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Informing the Autocrat: Agents, Investment, and Judicial  
Independence in Authoritarian Regimes

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An abstract of  
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James T. Laney School of Graduate Studies of Emory University  
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## Abstract

### Informing the Autocrat: Agents, Investment, and Judicial Independence in Authoritarian Regimes

By Braden Dauzat

Most authoritarian regimes lack independent judicial systems, yet many receive high volumes of litigation challenging government action in administrative and economic matters. Surprisingly, even in regimes where judges are hand-picked loyalists courts frequently rule against the regime. Even more surprisingly, there is broad evidence that authoritarian regimes often comply with anti-regime rulings. Extant theories of the role of courts in authoritarian regimes focus on the economic role of independent courts or the political role of dependent courts, and as a result they struggle to make sense of these patterns. In this dissertation, I offer a new theoretical framework that can account for these patterns and provide a logic that explains the economic role of dependent courts in authoritarian regimes. I argue that dictators face a fundamental tension between allowing their agents to engage in illicit corruption, and in attracting investment. This theory views courts as tools that can provide dictators with information that allows them to manage the agent-investment tension. However, I argue that courts provide less trustworthy information as their independence from the regime increases. As a result, courts can alleviate the agent-investment tension, but only if courts are not too independent. I develop a formal model of this theory and derive a number of implications which I then test empirically. I find support for my theoretical framework, and conclude with implications of this theory for scholarly work and policy implementation.

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## Chapter 1 Introduction

In 1980, the Argentine Supreme Court issued a decision in the case *Nacion Argentina v Paz y Posse Limitada Ingenio de San Juan*. This case concerned the expropriation of profitable sugar mills in the province of San Juan by the Argentine military dictatorship. At issue was how to properly value the property expropriated in light of currency depreciation, as the government had determined a compensation amount which it had partially paid the owners before a large drop in the value of the currency. The sugar mill owners sued, arguing that the compensation should be adjusted for the change in currency valuation. The courts issued rulings favoring the sugar mill owners at both the district and appellate level. At stake in the case was the considerable total sum of 23,349,318,022 Argentine pesos which the government was ordered to pay by the appellate court. The government challenged the appellate court ruling and on this appeal the case was heard by the Argentine Supreme Court.

The military regime in Argentina at the time of this case was one of the most brutal and repressive in Latin America, operating a years long campaign of state terrorism against any opponents of the regime resulting in the forced disappearances of thousands (Helmke 2012; Pereira 2008). Upon taking power, the regime had no hesitation in overhauling the Supreme Court as well as the legislative and executive branches of government. The regime also faced no issues suspending and altering the constitution as was convenient. None doubted that the new Supreme Court would be loyal and aligned with the junta, because Argentina's institutional history meant that "it was seen as de rigueur that the junta would replace the individual members of the Court with judges who shared the military's basic outlook and ideology (Helmke 2012 pg. 69)." During the period in which the case was heard, "judges reasonably expected that the military regime would sustain its hold on power" (Helmke 2012 pg. 75), and

so faced strong incentives to continue to please the junta. At the time of this case, every member of the Supreme Court had been appointed by the military junta and chosen specifically for their loyalty to the regime (Helmke 2002; Helmke 2012).

Despite this, the Supreme Court upheld the ruling of the lower courts and ruled that the regime must take currency depreciation into account and pay the total sum ordered. In addition, the court ruled that the government must also pay for the costs of appeal and updated the compensation mandated by the appellate court to account for currency shifts in the time elapsed between appeal and final decision. Despite the magnitude of this loss and the cost to the government, there is no evidence that the courts faced any negative consequences for this ruling (Helmke 2012). There was no evidence of any backlash, no increase in purges or judicial attacks at this time, and no evidence that the government did not pay this amount as the ruling demanded.

Given the close and dependent relationship between the Argentine Supreme Court and the military junta, why would economic actors choose to challenge government actions using the judiciary in the first place? All evidence supported the idea that the Argentine judicial system was one of the weakest and most dependent judicial systems in the world (Helmke 2012). One might naturally assume that pursuing a case challenging the government in a court like this would be a waste of time, money, and resources. And yet, the sugar mill owners not only filed a case challenging the government in an incredibly dependent judicial system but won at every level of this system. While the decision to challenge the government in this system is puzzling, the outcome of the case and response to the outcome is equally if not more difficult to understand. Why did the court rule against the regime, and why did the regime appear to accept this costly ruling?

This case is surprising given our current understanding of the role of courts in authoritarian regimes. Scholars have focused primarily on explaining the role of courts in authoritarian regimes in two ways. On one hand, scholars have focused on the role

of dependent judicial institutions, which are seen as a tool of the government used to punish political enemies, implement repression, and enforce social control (Ginsburg and Moustafa 2008; Pereira 2008; Shen-Bayh 2018; Toharia 1975). On the other hand, the literature has focused on the role of independent judicial institutions which are seen as powerful institutions that function to constrain government actions, particularly with respect to economic and administrative cases (Ginsburg and Moustafa 2008; Moustafa 2007; R. Peerenboom 2009; Wang 2015).

While these theories provide important context and insight into a number of observed phenomenon in authoritarian regimes, neither set of theories can easily account for why dependent courts might rule against the regime in important economic matters. And the simple fact is that most courts in authoritarian regimes are far from highly independent, but neither are most courts in authoritarian regimes completely dependent. Rather, most courts tend to have very low to middling levels of independence. Despite this, courts in authoritarian regimes experience high amounts of litigation challenging the government and they rule against the government frequently, particularly in economic litigation (C. E. Schwarz 1977; Shvets 2013; Shvets 2016; Solomon 2004; Toharia 1975; Trochev 2010). What's more, it appears that regimes often comply with these rulings<sup>1</sup>.

## 1.1 Argument

My dissertation is concerned with understanding the economic role of courts in authoritarian regimes and the way in which judicial independence affects that role. I argue that judicial institutions can be seen as tools to manage a critical tension between agency control and economic investment in authoritarian regimes. Like previous theories, I argue that leaders of authoritarian regimes should be particularly concerned with maintaining power compared to democratic regimes, considering the

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<sup>1</sup>See Chapter 2 for empirical evidence of the patterns described here.

consequences of removal for authoritarian leaders can range from imprisonment to death (Boix and Svobik 2013; Epperly 2017; Epperly 2019; Hess 2013; Powell and Thyne 2011; Svobik 2012). Maintaining the loyalty and support of agents is critical to remaining in power (Egorov and Sonin 2011; Gandhi and Przeworski 2006). One important way authoritarian regimes do this is by controlling access to potential rents from corruption and low level expropriation (Hollyer and Wantchekon 2015; Shleifer and Vishny 1993). Control over access to corruption can be used to both reward loyal agents, and punish disloyal ones.

However, because authoritarian regimes also desire economic development and investment this method of agency control is problematic (Geddes et al. 2014; N. M. Jensen et al. 2014; Moustafa 2007; Pepinsky 2009; Wang 2015). Regimes require some level of economic development to access resources needed to fend off and co-opt potential threats to their rule, but allowing agents access to corruption undermines this. This produces a tension between maintaining the loyalty of agents and attracting economic investment. I will refer to this tension as the “agent-investment tension.”

I argue that this tension is driven by the fact that dictators lack information on how the actions of their agents affect economic actors. Because economic investment is so vital for regime survival it is in regimes’ interest to limit corruption in order to attract investments. However, the level of corruption undertaken by agents is inherently difficult for the regime to monitor and address (Birney 2014; Hollyer and Wantchekon 2015).

I argue that courts can provide information the regime needs to monitor corruption. This information allows regimes to manage the agent-investment tension in a way that both maintains the loyalty of agents and attracts economic investment. As decentralized and formalized monitoring institutions, courts incentivize third parties to generate a stream of information at little cost to the regime (Ginsburg and Moustafa 2008; Magaloni 2008; McCubbins and Schwartz 1984). Judicial rulings in cases

challenging agent action provide signals to the regime about the level of corruption agents engage in. If the regime can trust this information, this would enable the regime to monitor agent corruption and strike a balance between its need to reward agents and its need to attract economic growth. This raises the question: what type of court should we expect governments to create to manage this trade-off?

In answering this question, I argue in contrast with the current literature that there is a trade-off between judicial independence and how well courts can monitor for the regime. As judges become more independent, they are less and less likely to rule in a way the regime would agree with. A key insight of my theory is that the regime will only choose to enforce the decisions of courts without reviewing those decisions when the regime can trust that judicial rulings are in its own interest. If courts are too independent, then the regime cannot trust that the court's rulings are aligned with the regime's interest. In order for judicial monitoring to alleviate the agent-investment tension, courts cannot be too independent from the regime. Only within a range of limited independence can dictators increase judicial independence in order to better attract investment. Judicial rulings from sufficiently dependent courts provide regime leaders with trustworthy signals that allow the regime to manage the trade-off between investment and agent corruption. In turn, this allows the regime to reduce agent corruption, even to some extent beyond its own preference, in order to attract investment. By manipulating judicial independence and utilizing the monitoring capacity of the judicial system, regimes are able to resolve an important tension and increase their chances of remaining in power and in control of the regime. However, my framework emphasizes that there is a limit to how independent courts can become and still perform this function.

## 1.2 Plan of Book

Proceeding forward, in Chapter 2 I will elaborate on the nature of the puzzle discussed here. One part of this puzzle focuses on the nature of dependent courts in authoritarian regimes and what they are used for. Why do economic actors challenge government action in courts widely thought to be dependent on the regime? Why do these actors sometimes win in substantial and important cases in these courts? Another part of this puzzle concerns the way authoritarian regimes interact with courts both independent and dependent. Namely, why do the majority of authoritarian regimes appear to have mixed records of compliance with the judiciary even as the majority of courts in authoritarian regimes have very limited independence?

I analyze expropriation cases in Mexico under authoritarianism as well as present cross-national evidence on judicial independence and judicial compliance in authoritarian regimes. This evidence suggests that even though high levels of judicial independence are rare in authoritarian regimes, it is not uncommon for courts to rule against the government and the government to comply with these rulings. I give an overview of extant theories that might address these patterns and highlight that none of these theories provide a logic that would explain these empirical facts. I present a theory of courts in authoritarian regimes that provides a way to understand these empirical patterns. I discuss the key tension that drives my theory of courts in authoritarian regimes as a tension between regime compensation of agents through corruption opportunities and the regime's need to attract investment. I outline the nature of agency control in authoritarian regimes and discuss how the nature of agency control interacts with and undermines the regime's ability to generate economic investment and growth. I present my theory that courts can help regimes to manage the agent-investment tension by facilitating transmission of information about agent corruption to regime leaders. I discuss why highly independent courts in authoritarian regimes are not be able to do this, and why instead regimes must rely on courts with



limited independence.

In Chapter 3 I develop and analyze a formal model of the theory discussed in Chapter 2. This model formalizes the interaction between an investing firm and a dictator, both with and without a court, in order to form predictions over the conditions under which we might see changes to judicial independence and the relationship between the dictator and the judicial system. I examine how judicial independence impacts how courts interact with the tension between investment and agent corruption. I discuss how and why courts can help both governments and firms at low levels of independence. I present comparative statics in order to form empirical predictions from this model. I also discuss how this model can help make sense of the patterns I observe in Chapter 2.

In Chapter 4, I present empirical tests of several comparative statics derived from the formal model in Chapter 3. I test these comparative statics utilizing exogenous changes in global export commodity prices in authoritarian regimes. I find evidence largely consistent with my model, and consistent with the idea of judicial independence in authoritarian regimes being a product of the trade-off between agency monitoring and attracting economic investment.

Finally, I conclude with thoughts of the implications of this theory for scholarly work as well as for development and judicial independence broadly in authoritarian regimes. This dissertation offers a new framework for understanding courts in authoritarian regimes and beyond. This framework offers a new path to understanding the nature of rule of law in authoritarian regimes. Further, this dissertation offers a more integrated approach of how the nature of authoritarian rule and agency control interacts with nominally democratic institutions. In addition to this contribution to the academic literature, my dissertation has important implications for policy design, activism, and non-governmental organization intervention in authoritarian regimes.

## Chapter 2 The Economic Role of Courts in Authoritarian Regimes

In Chapter 1, I described how a firm was able to successfully sue the Argentine autocratic military junta over a commercial matter related to federal expropriation in one of the world's least independent judicial systems. This is was not a one-off, idiosyncratic event. A search of expropriation cases in the Argentine Supreme Court database turns up dozens of similar results <sup>1</sup>. Beyond Argentina, there is evidence in a variety of settings that courts are used to challenge government action in authoritarian regimes even when they are widely considered to be dependent. Examples of the importance of dependent commercial courts to economic actors can be found in authoritarian regimes such as Pakistan after military coup, Spain under General Franco, and Singapore among others (Chemin 2009; Chua and Haynie 2016; Ginsburg and Moustafa 2008; Toharia 1975).

Russia is one prominent example, with authors finding very high use of commercial courts to challenge government action in one of the world's most prominent authoritarian regimes under the rule of Vladimir Putin (Lambert-Mogiliansky et al. 2007; Shvets 2013; Shvets 2016; Solomon 2004; Trochev 2010). Particularly interesting is the finding that anti-government litigation and rulings are relatively widespread even among judges hand picked by the regime and appointed to federal commercial courts (Shvets 2016; Trochev 2010). Trochev writes:

“In 2008,...courts ordered the Russian government to pay 33.2 billion rubles (\$1.1 bln US) to 137,359 plaintiffs who successfully sued Russia just in two kinds of lawsuits: for the damages caused by wrongful actions of

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<sup>1</sup>A database of judicial decisions of the Supreme Court of Argentina can be found online at <https://sj.csjn.gov.ar/sj/>

government officials and the for the failure of federal government agencies to perform their contractual obligations” (Trochev 2010 pg. 1).

Another illuminating example of the ways in which courts closely aligned with authoritarian regimes are regularly used to challenge regime action in the economic sphere can be found in Mexico under the rule of the Partido Institucional Revolucionario (PRI). The PRI held uninterrupted control of national legislative, judicial, and presidential institutions from 1929-2000 in Mexico. The party was able to do this by maintaining a tight grip on electoral institutions through electoral fraud, intimidation, and coercion in order to operate as a dominant party autocratic regime for over 70 years. During this time, Mexican Presidents had extraordinary control over the federal judiciary and were not shy in exercising this control. In fact, out of the 14 party Presidents in the 20<sup>th</sup> century, none appointed fewer than 30% of the justices on the Supreme Court during their time as President (Magaloni 2008). And most presidents were responsible for appointing over half of the Supreme court during their presidential tenure, with some even replacing the entire court or doubling the number of justices (Magaloni 2008).

While justices were appointed by the President with consent of the Senate, the tight party grip on both institutions and strong centralization of power in the office of the Presidency meant in practice the President faced little to no opposition to his choices (Magaloni 2006). While on paper justices were often appointed with life tenure, removing unwanted justices was not a serious problem for the PRI. Almost half of Supreme Court Justices served for less than 6 years. In addition, PRI control of the legislative branch meant Presidents could easily amend the constitution to eliminate life tenure or change the number of justices on the Supreme Court as needed. In fact, the Mexican constitution was amended over 200 times in this period and the number of Supreme Court justices was changed 5 times (Magaloni 2008).

