.274***	5.069***	6.631***	6.727***	3.049***	5.744***	5.982***	5.436***	6.540***	6.576***	3.281***	6.155***	6.635***	6.007***	6.435***	6.735***	7.037***	6.397***	6.819***	6.627***
	(0.282)	(0.413)	(0.675)	(0.748)	(0.777)	(0.892)	(0.138)	(0.404)	(0.584)	(0.221)	(0.315)	(0.434)	(0.096)	(0.386)	(0.547)	(0.636)	(0.530)	(0.883)	(0.815)	(0.598)	(1.137)	(0.529)
N	1254	1254	1246	645	645	645	1133	1133	1129	1254	1254	1249	1265	1265	1257	1257	1257	593	638	1118	593	1238
N_Countries	123	123	123	71	71	71	108	108	108	123	123	123	124	124	124	124	124	63	70	107	63	122
R-sqrW	0.2281	0.2200	0.2175	0.1413	0.1280	0.1279	0.2222	0.2182	0.2190	0.3163	0.3231	0.3244	0.2123	0.2186	0.2178	0.2081	0.2141	0.2516	0.2462	0.3347	0.1584	0.3303
R-sqrB	0.0002	0.5736	0.5708	0.0347	0.5711	0.5737	0.0011	0.5913	0.5886	0.6250	0.6746	0.6788	0.0190	0.6120	0.6035	0.2964	0.5841	0.7293	0.7189	0.7097	0.5818	0.6844
R-sqrO	0.0109	0.5333	0.5349	0.0438	0.5188	0.5193	0.0237	0.5452	0.5463	0.5846	0.6368	0.6462	0.0274	0.5681	0.5654	0.2917	0.5457	0.6552	0.6469	0.6743	0.5171	0.6526
Wald-Chi2	193.80	329.62	371.36	80.45	176.43	200.41	158.48	283.92	325.52	387.12	572.68	621.06	190.52	362.09	406.30	220.23	381.56	364.89	323.97	571.45	266.24	630.08
p_chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Appendix D: *Countries Included in Panel*

Albania
Algeria
Angola
Argentina
Armenia
Australia
Austria
Azerbaijan
Bahrain
Bangladesh
Belgium
Bolivia
Botswana
Brazil
Brunei
Bulgaria
Burkina Faso
Cameroon
Canada
Chile
China
Colombia
Congo, Democratic Republic
Costa Rica
Cote d'Ivoire
Croatia
Cyprus
Czechia
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Ethiopia
Finland
France
Gabon
Gambia
Germany
Ghana
Greece
Guatemala
Guinea
Guyana
Haiti
Honduras
Hungary
Iceland
India
Indonesia
Iran
Ireland
Israel
Italy
Jamaica
Japan
Jordan
Kazakhstan
Kenya
Kuwait
Latvia
Lebanon
Liberia
Libya
Lithuania
Luxembourg
Madagascar
Malawi
Malaysia
Mali
Malta
Mexico
Moldova
Mongolia
Morocco
Mozambique
Namibia
Netherlands
New Zealand
Nicaragua
Nigeria
Norway
Oman
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Qatar
Romania
Russia
Saudi Arabia
Senegal
Sierra Leone
Singapore
Slovakia
Slovenia
South Africa
Spain
Sri Lanka
Suriname
Sweden
Switzerland
Syria
Tanzania
Thailand
Trinidad & Tobago
Tunisia
Turkey
United Arab Emirates
Uganda
Ukraine
United Kingdom
United States
Uruguay
Venezuela
Vietnam
Yemen
Zambia
Zimbabwe

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