The Supreme Court Justices were chosen for their impeccable party credentials

and loyalty to the party and the President (Pozas-Loyo and Ríos-Figueroa 2018). In addition, these justices had very strong career incentives to rule in line with the government as their limited tenure often ended in party affiliated careers and positions, which were highly conditional on loyal behavior while in office (Domingo 2000; Magaloni 2008; Pozas-Loyo and Ríos-Figueroa 2018). These justices were then responsible for appointing and promoting all lower federal judiciary positions.

From formerly secret recorded minutes of Supreme Court meetings over appointments, it is apparent that for nearly all of the mid-20<sup>th</sup> century candidates were chosen and appointed on the same basis of party loyalty and ideological adherence to the current president's vision that produced the justices (Pozas-Loyo and Ríos-Figueroa 2018). According to observers, this system of appointment and top down control of the judiciary from the Supreme Court was “key to maintaining the judicial system for the benefit of the autocracy” (Magaloni 2008 pg. 181) which resulted in a “highly responsive and subservient judiciary” (Magaloni 2008 pg. 181).

In this dependent judicial system, the primary legal tool that citizens could use to challenge government action was the amparo action (Magaloni 2008; C. E. Schwarz 1977). Amparo actions allowed lawsuits to challenge government action or inaction in order to protect an individual's rights under the constitution. This potentially included any government action, so long as it could be tied to a constitutional right, and in practice included many forms of regime action in economic and commercial matters. Scholars have argued this subservient system was set up to be strong enough to “monitor lower level officials and judges” but kept “weak enough to prevent citizens from enforcing their rights vis-á-vis the regime” (Magaloni 2008 pg. 181). Because courts were so dependent, scholars argue that “citizens found little effective redress for their grievances through the courts” against autocratic abuse (Magaloni 2008 pg. 190). As a result, the prevailing view in the literature of the Mexican judicial system and those like it is that largely dependent courts such as these were of no use in challenging

the government in important matters such as economic cases. As Magaloni argues,

“In important issues involving expropriation of property, harsh economic regulation, and the violation of due process, citizens were subject to government abuses but could not challenge these abuses through the courts.” (Magaloni 2008 pg. 181)

One reason for the perceived ineffectiveness of courts in this area is that the Mexican Constitution granted extreme economic powers granted to the government in Article 27. This Article established that “all land and natural resources originally belonged to the state, which could expropriate private property if it could be justified in light of the ‘common good’ ” (Magaloni 2008 pg. 192). Because the constitution granted the regime extremely wide latitude in economic regulation and expropriation the Mexican judicial system was seen as having no real power to constrain the government in this area in particular.

But if this is the case, how are we to understand the high amparo caseloads during this period? Empirical accounts reveal that citizens and firms utilized courts and amparo actions to challenge government action in administrative and economic cases quite frequently. In 1974 alone, over 63,000 amparo cases challenging government actions were heard (C. E. Schwarz 1977). While this figure is from a single year, amparo caseloads in the tens of thousands was not unusual for Mexico when comparing patterns from previous decades (Gonzalez 2002; C. Schwarz 1972; C. E. Schwarz 1977). The fact that a large volume of cases challenging government action under the PRI was sustained over decades indicates that citizens and economic actors did not view the amparo suit as useless to challenge government action.

Further, how are we to understand why claimants so often win in these cases - especially in economic cases that should be important to the regime? In analyzing amparo cases in this period, scholars have found a surprisingly high rate of rulings against the government. For example, Gonzalez Casanova analyzed a random sample

of 3700 amparo decisions made by the Supreme Court during the PRI period against the executive branch, and found that claimants won 34% of these cases (Gonzalez 2002). In another analysis, Schwarz finds that in administrative and labour cases, federal courts ruled against the government in 61% of cases (C. Schwarz 1972). This study also finds that between 1964 and 1968 government is ruled against 43% of the time in all cases where the government is a party. These are not trivial rates of anti-government decisions, and are far too frequent to chalk up to mistakes or unique events.

Especially puzzling given the extreme dependence of the Mexican judiciary and the perceived importance of economic policy and expropriation is the analysis of expropriation cases during the PRI period in Herrera-Martin 2014. Throughout the period of PRI rule, the Supreme Court issued decisions in 510 cases challenging expropriation orders at all levels of government (Herrera-Martin 2014). The majority of the cases heard, at just over 58%, were cases challenging state level expropriation. Municipal level expropriation was the smallest share, at nearly 5.5%. Cases challenging federal level expropriation was nearly 36.5% of the total (Herrera-Martin 2014).

Table 2.1: Expropriation Orders Struck Down in Mexico

<b>Decision Grounds</b>	<b>Supreme Court Rulings</b>	<b>Percent Struck Down</b>
Procedure	259	43.24%
Public Purpose	114	68.42%
Compensation	96	56.52%
Prior Hearing	27	22.22%
Jurisdiction	11	90.91%
Hearing	3	100%

In this extremely dependent court system, the Supreme Court ruled against the government and struck down the expropriation order in a surprising 51.57% of cases challenging expropriation. A breakdown of cases by decision grounds is shown in Table 2.1 which is created from Table 4, Table 5, and Figure 5 in Herrera-Martin 2014. Hundreds of expropriation orders were successfully challenged primarily on grounds

of procedure, public purpose, and compensation. Though compliance is difficult to observe directly, there is substantial evidence that the government frequently, but not always, complied with these rulings despite their cost and reversal of government action (Herrera-Martin 2014).

Under authoritarian rule, Mexican judges were appointed based loyalty to regime leaders. The Supreme Court had no insulation from executive interference in the number and makeup of judges and the regime was easily able to amend or alter the constitution as they pleased. Judges faced very strong career incentives at every level to act in line with regime wishes. Despite this, Mexican courts under authoritarianism ruled against the government quite frequently in cases challenging government action in administrative and economic cases, even at the level of the Supreme Court. Indeed, the high volumes of litigation and win-rates against the government indicate that Mexican courts were an important venue through which citizens and firms could challenge government action despite the dependent and regime-aligned nature of the system.

## **2.1 Judicial Independence and Compliance in Authoritarian Regimes**

The empirical examples reviewed so far describe a pattern of dependent judiciaries frequently ruling against authoritarian regimes in important economic cases, and regimes often appearing to comply with these rulings. But how widespread might these patterns be? To get a sense of the extent to which these examples might be representative of courts in authoritarian regimes, I examine cross-national empirical data. First, I examine how levels of judicial independence vary in authoritarian regimes. Then, I examine how frequency of compliance with the judiciary varies in authoritarian regimes.

### 2.1.1 Judicial Independence in Authoritarian Regimes

What does judicial independence look like in authoritarian regimes? I examine patterns of judicial independence in authoritarian regimes using Latent Judicial Independence (LJI) scores developed by Linzer and Staton 2015. This measure is formed from a latent variable model which uses several existing cross-national measures in order to capture the underlying concept of de facto judicial independence across the measures. The model used to construct this measure effectively handles missingness as well as temporal dependence in the data, and has been shown to have high reliability as a measure of judicial independence. This represents the best available measure to capture judicial independence for my purposes, and is widely used within the field as a cross-national measure of de facto judicial independence (Beazer and Blake 2018; Chilton and Versteeg 2017; Epperly 2012).

In order to provide context to this measure in authoritarian regimes and better interpret the observed levels of judicial independence, I compare the differences in the distribution of judicial independence across authoritarian and democratic regimes. To compare democratic and authoritarian levels of judicial independence, I measure democracy and authoritarianism using the measure developed in Cheibub et al. 2010, a widely utilized cross-national measure of regime type (Acemoglu, Naidu, et al. 2019; Hollyer, Rosendorff, et al. 2011; Svobik 2012). This measure is a binary measure of democracy and dictatorship where a country is coded as a democracy if the country has free and fair elections and evidence of peaceful transition of power through election, and the country is coded as a dictatorship if it does not. This provides a binary measure of democracy and dictatorship for all regimes from 1946 to 2008. Many measures of democracy include other normative factors, such as rule of law, in their coding (Coppedge et al. 2017; Jagers and Gurr 1995). This could potentially pose a problem for interpretation to the extent that these concepts are also correlated with judicial independence. The Cheibub et al. 2010 minimalist measure of democracy and



dictatorship avoids these issues and is the best measure for my purposes.

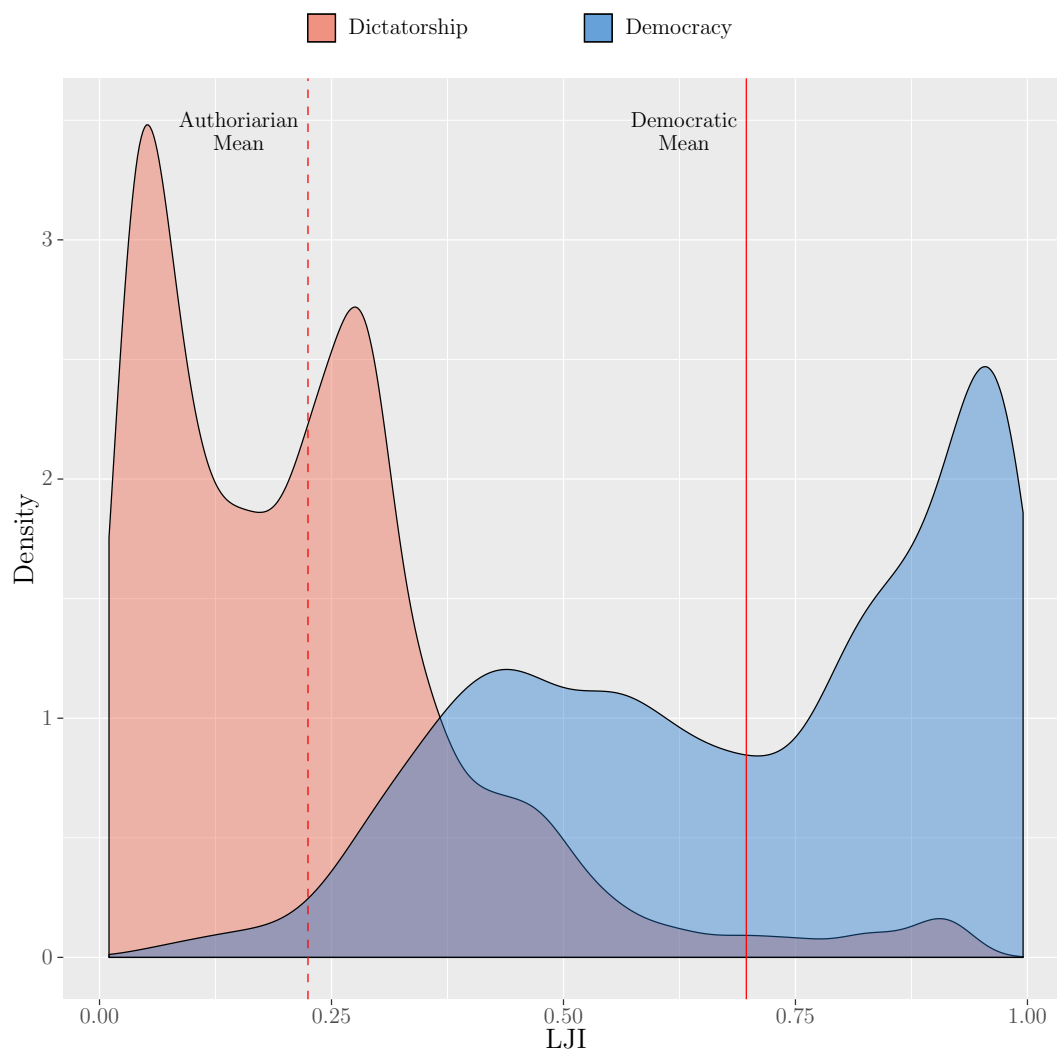


Figure 2.1: Yearly LJI in Democracies and Dictatorships 1946-2008

Figure 2.1 presents a density plot of LJI scores for all democracies and dictatorships existing between 1946 and 2008. Courts in dictatorships are on average far less independent than courts in democracies. The mean scores for all democracy years is over three times that of dictatorships. One example near the authoritarian mean is Chinese courts in the very beginning of Deng Xiaoping's reforms to the Chinese economy. From 1978 to 1983 China's LJI score ranged from about .21 to .23, hovering right around the authoritarian LJI mean of .22. For comparison, a democratic country

near the democracy mean of .69 is France in the early 2000's. Russia since the fall of the Soviet Union and Mexico under the PRI are examples of above-average LJI scores for authoritarian regimes. In Russia, LJI ranged from about .3 to .35 since the early 1990's. In Mexico, LJI ranged from around .28 to .45 from 1948 to the end of the PRI period. Argentine courts during the late 1960's to 1970's are an example of below average LJI scores for authoritarian regimes with LJI scores ranging from only .08 to .18 during this period.

The distribution of dictatorship-year scores is well to the left of the distribution of democracy-year scores. Over 93% of authoritarian observations are below center on this scale. There are almost no dictatorships in which judicial independence meets even the average level of independence in democracies across all country years, consisting of less than 3% of the total authoritarian observations. There are only 8 authoritarian countries in this period that ever reach average levels of judicial independence in democracies, and of these over three quarters of the observations come from just two authoritarian countries: South Africa and Botswana. Other countries that reached this level did so only very briefly, only for a couple years at most.

These patterns indicate that only very few courts in authoritarian regimes reach even moderate levels of independence. On the whole, courts in dictatorships are simply not very independent. However, while the evidence does not indicate a pattern of independent courts, neither does it indicate that courts in authoritarian regimes are totally lacking in independence. Rather, most courts in authoritarian regimes appear to have very low to middling levels of independence.

### **2.1.2 Judicial Compliance in Authoritarian Regimes**

In order to examine judicial compliance in authoritarian regimes, I need both a measure of government compliance with the judiciary and a way to identify authoritarian regimes over time. To measure authoritarian regimes, I use the Cheibub et al. [2010](#)

measure again. To measure compliance, I will use the Varieties of Democracy (V-dem) project's information on judicial institutions (Coppedge et al. 2017). Specifically, I will use V-dem's yearly measure of government compliance with the judiciary. To get this measure, V-dem proposes the following question to country experts: "How often would you say the government complies with important decisions of the high court with which it disagrees?" Each expert answers this question by a five-level response ranging from 'Never' to 'Always.' V-dem reports an item response theory measurement model which takes these scores and transforms them to a continuous measure as well as ensures scores are comparable across coders and time periods. To ease the interpretation in this section, I analyze scores from the measurement model that are transformed to exist on the scale of the original answers ranging from a score of 0 ('Never') to a score of 4 ('Always') so that a higher score indicates increasing frequency of compliance with important decisions of the high court that the government does not agree with.

Figure 2.2 presents a density plot of V-dem's yearly compliance with the judiciary measure for all democracies and dictatorships between 1946 and 2008. It is clear that authoritarian regimes exhibit much wider variation in yearly compliance with courts than they do with judicial independence. Authoritarian regimes exhibit lower average compliance than democracies, and only rarely appear to 'always' comply with courts. But in contrast to judicial independence, it is not true that compliance is rare in authoritarian regimes. Where before less than 7% of authoritarian observations had LJI scores above the middle of the scale, with judicial compliance authoritarian regimes are much more dispersed with a nearly equal split of authoritarian observations above the middle of the scale and below it.

The authoritarian mean of 1.8 on the V-dem scale indicates that a regime complies with important decisions with which it disagrees roughly half of the time. Though far from perfect compliance, this amount of compliance is non-trivial. This is especially so given the lack of judicial independence observed in Figure 2.1. For perspective,

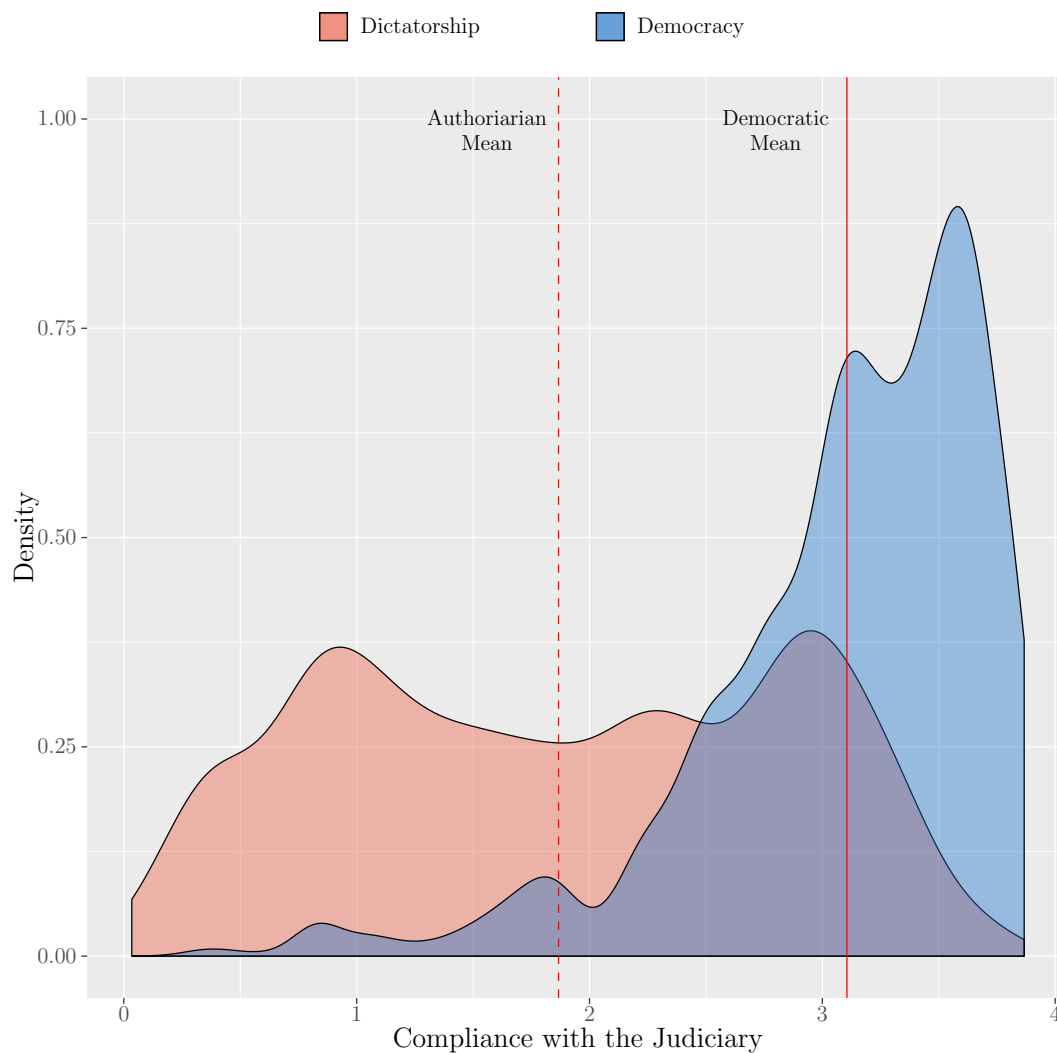


Figure 2.2: Yearly Compliance in Democracies and Dictatorships 1946-2008

post-communist Russia has compliance with the judiciary scores near the authoritarian mean of 1.8 for most of the 1990's. Argentina during authoritarianism is an example of a more highly compliant authoritarian regime, with compliance scores right around 3 on the V-dem scale indicating the regime 'usually' complies, despite the very weak state of judicial independence in Argentina throughout this period. Mexico is another example of fairly high compliance, with compliance scores ranging from 2.6 to 3.15 throughout this period despite the frequent rulings against the regime in commercial and administrative cases.

## **2.2 Theories of Judicial Institutions in Authoritarian Regimes**

The empirical patterns analyzed so far demonstrate that judicial institutions in authoritarian regimes in Mexico, Argentina, and Russia are not unique but rather conform with the general patterns of courts in authoritarian regimes. The patterns show that most regimes do not have independent courts, but rather courts with low levels of independence. Despite this, courts in authoritarian regimes are fairly frequently, though not always, complied with when they rule against the regime.

How can the existing literature help us to understand the observed patterns of compliance, dependence, and rulings of courts in authoritarian regimes? In the following sections, I examine the existing literature on courts in authoritarian regimes and focus on theories that might explain patterns like these. Because the cases discussed involve notoriously dependent courts, I first detail the existing literature that focuses on the reasons and rationale for the role of dependent courts in authoritarian regimes. Then, because these cases involve economic actors and litigation challenging government action in the economic realm, I detail the existing literature that focuses on the economic role of courts in authoritarian regimes.

### **2.2.1 Dependent Judicial Institutions**

Despite the fact that most courts in authoritarian regimes lack independence, relatively few scholars have attempted to directly address the role of dependent courts in dictatorships. One potential rationale for the prevalence of dependent courts in authoritarian regimes is straightforward and simple. If independent judicial institutions are a potential threat to regime interests, then this threat can be avoided by keeping judicial institutions subservient to the regime. So one often implicit reason authoritarian regimes are thought to choose to have dependent judicial systems is to avoid any potential threat that independent judicial systems might pose (Moustafa

2007; Wang 2015).

Another reason is that dependent courts are useful in and of themselves as institutions to impose regime control on political opponents (Ginsburg and Moustafa 2008; Pereira 2008; Shen-Bayh 2018). In the hands of an autocrat, dependent judicial systems can be used as an alternate and complementary mechanism for the repression of both elites and the masses. Though often implicit, a core assumption in this literature is that courts are effective for political and social control when the regime can rely on courts to show deference to the regime. Courts that are aligned with and deferential to regime interests are willing to be used as tools for social and political control and can be trusted by the regime to perform this function. This key idea is encapsulated by a quote from Ginsburg and Moustafa in *Rule by Law* where they summarize the findings of Pereira in his chapter covering the use of courts during military rule in the late 20<sup>th</sup> century in the countries of Argentina, Brazil, and Chile:

“Where courts showed deference to the regime, political cases were routed through the regular judiciary and repression was therefore routinized and somewhat domesticated. Where judicial-military relations were poor, on the other hand, violence was extralegal in character, with much more lethal and arbitrary consequences” (Ginsburg and Moustafa 2008 pg. 5).

Courts can be used by regimes to maintain order and to sideline political opponents - but only if they lack significant independence from the regime and can be trusted to implement the regime’s will (Cheesman 2011; Chua and Haynie 2016; Hilbink 2007; Pereira 2008; Tate and Haynie 1993; Toharia 1975). This is the rationale for why authoritarian regimes often create a parallel system of dependent and regime-aligned courts who are granted jurisdiction to handle politically sensitive cases. One prominent example is the case of Spain under the dictatorship of General Franco. In Spain, ordinary courts were allowed some independence but the regime tightly controlled jurisdiction to funnel sensitive issues into courts and tribunals aligned with regime

interests. Toharia argues these courts and tribunals were created “not so much to accomplish a task as to remove control over key economic problems from ordinary courts to institutions closely dependent upon the Executive” (Toharia 1975 pg. 491).

In addition to Spain and the dictatorships of the Southern Cone, the use of courts for political repression can be observed in several other settings, including Stalinist Russia and Nazi Germany where judicial institutions beholden to the regime were utilized for show trials and punishment of opponents of the dictator (Shen-Bayh 2018). Further examples of the use of courts and judicial institutions for political repression can be found in Cambodia, Egypt, Iran, Zimbabwe, and Kenya (Sadek 2012; Shen-Bayh 2018). But why would regimes choose to rely on dependent courts for political and social control of dissidents rather than use other methods?

Judicial institutions are thought to be useful for dealing with enemies of the regime for several reasons. Perhaps the most important reason is that judicial systems and trials routinize the process of repression and provide a useful veneer of legitimacy and procedure to the regime’s actions (Shen-Bayh 2018). Judicial institutions and the procedures and trials associated with them are powerful symbols of justice and fairness. The power of trials and judicial institutions to shape public narratives is thought to be attractive to regimes as it allows them to “engage in political theater that create[s] a dangerous, subversive ‘other,’ thus unifying the regime and its supporters” (Pereira 2008 pg. 24).

In addition to engaging in political theater and shaping public narrative about opponents, utilizing judicial systems has the benefit of appearing to be an orderly and civilized way of resolving disputes. Using dependent courts for political repression gives the regime a way to handle political opponents where “law and legal institutions can be deployed to sideline opposition and maintain political dominance without resorting to brute force” (Moustafa 2014 pg. 283). This also helps to justify and legitimize the regime using the veneer of the rule of law rather than arbitrary and

capricious use of extra-legal force.

In summary, the literature provides two answers that might explain the role of dependent courts in authoritarian regimes. One answer is simply that keeping judicial systems dependent removes any potential threat that might arise from these systems. The implication is that these types of courts are irrelevant institutions. The other answer is that dependent judicial systems can be relied upon to rule in a way that implements repression and social control on behalf of the regime. Next, I will consider how existing theories understand the role of the judiciary in hearing claims from economic actors challenging the actions of the government.

### **2.2.2 Judicial Institutions and Economic Challenges**

One of the most well known accounts of courts in authoritarian regimes argues that independent and powerful courts with the jurisdiction to hear claims against the government can allow otherwise unconstrained regimes to form credible commitments in the economic sphere, and attract more investment as a result (Ginsburg and Moustafa 2008; Moustafa 2007; Wang 2015). Regimes naturally have time-inconsistent preferences with respect to attracting economic investment (Kerner and Lawrence 2014; North and Weingast 1989; Stasavage 2007). In order to attract investment, regimes have incentives to make an investment-friendly environment, including promises of property rights protections, low taxes, low regulations, and other policies favorable to investors. But once investment has occurred, regimes often have little incentive not to raise taxes or even directly expropriate the property of investors when they need to raise funds or to please other constituents.

Being relatively unconstrained, at least compared to democratic regimes, this time-inconsistent preference problem is thought to be more troubling for authoritarian regimes than democratic ones. There are few political, legal, or electoral constraints on leaders, who have the power to implement wide ranging policies that suit their



whims. Because of these features, it is widely thought that authoritarian regimes have more difficulty credibly committing to respecting property rights of investors and maintaining stable policies in the economic sphere, and as such have greater difficulty attracting investment and growth compared to regimes with more ‘democratic’ institutions (Acemoglu, Johnson, et al. 2001; Acemoglu, Naidu, et al. 2019; Gandhi 2008; N. M. Jensen et al. 2014; North and Weingast 1989).

In both authoritarian and democratic settings scholars have argued that powerful and independent judiciaries can function as a third-party enforcement mechanism to help regimes form credible commitments in the face of time-inconsistent preferences. There is a large and influential literature on the benefits of ‘good’ institutions for economic development. This work links good institutions and rule of law, theoretically and empirically, to lowered risk of arbitrary government action and to economic investment and growth (Henisz 2000; N. Jensen 2008; Klerman 2006; Klerman and Mahoney 2005; Li and Resnick 2003; North and Weingast 1989; Stasavage 2007).

Accordingly, an important literature focuses on how strong and independent legal institutions are beneficial for economic investment and growth (Dove 2015; Haggard, MacIntyre, et al. 2008; Haggard and Tiede 2011; Ma et al. 2010; Messick 1999; R. P. Peerenboom 2002; R. Peerenboom 2009; Root and May 2008; Voigt and Gutmann 2013; Voigt, Gutmann, and Feld 2015). One variant of this logic in authoritarian regimes is advanced most notably by Tamir Moustafa in his 2007 book “The Struggle for Constitutional Power.” This book asks the question, “Why would an entrenched authoritarian regime establish an independent constitutional court with the power of judicial review?” (Moustafa 2007 pg. 4). The answer he provides is that regimes will do this when they need to form credible commitments in order to attract foreign investment. Unconstrained regimes find it difficult to commit to respecting property rights. Investors will be less likely to invest if they think the government will expropriate or otherwise abuse their property. Moustafa argues in line with the

broader institutional literature that “independent judicial institutions are among the primary means to establish credible commitments to property rights” (Moustafa 2007 pg. 24). When deciding whether or not to create independent judiciaries, regimes face a choice between appointing independent judiciaries and “accepting institutional constraints on power” (Moustafa 2007 pg. 24) or in keeping dependent courts and “maintaining unrestrained power and forgoing economic benefits” (Moustafa 2007 pg. 24). He argues that authoritarian regimes will accept institutional constraints in the form of an independent court when the need for economic benefits is sufficiently pressing.

Moustafa develops this theory in the context of Egypt under authoritarian rule in the 20<sup>th</sup> century. He argues that the Egyptian government established “a constitutional court with almost complete independence from executive control in 1979” (Moustafa 2007 pg. 4) in order to attract foreign investment after disastrous expropriations and economic policy of the preceding decades had driven foreign investors away. He argues that the authoritarian government ruling Egypt at the time desperately needed to form a credible commitment to respect the property rights of investors whose assets the regime depended upon. Because of this, the regime chose to create an independent judicial system which could constrain its power. He provides evidence that the court was independent by cataloging various ways in which the court ruled against the regime. He argues that the independence of this court allowed the Egyptian government to form credible commitments to respect the property rights of investors, and successfully attracted foreign investment into Egypt as a result.

Another theory, advanced by Yuhua Wang in his 2015 book “Tying the Autocrat’s Hands,” is a modification of the preceding view of independent courts in authoritarian regimes. In Wang’s view, in authoritarian regimes judicial independence is maintained only in the realm of economic litigation and courts are dependent otherwise. In this account, Wang agrees that authoritarian rulers “must respect the rule of law to make

a credible commitment to investors, whose assets are urgently needed” (Wang 2015 pg. 18). However, Wang argues that authoritarian rulers do so in a way where “they sequence the legal reforms such that they ‘tie their hands’ in commercial cases yet extend their discretionary power in the political realm” (Wang 2015 pg. 18). This partial form of the rule of law entails the dictator constraining their discretionary power in economic cases challenging the government, but not in sensitive political cases. This allows authoritarian leaders to make credible commitments to investors, while simultaneously “limiting citizens’ ability to use the judiciary to challenge the state” (Wang 2015 pg. 158). This results in courts being independent in the economic sphere, yet dependent in the political sphere. Authoritarian leaders are able to make this commitment in the economic sphere because it relies on investors, but need not make any such commitment in the political sphere.

Wang analyzes and develops this theory using the case of China’s systemic legal reforms from the 1990’s onward. Like Moustafa, Wang argues that the Chinese government faced incentives to increase judicial independence and constraints on government action for economic reasons. However, the Wang account differs in a number of important respects. First, Wang argues that the Chinese Communist Party (CCP) increased judicial independence in response to demand from foreign firms. He argues that foreign firms desired judicial independence in order to better compete with local firms who had connections to local politicians and bureaucrats that foreign firms did not. This differs from Moustafa’s argument, where the government acted to attract investment rather than in response to already existing investors. Second, Wang argues that the CCP only provides judicial independence in the economic sphere as a result of demand from foreign firms. This demand from foreign firms allowed the CCP to keep courts dependent and unable to challenge the regime in political cases while at the same time increasing independence and power to constrain the regime in economic cases.

### 2.2.3 Empirical Patterns Re-examined

Why would a dependent court rule against the government in economic and administrative cases? Current theories are focused on the political role of dependent courts or on the economic role of independent courts. As a result, these theories are not able to account for or directly speak to this phenomenon. None of the extant theories that might address these patterns gives us a way to understand why a dependent court would rule against the government in a costly expropriation case and face no repercussions. In fact, extant theories would not expect dependent courts to have any meaningful litigation challenging the government in the first place.

The current literature has no role for dependent courts in economic litigation challenging the regime, and so it is difficult to understand why a dependent court would consistently rule against the regime in important economic cases. From the point of view of these theories, it is hard to understand why courts were granted jurisdiction to hear challenges to government expropriation in the first place. It is hard to understand why a firm would waste its time suing in a judicial system that lacks independence, and it is especially hard to understand why the court ruled against the government in such a case.

The fact that dependent courts rule against authoritarian regimes so frequently raises another question - why do authoritarian regimes sometimes comply with these rulings and sometimes not? From any of the dominant perspectives on courts in authoritarian regimes, the patterns of compliance that can be observed in authoritarian regimes are perplexing. While these theories do not claim to make direct predictions over the levels of regime compliance observed, the theoretical frameworks they offer do lead to reasonable inferences one might make about how much compliance with court rulings should be expected.

One type of court described above is dependent and a tool of the regime, useful for projecting legitimacy and power over regime enemies and the general population.

Under this theoretical framework, this type of court should reasonably be expected to almost never rule against the government, and the government would certainly not be expected to follow the order if it did. As a result, we should never observe any compliance with cases the government disagrees with in these regimes. However, we can observe that despite the majority of courts lacking high levels of independence - compliance with courts is not rare at all in authoritarian regimes. In fact, most authoritarian regimes have middling levels of compliance with courts in contrast to what these theories would predict.

The other type of court is independent of the regime, useful for monitoring agents and constraining the regime itself. Under this theoretical framework, this type of court should reasonably be expected to rule against the government fairly frequently, and the government should be expected to follow these judicial orders. These theories predict both that independent courts will rule against the regime, and independent courts derive their value from their ability to constrain the regime. As a result, we should see both that the courts rule in ways the government disagrees with and we should observe only high levels of compliance with the court. However, this is not the case as we can observe that authoritarian regimes do not tend to have extremely high levels of compliance. In addition, empirically it appears that the vast majority of authoritarian regimes only ever reach low to middling levels of independence and that highly independent courts in authoritarian regimes are exceedingly rare in the first place.

What if courts, as Wang suggests, are only independent of the regime in certain types of cases, such as commercial or administrative law? If this is the case then we should still expect to see very high levels of compliance. Under this theoretical framework, courts should only rule against the government in the types of cases in which their independence is respected, in which case they will be complied with. In cases where their independence is not respected, they should not rule against the

government at all.

The current understanding of courts in authoritarian regimes does not offer a ready explanation to the patterns observed in this chapter. None of these theories offers an explanation for why most authoritarian regimes exhibit mixed levels of compliance with the judiciary despite most authoritarian courts exhibiting low levels of judicial independence. None of these theories offers an explanation for why dependent courts might be used to challenge regime administrative and economic action at high volumes and significant success rates. And in fact, the logic of these theories imply empirical patterns that we simply do not observe broadly across authoritarian regimes. The fact that these puzzling patterns are widespread indicates that there is an important gap in our understanding of courts in authoritarian regimes. In the next section, I address this gap by discussing an inherent tension prevalent in authoritarian regimes which I argue can help explain these patterns.

## 2.3 The Agent-Investment Tension

A fundamental assumption applicable to all political regimes is that regime leaders want to stay in power, and there are many factors that affect how and if they do so. My theory focuses on two particular factors that have an important impact on this goal: access to rents and economic resources, and the reliability of government agents.

A long empirical record demonstrates that poor economic growth and high economic instability are predictive of authoritarian regime breakdown and leadership turnover, as well as democratic transition (Pepinsky 2009; Wright and Escribà-Folch 2012). Poor economic performance is often a primary reason for the involuntary removal of autocratic rulers (Geddes et al. 2014). Past research has demonstrated that investment and economic growth gives rulers the tools necessary to stymie opposition from both elite and mass threats. For example, foreign direct investment (FDI) is associated with greater stability and longevity for authoritarian rulers (Escribà-Folch 2017). Likewise,

regimes that invest in institutions that improve their investment climate substantially increase leadership survival, particularly in autocracies (Arias et al. 2018). Other research has found that economic crises and poor growth is associated with increased instability and regime change in autocracies (Rosenfeld 2018). This research suggests that an important way that dictators can solidify their rule and reduce the probability of losing power is by generating economic development through investment in the economy <sup>2</sup>.

Agent control and loyalty in authoritarian regimes is also closely connected to the survival of dictators (Bueno de Mesquita et al. 2005; Egorov, Guriev, et al. 2009; Egorov and Sonin 2011; Gregory 2003; Montefiore 2010; Svoboda 2012; Tyson 2018) <sup>3</sup>. Authoritarian regimes vary in the extent to which power is centralized but every regime depends on agents in order to operate and authoritarian regimes are no exception to this rule. Loyal agents are needed to implement policies in line with the dictator's goals and as such are a critical element to maintaining power and effectively thwarting threats to that power. In addition to policy implementation, maintaining the loyalty of agents is important to avoiding threats stemming from factionalism. Dictators often tie career advancement and appointments for political offices to loyalty and ideological alignment, rather than purely to performance, due to the importance of agent loyalty in authoritarian regimes (Egorov and Sonin 2011; Shih et al. 2012).

Though both agent loyalty and investment are necessary for authoritarian leaders, the way in which dictators maintain the loyalty of agents produces a tension between agent loyalty and economic investment. An important way in which dictators maintain the loyalty of agents is by distributing goods or policies that agents desire (Bueno de

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<sup>2</sup>Economic investment, development, and growth in my theoretical framework can involve anything from creating new industrial plants to expanding a restaurant or investing in the stock market. The relevance to this dissertation is that economic development and growth are driven by economic actors choosing to invest their capital within an economy in the expectation that this investment will bring them profit. I make no distinction between international and domestic sources of economic investment.

<sup>3</sup>Agents in authoritarian regimes are any actors that hold political or bureaucratic office that the dictator relies on for policy implementation. This can include governors, town mayors, members of the legislature, secret police officers, bureaucrats in the finance ministry, etc.

Mesquita et al. 2005). One such good is the opportunity to use political or bureaucratic positions to engage in corruption that personally benefits agents (Wintrobe 1998). In authoritarian regimes, providing rent-seeking opportunities through leadership positions to key opposition elites in the legislature allows the regime to co-opt these elites, buy their loyalty, and reduce threats of social protest (Reuter and Robertson 2015). As a result authoritarian regimes commonly foster loyalty among their agents by controlling access to opportunities for corruption inherent in political and bureaucratic appointments (Darden 2008; Hollyer and Wantchekon 2015; Sun 2017; Urban 1985).

Traditionally corruption is defined as the illicit sale or use of government property or power for personal gain by government officials (Shleifer and Vishny 1993). For instance, government officials may collect bribes for providing permits or licenses, giving passage through customs, or for prohibiting the entry of competitors through selective restriction of the right to engage in commerce or operate businesses (Drury et al. 2006; Shleifer and Vishny 1993).

In this dissertation, I take a broader approach to defining corruption than just considering bribery - though bribery is certainly an important component of corruption. Particularly, I wish to highlight that corruption may also include a variety of nominally legal government actions that nevertheless involve the illicit use of government power for personal gain. As scholars have noted, there are many opportunities for illicit personal enrichment inherent in political positions. Prime political or bureaucratic positions can “provide its holder with rent-seeking opportunities, a platform for lobbying for business interests... Legislative leadership positions can also provide particular individuals with direct legal authority over questions of personal interest to them” (Reuter and Robertson 2015 pg. 237). Policies such as industrial zoning, the setting of fees for goods and services, expropriation of private property, setting taxes and tariffs, and more are all actions that are legally within the scope of government powers in most regimes. However, each of these actions could be used to generate



personal benefits for the agents responsible for implementing them or their allies. For instance, politicians may implement new laws, or bureaucratic agencies may implement new regulations, that increase the property value of holdings for themselves or their allies. The arbitrariness of authoritarian rule and the significant discretion inherent in the positions of many bureaucratic officials or politicians provide ample opportunity to use government positions for personal enrichment beyond just bribery, extortion, or embezzlement. The key concept I wish to capture includes all of the ways in which agents personally enrich themselves through control of goods or powers that belong to the state, whether through legal or illegal means.

Using the personal benefits provided by political positions to reward agents also includes taking advantage of differences across positions and the dictator's control of career advancement within the government (Hollyer and Wantchekon 2015; Iyer and Mani 2012; Lazarev 2007). Some government posts are naturally more lucrative than others in terms of the access they offer to rents from corruption. These posts might involve frequent opportunities for large amounts of bribery or otherwise provide ample opportunity for corruption. Other posts are much less desirable and offer very limited ability for personal enrichment. By assigning loyal agents to attractive positions such as in a customs and procurement offices or a senior position in the ministry of finance, regime leaders can reward and keep their loyalty. In addition, authoritarian rulers can attempt to gain followers and sway the loyalty of enemies by providing them with plum political positions which offer opportunities for enrichment. In this way, agent loyalty is generated and maintained by providing opportunities to solicit bribes or otherwise personally enrich themselves at the expense of economic actors.

At least in part because of these dynamics, corruption is endemic to authoritarian governance. While there is some evidence that corruption increases in newly democratized countries, this increase is only observed for a brief time at best before corruption in democracies again falls below levels observed in dictatorships (Rock and

Bonnett 2004). In general, features associated with authoritarian regimes are strongly correlated with increased corruption in most empirical analyses. State intervention in the economy, lack of a free press, fiscal centralization, and other factors associated with authoritarian regimes are also associated with higher levels of corruption (Brunetti and Weder 2003; Zaliznaya 2015). In particular, a broad trend is that a lack of political competition is found to be highly correlated with corruption and authoritarian regimes on the whole are far more corrupt than democratic ones (Chang and Golden 2010; Montinola and Jackman 2002; Treisman 2000).

Why would dictators seek to compensate and provide incentives to their agents in this way, rather than in other ways such as providing increased wages or benefits for political officials? One reason that allowing opportunities for corruption is an attractive way to reward agents because it is a cheaper substitute from the dictator's perspective compared to more direct monetary benefits. Dictators may not always have the capacity to offer compensation that agents would want directly, and may not always have the capacity to prevent corruption in any case. Dragu and Przeworski argue that authoritarian leaders may in some circumstances prefer their agents not engage in corruption to increase their payoffs at least for security agents (Dragu and Przeworski 2019), however the wide prevalence of corruption in authoritarian regimes appears to imply that even if dictators have this preference it is typically not possible to enforce it (Hollyer and Wantchekon 2015). Controlling agent compensation directly would require that the dictator also control and prevent all forms of corruption or use of political office for private gain. This is a difficult and costly enterprise even in advanced democracies, which have a plethora of third party watchdog and media agencies that can effectively monitor and expose agent corruption. It is likely to be even more expensive and difficult to control this directly in authoritarian regimes. In contrast, to allow agents to utilize the inherent opportunities for corruption in their positions, regime leaders need do nothing but control the appointment of agents.

Rather than build the capacity to find and distribute goods to loyal agents themselves, it is simpler and cheaper for dictators to simply choose not to punish corruption and allow loyal agents to enrich themselves (Hollyer and Wantchekon 2015).

Another reason that utilizing corruption opportunities to reward agent loyalty is attractive to many regime leaders is that it has the benefit of being nontransparent. This allows regime leaders to manage agents in a way that offers a shield from public scrutiny (Hollyer and Wantchekon 2015; Shleifer and Vishny 1993). For some agents, the amount of compensation that would keep them loyal to the regime may need to be huge sums of money that the regime would rather not be seen providing directly. By allowing these agents to control positions of power that offer them access to corruption opportunities capable of producing large rents, the regime is able to manage elite agents and provide them necessary benefits without facing criticism or backlash for doing so.

Incentivizing agents by allowing them opportunities for corruption directly undermines the goal of attracting investment (Bardhan 1997; Barro 1991; Mauro 1995). Bureaucratic and political corruption slows and distorts economic growth, investment, and development. The predominant view is that corruption is damaging to economic performance ‘as both a tax on productivity and a market distortion’ (Drury et al. 2006 pg. 123). However, many authors argue that corruption is worse than a tax because there is no standard central mechanism for collection, which means that corruption is difficult to predict and may far exceed potential tax rates as it drains resources that might otherwise be used for more productive activity (Drury et al. 2006; Rose-Ackerman 1996; Tullock 1967). Because of the illicit and unpredictable nature of corruption, it is also argued that bribes are more distortionary than taxes of the same amount. Further, a culture of widespread corruption means that policymakers may pursue initiatives primarily for the opportunities for personal monetary gain they involve rather than what might be most efficient as a public good and best promote

development.

And while some authors argue that corruption may potentially have economic benefits in some way, such as allowing actors to avoid opaque and convoluted regulations, few would argue that widespread corruption is the most efficient or beneficial strategy to promote economic growth (Wang 2014). Empirical evidence has demonstrated that corruption is strongly associated with reduced private sector investment, even in countries with onerous regulation that corruption might theoretically help bypass and simplify (Bardhan 1997; Barro 1991; Drury et al. 2006; Mauro 1995). The following quote neatly illustrates the reality of investment in authoritarian regimes and why reliance on corruption opportunities to reward agents might deter investment:

“To invest in a Russian company, a foreigner must bribe every agency involved in a foreign investment, including the foreign investment office, the relevant industrial ministry, the finance ministry, the executive branch of the local government, the legislative branch, the central bank, the state property bureau, and so on. The obvious result is that foreigners do not invest in Russia.” (Shleifer and Vishny 1993 pg. 615)

On one hand, authoritarian leaders generally have powerful incentives to attract investment and promote economic development. On the other hand, authoritarian leaders also have powerful incentives to allow agents opportunities for corruption for personal enrichment. However, the tolerance of corruption to reward agents comes at the direct expense of economic development by harming businesses and creating an arbitrary business environment where costs and regulations are difficult to predict and plan for. Driven by the goal of remaining in power, authoritarian leaders face a tension between the methods used to control agent loyalty and the need to induce economic investment and development.

## 2.4 The Dictator's Informational Problem

How might dictators solve this agent-investment tension? Dictators want to allow corruption to maintain the loyalty of agents, but also want to limit corruption subject to this constraint in order to attract investment. Suppose dictators could perfectly observe corruption throughout the regime. Dictators could evaluate each instance of corruption based on how much harm it caused to investment, balanced with how necessary corruption is to reward their agents. If an instance of corruption was not unduly harmful to investment, dictators could choose to allow the corruption to stand. But if corruption was too harmful to the goal of economic development, then dictators could choose to punish the corruption and reverse whatever action their agent took. This way, dictators could ensure that agents have access to opportunities for corruption but that this access does not totally impede broader goals of attracting economic growth. In this world, dictators could choose to allow or not allow agent corruption in each instance based on their preferred balance of this tension. This would allow dictators to handle the agent-investment tension by striking a balance that allows them to both maintain agent loyalty as well as attract investment.

However, a key issue is that corruption by its nature is very difficult to monitor and observe (Hollyer and Wantchekon 2015; Pan and Chen 2018). Dictators have an inherent informational disadvantage relative to their agents, and this disadvantage only increases given the illicit and secretive nature of corruption. Dictators rely on their bureaucracies and other agents such as mayors and state legislators to implement a wide range of policies and tasks that potentially affect economic actors. Bureaucracies in modern nations are vast and complicated, making it especially difficult for dictators to monitor the wide range of actions that their agents are responsible for.

Making monitoring even more difficult is the fact that secrecy and lack of transparency is endemic to authoritarian regimes, and attempting to alleviate this secrecy is the purported purpose of many authoritarian institutions (Boix and Svobik 2013;

Hollyer, Rosendorff, et al. 2011). Typically, these institutions are thought to provide information to elites about the actions of the dictator. However, here I am concerned with a different problem - the dictator's informational disadvantage with respect to his agents' corrupt actions. The lack of information on corruption should be a particularly difficult problem for authoritarian rulers who face informational constraints. Authoritarian regimes are less transparent compared to democracies and also lack many of the civil society institutions that democracies have for monitoring bureaucratic and political agents, such as a free and independent press or the mechanism of free and fair elections which can bring corruption to light. To the extent that freedom of the press is allowed, it is generally circumscribed and limited to certain types of investigative tasks (Lorentzen 2014). While it is possible that allowing some form of freedom of the press can alleviate informational problems to some extent, it is unlikely that the limited forms of freedom of the press observed in authoritarian regimes are able to completely resolve the dictator's lack of information.

The inability to observe corruption is a problem for dictators. If a dictator cannot observe corruption, then he cannot credibly promise to limit corruption even if he wanted to. Without any assurance that agent corruption will be kept in check many economic actors may choose to not invest in the regime, preventing the dictator from accessing the resources and revenue he needs. One might think that a potential solution to this problem is that dictators could rely on firms to alert them to actions that are beyond the dictators' tolerances. Because economic actors experience the corruption, they should have valuable information about whether or not the corruption they experienced is in line with the dictator's preference. If economic actors could convey this information to dictators, then dictators would be spared the cost and difficulty of monitoring their agents. They could use this information to limit corruption while still allowing enough to maintain the loyalty of their agents. However, dictators cannot trust economic actors to report this information accurately. Economic actors want

dictators to prevent all corruption and as a result always have an incentive to make corruption seem as harmful as possible.

Similarly, while regime agents know what corruption has taken place they cannot be trusted either. Personal gain gives agents a strong incentive to hide or misrepresent their actions in order to enrich themselves beyond what the dictator might tolerate. These incentives worsen dictators' relative lack of information with respect to their agents' actions. And beyond the difficulty in observing corruption when it takes place, concluding that agent action was the result of corruption and caused undue damage to economic actors can involve evaluating complex policy decisions that are not obviously the result of corruption. Even when agent behavior is clearly observable, it might be difficult for regime leaders to gauge how that behavior fits with their preferences. In particular, it might be difficult for dictators to know the extent to which actions were personally motivated, and the extent to which actions were sound administrative or policy decisions.

## **2.5 Courts as a Solution to the Agent-Investment Tension**

If the dictator could obtain more information about agent corruption, they could strike a balance to maintain agent loyalty and attract investment by limiting corruption to some extent. How might they obtain the information necessary to do this? My theory argues, consistent with prior literature, that courts can function as effective monitors of agents. A well known argument in the literature on judicial institutions argues that courts are good monitors, and that the monitoring provided by court systems “can help solve information asymmetries and reduce the scope for corruption” (Root and May 2008 pg. 314) by providing dictators with information about agents. The benefit of courts in particular is that they function as a “fire-alarm” oversight mechanism (McCubbins and Schwartz 1984) where information is generated by a dispersed citizenry

rather than a top-down monitoring mechanism. This stream of information generated by citizens can effectively alert the government about “bureaucratic abuses that other forms of vertical oversight cannot” (Magaloni 2008 pg. 181). Bottom-up monitoring makes courts particularly cost effective compared to top-down monitoring, and also has the ability to generate far more reliable and widespread streams of information for the government (McCubbins and Schwartz 1984).

My theory builds off of these theories which have recognized that courts can monitor agents for corruption and disobedience, but it differs from this monitoring literature in an important way. My theory explicitly recognizes that there is a trade-off between judicial independence and the usefulness of courts as monitors. While it is widely recognized in the literature that courts make effective and cheap monitors of agents, to date no authors have directly addressed what type of court might best do so in an authoritarian setting. Rather, the underlying assumption in the literature appears to be that independent courts make the best monitors of agents. In studies of African courts, it has been argued that “opportunities to develop judicial independence arose as leaders grew concerned about corruption” (Widner 2001 pg. 393), and the prevailing view is that China increased judicial independence in order to better monitor its agents (Ginsburg and Moustafa 2008; R. P. Peerenboom 2002; R. Peerenboom 2006). This sentiment is echoed by discussion that courts used for monitoring purposes need to be ‘strong’ (Magaloni 2008 pg. 181 ) or ‘empowered’ (Moustafa 2007 pg. 32).

While the issue is not directly addressed in the literature, a close reading indicates that the prevailing view appears to imply, if anything, that independent courts are better monitors of regime agents. However, as I will outline below, I argue the opposite. I argue that dependent courts will make better monitors precisely because these courts are aligned with regime interests, and so regime leaders can trust the rulings of these courts to be in their interest. Being able to trust the rulings of dependent courts gives regime leaders greater information about how the action of their agents fit into



the regime leaders' preferences, and from their perspective means dependent courts are more useful monitors. This fits in line with literature in political science and economics which discusses how agent biases affect information transmission (Calvert 1985; Kydd 2003; Montagnes and Wolton 2017).

Building off of the judicial monitoring literature, I argue that because of the agent-investment tension, the ability of courts to monitor agents inherently affects the amount of investment in a regime. Because there is a trade-off between judicial independence and monitoring, I argue that only courts that are sufficiently dependent will be effective monitors of agent action. As a result, courts can reduce agent corruption and increase investment only so long as they are not too independent.

To illustrate the logic of my theory, first imagine an authoritarian regime with a totally dependent court. When I refer to a court, I refer to the entire court system including high and low courts. The dictator has an interest in balancing his need for investment and his need to allow agents to enrich themselves, and so the dictator will seek to allow some level of agent corruption up to a point and then prevent corruption when it becomes too costly to investment. A dependent court hearing commercial cases concerning corruption will rule in a way perfectly aligned with the dictator's interests, meaning that the court will rule all corruption the dictator disagrees with as illegal. The dictator in return would never need to review the court's decisions, and instead would always be able to trust the court's rulings are in his interests. In other words, it would always be in the dictator's interests to comply with and enforce the court's rulings with a perfectly dependent court.

Now, imagine the court becomes slightly more independent. As a result, the court begins to rule some corruption the dictator agrees with as illegal. Now, the dictator can no longer trust that every ruling is perfectly aligned with his own preferred balance between agent loyalty and investment. As a result, the dictator knows it is not always in his interest to comply with the court's ruling. Now the dictator has incentives to

review the court's rulings when the court rules an action illegal rather than trust the court and implement the ruling. As the court becomes more and more independent, the dictator's incentives to review increase as well because the dictator knows the court is more and more likely to not be ruling in line with his interests. However, a key point is that even as the dictator chooses to review more, he will not review all cases. Reviewing cases is time consuming, difficult, and costly and so the dictator is constrained from being able to review every case. Because of the cost and difficulty of review, for any court that is not perfectly non-independent there will be at least some cases that the dictator does not review.

A key insight of my theory is that so long as the court is not too independent, the dictator will choose to enforce the court's ruling for these unreviewed cases. The dictator does this because it is more likely than not that the dictator and the court agree when the court is not too independent. Importantly, this means that the dictator will enforce rulings that declare agent corruption illegal for cases that it does not review. For economic actors, this means that semi-independent courts will result in less agent corruption overall and make a regime more attractive to invest in as a result.

Why would a dictator ever appoint a court that is not perfectly dependent? The answer is that they will do so when they need to in order to attract investment. If conditions for investment are poor, a more independent court can compensate to some extent because appointing a more independent court results in more rulings against corrupt agent actions experienced by investors. And again, so long as the court is not too independent, this will produce greater overall enforcement of rulings against corrupt agent actions. This means investors get to keep more of their profits, making investment a more attractive and lucrative opportunity. Dictators are able to commit to enforcing these rulings not because they are constrained by courts, but because the courts are sufficiently aligned with the regime that the dictator would rather not engage in costly review to figure out the 'correct' action from his perspective and is

better off just enforcing the court ruling.

## 2.6 Discussion

My theory of courts as a solution to the agent-investment tension contributes to the literature on judicial institutions and authoritarian regimes in a number of ways. My theory draws from several strands of the literature on courts in authoritarian regimes as well as drawing from the literature on agent corruption and loyalty in authoritarian regimes. My theory builds off of these accounts by recognizing that there is a trade-off between judicial independence and monitoring agents from the dictator's perspective. Further, my theory builds off this literature by taking this insight and examining how judicial monitoring interacts with the agent-investment tension faced by authoritarian regimes. From this, my theory argues that courts can help solve the agent-investment tension in authoritarian regimes, but that because there is a trade-off between judicial independence and agent monitoring courts can only do so if they are not too independent.

This theoretical framework is able to explain puzzling patterns and facts discussed in this chapter that other theories could not. My theoretical framework is able to explain the role of both dependent and semi-independent courts in authoritarian regimes, and provides a logic that helps to understand why dependent courts rule against the government and why regimes would sometimes choose to comply with these rulings. In the context of my theory, dependent courts are capable of providing regime leaders with critical information about agent corruption and so it is often in the regime's interest to comply with rulings striking down expropriation or other forms of administrative action. In this context, it would not be unusual or irrational to see high caseloads challenging government action even in dependent courts. It would also not be unusual to observe rulings against the regime in dependent courts. Again, these rulings against the regime provide regime leaders with valuable information about the

action of their agents. Because agents will often behave in ways contrary to the goals of regime leaders, and because regime leaders can be alerted to this behavior through the judicial process, then it is expected in this framework that regime leaders would often comply with rulings against the ‘regime.’ It is in regime leaders best interest to do so, as it agrees with the court’s ruling which has exposed the action of the regime leaders’ agents.

And while my theory is able to explain why even dependent courts would rule against the regime and why regime leaders would comply with these rulings, my theory also is able to account for why in some instances the regime might not comply with the same court. If courts have even very low levels of independence, there will be some cases in which regime leaders do not agree with the court’s ruling. My theory argues that regime leaders will only sometimes become aware of this discrepancy upon reviewing or overseeing the case, and in these instances the regime would not comply as there is no incentive for them to do so.

In addition to explaining the empirical facts discussed in this chapter, this framework also generates several predictions that are either opposite to what existing theories predict, or not directly addressed by existing theories. In the next chapter, I formalize this framework in order to derive comparative statics for predictions which I then test.

## Chapter 3 A Formal Model of Judicial Institutions and Investment in Authoritarian Settings

In this chapter, I develop and analyze a formal model of the theory described in Chapter 2. In order to better understand how the presence of judicial institutions might affect the interaction between authoritarian rulers and potential investors, I first develop a model without a court. In this model, there are two players: a dictator, and a firm. The dictator represents the leadership of an authoritarian regime, while the firm represents any kind of economic actor within the regime - whether foreign or domestic.

### 3.1 The Dictator's Preference

I start by first defining a dimension in which the dictator's preference can manifest. The key tension of this theory involves the extent to which economic actors have profits threatened by agent corruption. To capture this idea, the policy dimension in this model can be thought of as a case-space covering the share of firm profits that are lost as a result of illicit agent action ranging from 0 to 1. I will use the terms 'corruption' and 'agent corruption' throughout this chapter to capture the idea of illicit agent behavior that harms firm profit in order to enrich agents.

In this model, agents are not directly modeled actors. Rather, agent corruption is modeled as randomly drawn points appearing along this case-space in accordance with how much firm profit is lost as a result of agent corruption. Any type of corruption can be ordered along this case-space by the share of profits lost to the firm the corruption causes. Corruption that causes firms to lose more profit is located higher on the

case-space, while corruption that causes firms to lose less profit is located lower on the case-space. At zero, the firm would lose no profits at all as a result of agent corruption. Corruption close to 0 can be envisioned as illicit actions that result in very little profit lost for the firm such as small and infrequent regulatory fees, bribes, and burdens the firm must comply with to continue operating. Corruption higher on the space results in the firm losing a greater share of profit. This corruption might include firms being charged extortionary prices by local officials in order to have access to electricity, minor or major expropriation of property, or sudden and expensive policy changes. At 1, the firm would lose the entirety of their profits as a result of agent corruption.

Figure 3.1: Case-Space Dictator Preferences

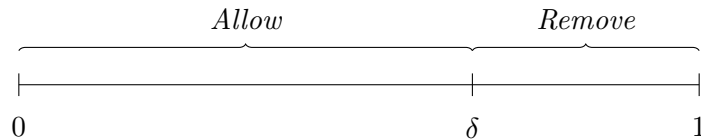


Figure 1 displays this case-space. Each actor has a preference in this space over how much corruption should be allowed to reduce firm profits. I model these preferences as cut-lines in the case-space, and they represent each actor’s ‘type.’ In line with other case-space models, this type is thought of as dividing the case-space into two regions (Beim et al. 2014; Beim et al. 2016). Actors prefer to allow corruption that is below their cut-lines, and remove corruption that is above their cut-lines.

Using this case-space, we can conceive of the dictator as having some type, ‘ $\delta$ ’ that exists on the case-space and describes the tolerance the dictator has for agent corruption. We can conceive of this type as existing upon this dimension of firm profit-loss, because the dictator in my theory judges agent corruption not based on how illicit or illegal the corruption is, but rather based on how much corruption damages the dictator’s goal of attracting investors. As discussed before, the dictator’s preference originates from the dictator’s trade-off that balances the goals of attracting investment

and allowing agents access to rents from corruption. This trade-off is best thought of in this setting as a cut-line in the case-space representing the dictator's preference over how much corruption is to be allowed. In order to reward his agents, the dictator needs to allow some amount of corruption to take place. However, the dictator also needs to ensure that this corruption does not become so harmful that economic actors are no longer willing to invest. So, the dictator wants to allow any corruption that exists below his cut-line, but to remove all corruption above his cut-line.

In my framework, I consider this preference to be exogenous and originating from a trade-off that is unique to the circumstances of each authoritarian ruler and their respective needs for political control and to attract capital. Some regimes will have greater trouble maintaining discipline and loyalty within the regime and will have greater tolerance for corruption as a result, allowing them to better utilize plum bureaucratic and political positions for agency and faction control. Other authoritarian leaders, for ideological or for practical reasons, might value investment and economic growth more and are less willing to allow agents to undermine this goal through personal enrichment.

## 3.2 The Firm's Preference

Like the dictator, in this model the firm's preference can be conceptualized as a cut-line in the case-space dividing the space into corruption the firm would prefer to be allowed, and corruption the firm would prefer to remove. Ideally, the firm would always prefer that it keeps all of its profit and loses none to corruption. In the context of the case-space, this means that firms will prefer that all corruption is removed. This is represented by the firm having a cut-line at 0.

Figure 3.2: Case-Space Firm and Dictator Preferences

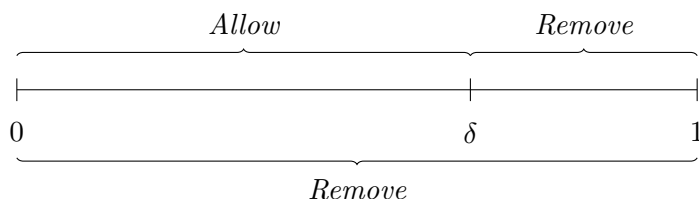


Figure 2 displays the case-space with both the dictator's type,  $\delta$ , and the firm's type, 0, on the space. The dictator's preferences are displayed above the case-space, while the preference for the firm's preferences are displayed below the case-space. We can see that above the dictator's type,  $\delta$ , both actors agree that this corruption should be removed. The only space where the actors disagree is for corruption below the dictator's type  $\delta$ . The dictator prefers to allow corruption below his type, while the firm wants all corruption to be removed.

### 3.3 Model Without a Court

This is a game of complete but imperfect information where the dictator does not observe agent corruption on this case-space,  $\rho \in [0, 1]$ , until and unless he pays a cost to review. For the dictator, the continuum of possible  $\rho$  values can be separated into two relevant states of the world:  $\rho \leq \delta$ , and  $\rho > \delta$ . The fundamental tension of the game is that the dictator does not know whether or not  $\rho \leq \delta$  unless he engages in costly review, and while the firm does know this it faces an incentive to convince the dictator that  $\rho > \delta$  regardless of the true location of  $\rho$ .

Below, I walk through the structure of the game and examine the game's Perfect Bayesian Equilibria (PBE), with off-path beliefs being consistent with the passive conjectures restriction. I also restrict attention to pure strategy equilibria and cut-point strategy equilibria. I am interested in exploring pooling equilibria in which the firm either always chooses to file or always chooses to not file, and separating or semi-separating equilibria where the firm chooses to file only for certain values of  $\rho$ .



This allows me to consider when and how firms can transmit information through their decision to file in a setting without a court. Specifically, if only pooling equilibria exist the dictator receives no information and cannot update his prior beliefs over the location of  $\rho$ . I seek to characterize if, and under what conditions, a separating or semi-separating equilibrium can exist that allows the firm to transmit information to the dictator, and how informative the firm can be.

### 3.3.1 Players

In the model there are two players: a dictator, D, and a firm, F. Each player has a type defined as a cut-line in the case-space covering dimension of the share of profits lost as a result of corruption by unmodelled agents. This case-space ranges from  $[0, 1]$ . The dictator's type is denoted by  $\delta$  and ranges from  $[\frac{1}{2}, 1]$ . The firm always has a type equal to 0 to represent the firm's desire that all corrupt actions are removed.

### 3.3.2 Actions

In this game, the firm must decide whether to invest or not, denoted by  $i \in \{0, 1\}$  where  $i$  takes on a value of 1 if the firm chooses to invest. The second action available to the firm is the choice to file or not, denoted by  $f \in \{0, 1\}$  where  $f$  takes on a value of 1 if the firm chooses to file a claim.

Conditional on the firm choosing to invest and file, the government then has two choices to make. The government must decide whether to review the claim or not, denoted by  $r \in \{0, 1\}$  where  $r$  takes on a value of 1 if the dictator chooses to review. Then, the government must decide whether to strike the corruption or not, denoted by  $s \in \{0, 1\}$  where  $s$  takes on a value of 1 if the dictator chooses to strike.

### 3.3.3 Timing

1. The firm moves first, and chooses to invest or not. If it does not invest, the game ends.

2. If the firm chooses to invest, then Nature moves twice. First, Nature draws some amount of agent corruption,  $\rho$ , which is distributed uniformly from 0 to 1. The value of  $\rho$  drawn represents the realized share of profits lost to the firm as a result of agent corruption.
3. Then, Nature draws a cost of review,  $\kappa_r$ , distributed uniformly from 0 to 1. This cost of review is the cost the dictator would pay to observe agent corruption,  $\rho$ , if it chooses to review the firm's claim.
4. The firm then chooses to file a claim, or not. If the firm chooses not to file a claim, the game ends.
5. If the firm chose to file, the dictator then chooses to review or not. If the dictator chooses to review the claim, it pays the cost of review,  $\kappa_r$ , and observes the true value of agent corruption,  $\rho$ .
6. Then, whether or not the dictator chose to review, the dictator must choose whether or not to strike the agent corruption and the game ends.

### 3.3.4 Information

At the time of investment, both the firm and the dictator are only aware of the dictator's cut-point,  $\delta$ , the distribution of agent corruption,  $\rho$ , and the distribution of the dictator's cost of review,  $\kappa_r$ . Both the dictator and the firm construct prior beliefs over agent corruption and cost of review from the fact that they are distributed uniformly. Because agent corruption,  $\rho$ , is distributed uniformly, prior beliefs over agent corruption are that  $Pr(\rho \leq \delta) = \delta$ , and  $Pr(\rho > \delta) = 1 - \delta$ . Prior beliefs over  $\kappa_r$  are formed in the same way.

When Nature draws the realized level of agent corruption, the firm observes this and conditions its decision to file on the level of agent corruption it observes. The firm, however, does not observe the realized value of the dictator's cost of review. When

the dictator is choosing to review or not, the dictator observes the realized value of his cost of review, but not the level of agent corruption. However, before deciding to review, the dictator updates his beliefs over the level of agent corruption as a result of observing the firm's decision to file. If the dictator chooses to review, he can observe the level of agent corruption perfectly. If the dictator chooses not to review, he does not observe agent corruption and instead relies on his updated prior beliefs over the location of agent corruption when deciding to strike or not.

### 3.3.5 Utilities

The dictator wishes to strike down corruption above his cut-point, and not strike down corruption below his cut-point. Similar to other case-space models (Beim et al. 2014; Beim et al. 2016), this is represented by the dictator receiving a payoff of 0 if he does not strike agent corruption above his type or if he does strike agent corruption below his type. He receives a payoff of 1 if he chooses to strike agent corruption above his type, and a payoff of 1 if he chooses not to strike agent corruption below his type. If he reviews, he subtracts the cost of review,  $\kappa_r$ , from his payoff. Take  $I$  as an indicator function equal to 1 if its argument is true, and 0 otherwise. Given this, one can show the following expression captures the dictator's payoff at every possible history.

$$U_D(f, i, s, r; \rho, \delta, \kappa_r) = i((1-f)I(\rho \leq \delta) + f((1-s)I(\rho \leq \delta) + s(1-I(\rho \leq \delta)) - r\kappa_r)) \quad (3.1)$$

The firm's fixed cost of investment is represented by  $\kappa_i$ , and the firm's profit upon investment before factoring in agent corruption is represented by  $\pi$ . Both of these quantities are always greater than zero. The firm loses a portion of its profit as a result of agent corruption, represented by  $\pi(1-\rho)$  (Montagnes and Wolton 2017). The firm is best off when agent corruption,  $\rho$ , is as low as possible, which occurs when

the dictator chooses to strike. In that case, the firm keeps all profit from investment minus the fixed cost of investment, as represented by  $\pi - \kappa_i$ . I assume that  $\pi > \kappa_i$ , so that the firm would always invest if there were no agent corruption. Given this, the following expression captures the firm's payoff at every possible history of the game.

$$U_F(i, f, s; \rho, \kappa_i, \pi) = i((1-f)(\pi(1-\rho)-\kappa_i)+f((1-s)(\pi(1-\rho)-\kappa_i)+s(\pi-\kappa_i))) \quad (3.2)$$

### 3.3.6 Strategies

For the firm, a complete strategy includes both the firm's decision to invest and when the firm will choose to file. Because the firm observes agent corruption,  $\rho$ , before choosing to file, the firm's strategy can be written as a cut-point strategy with regard to the observed value of agent corruption. Given this, a firm's strategy lives in the space  $\{0, 1\} \times \{g: [0, 1] \rightarrow \{0, 1\}\}$  which consists of a decision to invest and a function that maps an observed level of corruption to a decision to file. An example of a complete strategy for the firm then is  $S_F = (1, I(\rho \geq \rho^*))$  where the firm chooses to invest and file a claim for all agent corruption observed above some cut-line,  $\rho^*$ .

A strategy for the dictator will include the choice to review as well as the decision to strike. The dictator's choice to review or not will depend on the observed value of the cost of reviewing,  $\kappa_r$ , in the course of the game. The decision to strike will depend upon both the choice to review and upon the observed value of  $\rho$  if the dictator reviewed. The dictator's strategy lives in the space  $\{0, 1\} \times \{g: [0, 1] \rightarrow \{0, 1\}; g: [0, 1] \rightarrow \{0, 1\}; g: [0, 1] \rightarrow \{0, 1\}\}$  which consists of three functions. The first function maps the observed cost of review to the decision to review or not. The second function maps the observed cost of review to the decision to strike or not if the dictator does not review. The third function maps the observed value of agent corruption to a decision to strike, in the event that the dictator did review. An example of a complete strategy for

the dictator then is then  $S_F = (I(\kappa_r \leq \kappa_r^*), I(\kappa_r > \kappa_r^*), I(\rho \geq \delta))$  where the dictator chooses to review if the cost of review is below some cut-line,  $\kappa_r^*$ , strike if the cost of review is above some cut-line,  $\kappa_r^*$ , and to strike if observed agent corruption is above the dictator's cut-line,  $\delta$ .

Below, I analyze the PBE of this game - focusing on identifying pooling, separating, or semi-separating equilibria where the firm chooses to invest. A PBE has two requirements. At each node of the game, players possess beliefs that are rational, meaning they are based on priors updated by Bayes' rule given observed actions of other players wherever possible. Second, at each node of the game players' choices are consistent with sequential rationality, meaning that at every node each player's strategy specifies optimal actions given their beliefs and the strategies of the other players. Beliefs over any histories not reached in equilibrium are constructed by passive conjectures.

### 3.4 Analysis of a Model Without a Court

**Proposition 1** *The only pooling equilibrium where the firm invests is one where the firm chooses to file a claim for any level of agent corruption.*

In a pooling equilibrium where the firm invests, the firm will always file for any level of agent corruption that it observes. Because the firm's decision to file is uninformative, the dictator cannot update his prior beliefs over the level of agent corruption based on the firm's decision to file. As a result, the dictator always believes that agent corruption is more likely to be below his cut-line in this equilibrium and will not choose to strike agent corruption unless he has more information.

However, even in this equilibrium where the firm does not signal any information, the dictator will still sometimes strike down agent corruption in a way that benefits both actors. The dictator will choose to review agent corruption if the cost of review is sufficiently small that the expected benefit of review outweighs the expected benefit

of striking agent corruption given his priors. When the cost of review is sufficiently small, the dictator will review the firm's claim and strike corruption if it finds that agent corruption is above his cut-line. Since there is always a chance that the dictator will strike down corruption above his cut-line, the firm always faces an incentive to file for agent corruption above the dictator's cut-line. As a result of this incentive, there can be no pooling equilibrium where the firm invests but never files a claim.

Because the dictator will only strike down agent corruption when he reviews, the dictator will never strike down any agent corruption below his cut-line and will fail to strike down corruption above his cut-line when the cost of review is high. Because the firm is not able to inform the dictator in this equilibrium, the dictator will make review and policy mistakes that harm both actors.

**Proposition 2** *In any semi-separating equilibrium where the firm invests, the firm is limited in the extent to which its decision to file can inform the dictator about the level of agent corruption.*

In the uninformative pooling equilibrium, both actors would be better off if the dictator had more information about agent corruption. Can the firm find some way to use its filing decision to signal information about agent corruption to the dictator? The answer is yes - but only up to a point. The firm can adopt a semi-separating strategy and choose to file only for observed agent corruption above some cut-point,  $\rho^*$ , and not file otherwise. The dictator can then update his prior beliefs over the location of agent corruption with the knowledge that agent corruption must at least be above  $\rho^*$ . Armed with better information about agent corruption, the dictator is now more likely to review any case filed by the firm and more likely to discover that agent corruption is above his cut line. This leaves the firm and the dictator better off compared to the uninformative pooling equilibrium, as the dictator is more likely to strike corruption above his cut-line and will make fewer review mistakes.

However, this equilibrium can only be supported so long as the cut-point chosen by the firm is not too high. In particular, the firm cannot choose a cut-point that would convince the dictator to believe it is more likely than not that agent corruption is above his cut-line. If the firm could do this, then the dictator would choose to strike agent corruption unless the cost of review is sufficiently small. This would give the firm an incentive to take advantage of the dictator's lack of information and file even when agent corruption is below the firm's cut-point,  $\rho^*$ , in the hopes that the dictator will not review. This would make the equilibrium unsustainable. Instead, the best the firm can do is increase the likelihood that agent corruption is higher than the dictator's type. This makes the dictator more likely to review when the firm files, though the dictator will still not choose to strike if it does not review.

For this same reason, no pure separating equilibrium can exist. Though it would benefit both the dictator and the firm if the dictator knew when agent corruption was above his own cut-line, the firm is not able to signal this information. If the dictator ever believes the firm's decision to file is fully informative as to the location of agent corruption relative to his cut-line, then the firm would face an incentive to file cases even when agent corruption is not above the dictator's cut-line. Because the firm has an incentive to have the dictator strike all agent corruption, the dictator cannot rely on signals sent by the firm to inform him as to when agent corruption should be struck.

In a model without a court, the dictator's lack of information means that the dictator will engage in two kinds of costly mistakes: review mistakes, and policy mistakes. With respect to review, the dictator's lack of information will lead the dictator to engage in costly review of the firm's claims even when it considers the corruption in question to be acceptable. If the dictator had more information, they would not need to waste time and resources engaging in review. With respect to policy, the dictator's lack of information means the dictator will sometimes allow corruption

that it would consider unacceptable if it knew the corruption's true location on the case-space. This is a problem from both the firm and the dictator's perspectives.

In both pooling and semi-separating equilibria, the dictator will only ever strike corruption above his type. But without more information on corruption, the dictator cannot effectively remove corruption in line with his type. Because the dictator cannot trust the firm, the dictator will always fail to strike corruption above his cut-line unless the cost of review is sufficiently low. The less the dictator is informed, the more likely it is that the dictator makes policy or review mistakes. The risk of policy mistakes leads the firm to choose to not invest when it otherwise would if the dictator could better observe corruption. This leaves both the dictator and the firm worse off.

### 3.5 Model With a Court

The model presented above solely with a dictator and investing firm serves to highlight two important aspects of the firm and dictator interaction. The first is how the dictator's lack of information prevents the dictator from always striking corruption above his cut-line,  $\delta$ . The second is how the firm's incentives to misrepresent agent corruption prevent the firm from solving this informational problem.

In this section, I introduce a court to the model to analyze how a third party monitor can influence the dictator's informational problem. This model is identical to the one above, with two key differences. First, before the firm invests the dictator appoints a judge of type  $\beta \in [0, 1]$ , observed by all players. Second, if the firm invests and files a claim, the judge then always reviews the claim and perfectly observes agent corruption. The judge then issues a ruling of legal or illegal in line with her cut-point,  $\beta$ . The judge always rules any corruption above her cut-line illegal, and always rules any corruption below her cut-line legal. This ruling is then observed by the dictator before he chooses to review, and the game proceeds as before.



Figure 3.3: Case-Space Model With a Judge and Dictator

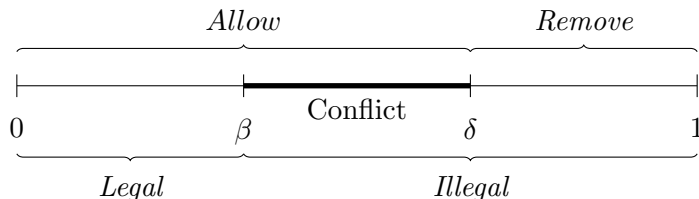


Figure 3.3 demonstrates how the judge's signals overlap with the dictator's preferences. As before, the dictator wants to allow all corruption below his cut-line, and wants to remove all corruption above his cut-line. The judge is modeled here as an actor whose only concern is issuing a ruling that depends on her cut-line,  $\beta$ . Because the judge is modeled as only caring about sending a signal that matches her preference, the judge will always rule all actions below her cut-line as legal and all actions above her cut-line as illegal. The judge can be viewed as a non-strategic actor that simply receives a payoff of 1 if she rules legal when agent corruption is below her cut-line,  $\rho \leq \beta$ , and a payoff of 1 if she rules illegal when agent corruption is above her cut-line,  $\rho > \beta$ . She receives a payoff of 0 otherwise. The appointment of  $\beta$  and the issuance of rulings by the judge do not directly impact the payoffs of the other actors, so payoffs for the firm and the dictator are identical to those described above in equations 3.1 and 3.2.

Observe that below the judge's cut-line and above the dictator's cut-line, the signal the judge sends matches the dictator's preference. However, for agent corruption between the judge's cut-line and the dictator's cut-line there is conflict. The judge rules agent corruption in this region as illegal, but the dictator wishes to allow agent corruption here. How trustworthy the judge's rulings are to the dictator depends on the direction of the ruling as well as the size of the conflict region.

The location of the judge's cut-line,  $\beta$ , relative to the dictator's cut-line,  $\delta$ , can be viewed as representing how independent the judiciary is from the dictator. The distance between the cut-lines captures both how aligned the judiciary's preferences

are with the dictator's as well as the willingness of the judiciary to rule against the wishes of the dictator. Judges with a cut-line further away from the dictator's cut-line can be seen as more independent from the dictatorship when compared to judges with a cut-line closer to the dictator's cut-line. Judges with cut-lines further away from the dictator's cut-line will have larger conflict regions and will rule against the wishes of the dictator for a greater range of agent corruption. A judge with the same cut-line as the dictator so that  $\beta = \delta$  would be a judge totally lacking in independence. For this totally dependent judge, there would be no conflict region and every ruling would perfectly reflect the preferences of the dictator.

### 3.5.1 Strategies

The firm's strategy in this game is the same as above, except the firm can now condition its strategy on the observed cut-line of the judge appointed by the dictator at the start of the game. The dictator's strategy differs in two key ways. First, the dictator now must appoint a judge of type  $\beta \in [0, 1]$  at the start of the game. In addition, the dictator no longer just observes the firm's decision to file but also observes the judge's ruling of legal or illegal and updates his beliefs accordingly. In this model the dictator's decisions to review and strike are conditioned not just on the cost of review drawn and the firm's decision to file, but also on the direction of the judge's ruling and the judge's type. Though the judge is an actor whose payoffs only depend on the location of agent corruption relative to her cut-line, we can define the judge's strategy as always ruling legal if agent corruption is below her cut-line and always ruling illegal otherwise.

## 3.6 Analysis of a Model with a Court

**Proposition 3** *In any separating or semi-separating equilibria, the firm cannot signal more information than it could through a pooling equilibrium.*

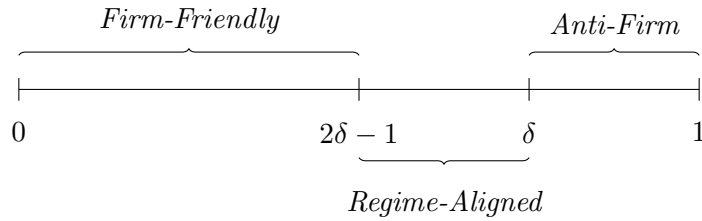
Though separating or semi-separating equilibria are possible in this model, neither of these can convey more information to the dictator than the firm could convey with a pooling strategy. Whatever strategy the firm chooses, it cannot convey more information about agent corruption than the judge's ruling does in equilibrium. For reasons similar to the first model, the firm's ability to convey information through strategic filing is fundamentally limited by its incentive to mislead the dictator. If the firm could convey more information than the judge's ruling does in equilibrium, the firm would face the same incentives to mislead the dictator as it did in the model without a court.

Because the firm cannot convey more information than the judge in equilibrium, the firm and the dictator are just as well off under a pooling equilibrium as they would be under a separating or semi-separating equilibrium. While separating and semi-separating equilibria will be more complex, they will not substantively differ from pooling equilibria where the firm's decision to file is uninformative. As a result, I focus the analysis that follows on understanding the set of pooling equilibria where the firm invests and always files.

### 3.6.1 Judge-Type Thresholds

What type of judge should the dictator appoint? As the dictator decides what type of judge to appoint, the dictator must consider the information that he will receive from this judge's rulings and how that will affect his expected payoff as well as how that will affect the firm's decision to invest. To understand the pooling equilibria of the model, I walk through how the dictator's beliefs and sequentially rational strategy change as a result of the relative location of the judge's cut-line to the dictator's cut-line. Figure 3.4 displays two thresholds of the game as a function of the relative distance and location of the judge's cut-line,  $\beta$ , relative to the dictator's cut-line,  $\delta$ .

Figure 3.4: Case-Space Model Judge-Types



Judges can be categorized based on where their cut-lines lie in relation to these judge-type thresholds. To help simplify discussion of the model’s pooling equilibria, I will refer to judges with a cut-line  $\beta < 2\delta - 1$  as ‘firm-friendly,’ because their preferences are relatively more aligned with that of the firm than that of the dictator. For judges with a cut-line  $2\delta - 1 \leq \beta \leq \delta$ , I refer to these judges as ‘regime-aligned’ because their preferences are relatively more aligned with the dictator than with the firm. I refer to judges with a cut-line  $\beta > \delta$  as ‘anti-firm’ because their cut-line is the greatest distance away from the firm’s cut-line.

### 3.6.2 Pooling Equilibria

**Proposition 4** *In any pooling equilibrium where the firm invests, the dictator will appoint a regime-aligned judge.*

The firm chooses to invest only if the judge is such that in expectation the payoff for investing is greater than 0. For the firm, it is always sequentially rational to file for any corruption observed even in off-path branches of the game tree. As before, the dictator must form beliefs about the location of corruption relative to his cut-line based on the firm’s decision to file. Because the firm always chooses to file, the dictator does not update his prior beliefs over the location of corruption when the firm files. After observing the firm file, the dictator’s belief is  $b_D(\rho \leq \delta | File) = \delta$ . If the firm chooses the off-path action of not filing a claim, then the game ends and the dictator’s belief is unimportant. However, beliefs are constructed via passive conjectures so that  $b_D(\rho \leq \delta | \neg File) = \delta$  and  $b_D(\rho \leq \delta | File) = \delta$ , even for off-path judicial appointments.

After the firm files, the dictator observes the ruling of the judge and updates this belief consistent with Bayes' rule. What this updated belief becomes depends on the relative location of the dictator and judge's cut-lines, the direction of the judge's ruling, and which of the thresholds the judge falls into: firm-friendly, regime-aligned, or anti-firm. To understand why the dictator will always appoint a regime-aligned judge, I briefly describe how the dictator's beliefs and sequentially rational actions are affected based on the type of judge appointed.

Consider how the appointment of a judge with a type below the dictator's affects the game. Recall that the judge will always issue a ruling of legal if the action in question is below her own cut-line, and a ruling of illegal if the action in question is above her cut-line. When the judge's cut-line is below the dictator's and the judge issues a legal ruling, the dictator is able to update his beliefs and knows with certainty that agent corruption must be below both the judge's cut-line and his own. Because the dictator knows with certainty that agent corruption is below his own cut-line, he will not need to waste time and resources reviewing corruption in this range. The dictator knows with certainty that it is in his best interest to agree with the ruling and will always choose to not strike the corruption.

However, if a judge with a cut-line below the dictator's issues an illegal ruling, the dictator knows that agent corruption is above the judge's cut-line but does not know for certain if agent corruption is above his own cut-line. The dictator does, however, update his beliefs over the probability that agent-corruption is above his own cut-line given the location of the judge's cut-line. The dictator then weighs the probability that agent corruption is higher than his cut-line,  $P(\rho > \delta)$ , and the probability that agent corruption is below his cut-line,  $P(\rho \leq \delta)$ .

If the judge is firm-friendly, then the probability that agent corruption is below the dictator's cut-line will outweigh the probability that agent corruption is above the dictator's cut-line,  $P(\rho > \delta) < \frac{1}{2}$ . Similar to the model without a court, in this case

the dictator will not strike the corruption unless he draws a sufficiently small cost of review and is able to observe the corruption. If the dictator chooses a firm-friendly judge, then the dictator and the firm would both be subject to the same policy and review mistakes present in the model without a court.

However, if the judge is regime-aligned, then the probability that agent corruption is above the dictator's cut-line will outweigh the probability that agent corruption is below the dictator's cut-line,  $P(\rho > \delta) \geq \frac{1}{2}$ . Now, the dictator will choose to strike the agent corruption even if he draws a large cost of review and does not observe the corruption. This allows the dictator to ensure that he will always be able to strike corruption above his cut-line, and will even strike corruption between the judge's cut-line and his own when the cost of review is high.

Only a regime-aligned judge can result in the dictator striking all corruption above his cut-line. As I demonstrate in the appendix, the fact that the dictator can always strike down all corruption above his cut-line means that the firm is always better off when the dictator appoints a regime-aligned court. A firm-friendly judge will not give the dictator enough information to strike down all corruption above his cut-line, while an anti-firm judge will rule some corruption above the dictator's cut-line as legal and the dictator will not strike this corruption without review. Intuitively, for any judge above his own ideal point that induces the firm to invest, the dictator can always do better by appointing a judge at his own ideal point and still induce the firm to invest. Because the dictator is better off when the court is as close to his cut-line as possible conditional on the firm choosing to invest, he will never face an incentive to appoint a different type of court.

**Proposition 5** *In any pooling equilibrium where the firm invests, the dictator will appoint a judge to be as dependent as possible such that the firm will still invest.*

Though the firm is always better off with a regime-aligned court compared to any other type of court, the firm is best off when the judge is as independent as

possible within this limited range of independence. In any pooling equilibrium where the firm invests, the firm's expected utility is monotonically increasing in judicial independence in the regime-aligned range. As the distance between the judge's and dictator's cut-lines grows, the judge will rule a wider set of agent corruption below the dictator's cut-line as illegal. If the judge is regime-aligned, the dictator will choose to strike this corruption when the costs of review is too high. For the firm, a more independent but still regime-aligned judge can convince the dictator to remove all corruption above his type and sometimes remove corruption below his type. This offers the firm more protection from agent corruption and increases their payoff in expectation.

Though the firm's expected utility is increasing in judicial independence in the regime-aligned range, the dictator's expected utility is monotonically decreasing in judicial independence for the same reason. As a regime-aligned judge becomes more independent, the dictator will more frequently make policy and review mistakes. The dictator will increasingly strike actions between his cut-line and the judge's, and the dictator will more frequently review actions above his cut-line.

Intuitively, dictator is best off when it picks a regime-aligned judge as close as possible to his own type, conditional on that judge inducing the firm to invest. If the dictator knew the firm would invest, then the best strategy for the dictator would be to pick a totally dependent judge where  $\beta = \delta$ . With a perfectly dependent judge, the dictator would never make any policy or review mistakes. But because the firm would be better off with some judicial independence, the firm might sometimes not invest if the judge is totally dependent, when it would invest if there was some limited amount of judicial independence such that the judge is still regime-aligned. The dictator's strategy then is to pick a judge in the regime-aligned range as close to his own type as possible, conditional on the firm choosing to invest with that judge.

### 3.6.3 Pooling Equilibria Comparative Statics

As the previous propositions outline, in any pooling equilibrium the dictator will always appoint a regime-aligned judge of limited judicial independence, conditional on the firm investing. But how does equilibrium behavior change as the firm's investment condition,  $\pi(1 - \rho) - \kappa_i$ , changes? Recall that  $\pi - \kappa_i$  represents the benefit the firm would receive upon investment if there was no corruption. In this section I examine how equilibrium behavior changes as a result of varying the firm's potential profit parameter,  $\pi$ , while holding the firm's cost of investment,  $\kappa_i$ , constant which is equivalent to varying the size of the difference between the two. I examine these comparative statics in the set of pooling equilibria where there exist some set of judge types in the regime-aligned range for which the firm will not invest. I do this in order to determine how exogenous shifts that affect the firm's potential profit affect the relationship between the judge and the dictator, and how this in turn affects the firm.

**Proposition 6** *As potential firm profit increases in equilibrium, the dictator will appoint an increasingly dependent judge*

As proposition 5 describes, the dictator will always choose the most dependent judge that he can as long as the firm will still choose to invest. As potential firm profit increases, the firm is willing to invest for increasingly dependent judges because the increased profit will offset the increase in corruption from a more dependent judge in expectation. To take advantage of this, the dictator will appoint increasingly dependent judges as potential firm profit increases.

**Proposition 7** *As potential firm profit increases in equilibrium, the dictator will review cases less often*

Proposition 6 establishes that the dictator will appoint an increasingly dependent judge as firm profit increases. How does this affect the probability that the dictator will



review the firm's claims? As the judge becomes more independent, the conflict range shrinks and it becomes less likely that she rules in a way that is inconsistent with the dictator's preferences. Because the dictator knows he is more likely to agree with the judge, the dictator becomes less willing to pay a cost to review and more willing to rely on the ruling of the judge instead. As a result, the dictator will review cases less often as potential firm profit increases and judges become more dependent.

**Proposition 8** *As potential firm profit increases in equilibrium, the dictator will comply with judicial rulings more often*

In equilibrium, the dictator will comply with the judge's ruling except when agent corruption is in the conflict range and he chooses to review the case. But as judicial independence decreases, the conflict range shrinks. This both decreases the frequency with which the dictator will engage in review as stated by Proposition 7, but also decreases the frequency with which the judge will rule in a way that the dictator would disagree with in the first place. For both of these reasons, compliance will increase as potential firm profit increases and judicial independence decreases.

**Proposition 9** *As potential firm profit increases in equilibrium, the firm's expected share of profit lost to corruption increases*

How does increasing the potential firm profit affect the expected share of that profit lost to corruption in equilibrium? In equilibrium, the dictator will choose not to strike corruption only in two circumstances. The first is when the judge issues a legal ruling, in which case corruption is below the judge's cut-line. The second case is when the judge issues a ruling of illegal when agent corruption is in the conflict range, and the dictator chooses to review. As firm profit increases, judicial independence decreases and the conflict range shrinks. Though this means the dictator reviews less often and will strike in the conflict range more often, the conflict range is shrinking at

the same time and the judge is increasingly ruling agent corruption legal. As I show in the appendix the impact of dictator review on expected corruption is outweighed by the change in the conflict region and legal rulings. The firm's expected share of profit that is lost to corruption increases as a result.

### 3.7 Discussion

This chapter has developed and analyzed a formal model in order to generate several insights and predictions about the relationship between investment, judicial institutions, agent actions, and regime leaders. By analyzing a model both with and without a judge, this chapter has highlighted how the informational role of judicial institutions can affect investment. In a model with no court, the firm was fundamentally limited in the information that it could send to the dictator about where agent corruption is located relative to the dictator's cut-line. One important consequence of this is that the firm's choice to file could never result in the dictator removing an action without first reviewing the claim. This meant that the dictator would never remove an action below his type and the dictator would also frequently not remove actions above his type either because of the cost of review.

However, the introduction of the court into the model allows the dictator much more information over the relative location of the agent's action to the dictator's cut-line. Now, in equilibrium the dictator will be able to always remove actions above his type and sometimes remove actions below his type, without needing to review as often. In equilibrium, judges with limited independence can convince the dictator to perform actions that the firm alone or highly independent judges cannot. This provides a big benefit to the firm, which now can be guaranteed that it will be exposed to less costly corruption and expropriation by agent actions. It is also a benefit to the dictator who can attract more investment at a lower cost while still providing corruption opportunities to agents.

This leads to a major insight of the model about the way in which the dictator's lack of information affects investment. Comparing the model with and without a court, it is clear that the information provided by courts can make firms and dictators better off. This then will result in increased investment purely through providing information to the dictator about the action of the dictator's agents - even if this court has a total lack of independence from the regime and rules in line with regime wishes every time.

This is closely tied to another important insight of the model. The courts that are best able to increase investment are not highly independent courts, but rather courts of limited dependence. If courts are too independent, then the dictator cannot trust the information they send to be in his best interest. Only courts that are sufficiently dependent can convey information to the dictator that allows him to address and monitor his agents' corruption. This information better allows dictators to control and limit his agents' corruption, and this in turn makes firms better off as it reduces the expected costs associated with illicit agent actions. Counter-intuitively, this means that firms will actually be better off when the court is not too independent.

This theory fits in with a line of literature that argues that more de facto 'independent' courts can help the dictator to monitor and punish his agents. While my theory shares much in common with previous theories, it also makes several critical modifications that lead to divergent predictions and understandings of the role of courts in authoritarian regimes. One of the most important modifications my theory makes to the credible commitment literature is that I argue that courts in authoritarian regimes do not need the ability to meaningfully constrain dictator action in order to help attract investment. Rather, the mechanism through which courts can provide economic benefits in authoritarian settings is through assisting the dictator in monitoring agent corruption.

The framework here also better matches the empirical patterns seen in Chapter 2

with respect to judicial compliance and independence. My model argues that judicial independence in authoritarian regimes should be limited while providing a logic for why authoritarian regimes might appoint judges of varying levels of judicial independence within a limited range. As Chapter 2 demonstrated, nearly all authoritarian courts have limited levels of judicial independence and highly independence courts are exceedingly rare.

At the same time, my theory provides a logic for why courts with low levels of judicial independence might be used to challenge regime action in a way that benefits economic actors. Chapter 2 noted several instances of seemingly dependent courts being used to frequently challenge regime action in administrative and economic cases. My model argues that these challenges are not constraining the dictator, but rather providing the dictator with information that allows him to better control his agents in a way that benefits both economic actors and the dictator. This allows economic actors to convey information to the regime in a credible way, which in turn allows the regime to reduce corruption experienced by economic actors.

Another pattern of Chapter 2 that my theory helps to address is why we might see middling levels of compliance in authoritarian regimes given the prevalence of dependent courts. First, this framework points out that even prominent and expensive rulings against the regime are not necessarily rulings that the dictator disagrees with. In fact, these rulings often align with the dictator's interests and are crucial to helping the dictator control and limit agent corruption in order to attract investment while at the same time still allowing some level of corruption to occur. Second, regime leaders have difficulty in many cases determining whether or not a ruling is in their interests. Rather than invest time and resources into reviewing the case themselves, they will often choose to simply enforce the court's ruling so long as the court is sufficiently dependent. This will result in regimes sometimes complying with rulings not in their interests in order to avoid costs of review.

This chapter has developed a formal model grounding a theoretical framework which focuses on the informational role of courts in authoritarian regimes. This model offers a logic and a lens through which to understand many puzzling facts of authoritarian courts raised in Chapter 2. This model has also generated empirical predictions on the nature of the relationship between the judiciary and regime leaders as a result of exogenous changes in the potential profit a firm might generate upon investment. In the next chapter, I will test several empirical implications of the model.

## Chapter 4 Empirical Evidence

The model presented in Chapter 3 has generated several empirical predictions based on comparative statics of  $\pi$ . This parameter can be thought of as the profit that an actor would get in a hypothetical setting where they faced no threat of losing any profit to the action of regime agents. I will call this parameter ‘potential profit’ or ‘potential firm profit’ to keep in mind that this parameter is simply capturing the potential profit an economic actor might make before accounting for corruption. The comparative statics over this parameter examine changes in judicial independence, investment, review, and compliance as a result of changes in potential firm profit. In this chapter, I provide evidence that provides support for my model and a view of courts in authoritarian regimes as providing information that allows regime leaders to solve the agent-investment tension.

In the next section, I discuss the logic behind four hypotheses stemming from the comparative statics over the potential profit parameter shown in Chapter 4. Next, I discuss the data and strategy for the empirical analyses. I then present the empirical tests of these hypotheses by analyzing cross-national data on judicial independence shifts in response to exogenous changes in economic conditions in authoritarian regimes.

### 4.1 Empirical Implications and Hypotheses

If my theory is correct, under what conditions will dictators appoint a more independent judiciary? When potential profit is large, economic actors stand to make a large profit from investing, holding all else equal. When potential profit is small, economic actors stand to make a smaller profit from investing, holding all else equal. My theory predicts that as potential profit increases, regime leaders have fewer incentives to appoint or support an independent judiciary. The intuition behind this is that regime

leaders only have incentives to appoint independent judiciaries to the extent that these judiciaries can help attract more investment than less independent judiciaries. If potential profit increases, then all else equal economic actors are more likely to invest. If this is the case, then regime leaders are more likely to be able to attract the same amount of investment with a less independent judiciary. This comparative static leads to the first testable hypothesis.

**Hypothesis 1** *As the potential investment profit increases, on average courts will become less independent*

While my theory leaves unspecified the exact mechanism by which the independence of courts will be affected, one can imagine several mechanisms consistent with my theory. In many authoritarian regimes judges have short tenure and frequently retire, come up against term limits, or are otherwise pressured or forced to resign. The enforcement of short judicial tenure naturally allows regimes the ability to frequently replace judges and control the independence of the judicial system. Because of these term limits, in any given year regimes may have potentially dozens of judicial positions that need to be staffed allowing them to shift the independence of the judiciary through controlling the staffing of judges.

Another mechanism is through control of judicial advancement, salary, and careers of judges in the judiciary. This is a lever that has been shown to be effective in controlling the ideology and rulings of judges within the judicial system (Hilbink 2012; Magaloni 2008). Many authoritarian regimes have direct control over judicial advancement through the creation of institutional bodies in charge of judicial staffing, pay, and advancement that are staffed with judges with varying levels of independence according to the needs and preferences of the regime. By changing the extent to which the regime will interfere with promotion and pay, independence be manipulated to increase or decrease in response to broader economic conditions in the regime.

### 4.1.1 Review, Compliance, and Corruption

Hypothesis 1 predicts that as potential firm profit increases within a regime, judicial independence becomes more likely to decrease. As a consequence of this decline in independence, my theory predicts that regime leaders will choose to review the court less often. This prediction is straightforward from the resulting decrease in judicial independence. Because in equilibrium the probability that authoritarian rulers review judicial decisions is based on the size of the preference divergence between a given court and the regime, as the court becomes less independent the regime will have less incentive to engage in review of the court as it becomes less likely that the regime would discover that it disagreed with the court's ruling.

**Hypothesis 2** *As potential investment profit increases, courts will become less independent, and the regime will review court decisions less frequently.*

Related to this, the third observable implication from the comparative statics in the previous chapter that I test here is that as potential firm profit increases, the government will choose to comply with the court's rulings more often. The logic for this is two-fold. First, as courts become less independent the probability that the court would rule in a manner the government disagrees with shrinks. Thus, it becomes less likely that any rulings exist for which the government would choose to not comply. Second, as discussed above, the government will also review the judiciary less often as potential firm profit increases. This means that it is also less likely that the government discovers any cases for which it would want to not comply. This leads to the third observable implication of my model that I test here.

**Hypothesis 3** *As potential investment profit increases, courts will become less independent, and the regime will comply with the court more often*

As these last hypotheses discuss, my theory predicts that when the potential profit increases the regime will have fewer incentives to maintain judicial independence in



order to attract investment. As a result, courts on average will become less independent and the regime will both review these courts less and comply with them more. A key insight of my theory is that these less independent courts will be less effective at reducing agent corruption than a more independent court. As discussed above, more independent courts will rule against the regime's preferences more often. And while the regime will review these courts more often, they will not increase the amount they review enough to catch every instance in which they disagree with the court. In these cases of disagreement, the regime will still enforce these rulings. This means that a less independent court will result in the government enforcing rulings that prevent agent corruption and expropriation less often, and will result in worse property protection for investors as a result. This is the final hypothesis predicted by the comparative statics on potential profit, which is that the expected share of profit lost as a result of agent corruption that the firm is exposed to declines as a result of more independent courts.

**Hypothesis 4** *As the potential investment profit increases, courts will become less independent, and investors will be exposed to higher levels of agent corruption*

## 4.2 Empirical Analysis

### 4.2.1 Data

The data used in the following empirical tests cover all countries with a population of over one million in Africa, the Middle East, Latin America, and Asia from the years 1957 to 2007. This initial set of countries was chosen because of data availability rather than any theoretical reason and I have no reason to believe that my theory should not apply to any specific region or country. However, my theory does specify scope conditions under which I expect my hypotheses to apply. In order to target the types of countries that my theory should apply in, I focus the empirical tests on the effect of price shocks in non-democracies, as measured by the Cheibub et al. [2010](#)

binary measure of democracy and dictatorship<sup>1</sup>.

I do this because my theory is focused on the impact of judicial institutions in authoritarian regimes, and there are several features of my theory which are unlikely to apply outside of an authoritarian context. First, my theory describes settings where courts can only hope to exert weak or nonexistent costs of noncompliance with court rulings as a general rule. Second, my theory describes settings where there is difficulty monitoring agents through decentralized means, due to a lack of civic institutions such as free and fair elections as well as a general lack of transparency and accountability in government. Finally, this theory describes settings where the regime explicitly or implicitly expects and accepts that its agents will engage in some forms of corruption in order to increase the rewards of political office and bureaucratic positions. Indeed, this theory applies to settings where the regime desires that agents engage in corruption to some extent in order to maintain their loyalty. These features, though not exclusive to authoritarian regimes, are widespread and common among them. For these reasons, I limit the analysis in this chapter to authoritarian regimes.

### **Independent Variable**

My theory generates predictions over outcomes related to judicial independence and the relationship between the government and the courts in authoritarian regimes as a result of shifting potential firm profits. In order to test the hypotheses outlined above, I need to be able to measure several theoretical concepts accurately. First, I need a measure of the potential profits that captures changes in the attractiveness of investment from the perspective of firms that does not depend on the action of the regime. Potential measures that might capture this include investor confidence, observed investment amounts, stock prices, lending interest rates, and economic growth. However, using these measures to estimate changes in judicial independence

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<sup>1</sup>A list of countries included in the dataset can be found in Appendix A.1

and related measures raises major endogeneity concerns. In order to avoid this issue, I need a measure of potential profit that is exogenous to judicial independence.

As a way to address this concern, I utilize global commodity price shocks as a measure of changes in potential profit. Specifically, I use a dataset of commodity price shocks from 1957 to 2007 constructed by Bazzi and Blattman 2014. This data measures export commodity price shocks at the country-year level constructed from price data on 65 legally traded commodities. The measure is constructed by taking the annual difference in each country's log commodity export price index. The price index for each country is an average of all commodity export prices, weighted by the lagged export shares of that country. So if a country does not export a commodity, that commodity is given zero weight. If a country only exports one commodity, that commodity is given a weight of one. Further, these shocks are also weighted by the average of the ratio of commodity export values to GDP in the past five years. This helps capture that commodity price shocks are more important in nations where commodity exports make up a large proportion of GDP.

I use export commodity price shocks as a measure of changes in potential investment profit, assuming that as the price of a commodity exported by a country increases, in general the potential for profit upon investment increases in that country. The logic is simple - if world prices for natural gas increase, it becomes more profitable to invest in natural gas extraction in countries which export natural gas. Thus, positive price shocks are indicators of an improvement in the potential investment profit to be had in a country. Negative price shocks would indicate a decrease in the potential investment profit to be had. One potential concern with a measure like this is that natural resource exports will not accurately capture the potential investment profit for a country that does not heavily rely on exports of natural resources. I have two responses to this concern. The first is that, by and large the authoritarian regimes studied in this chapter have economies which are less developed than their established democratic

counterparts. As a result, these are precisely the types of countries most likely to have an economy driven by or heavily dependent on exports of natural resources in some form. Indeed, by examining the share of export commodities to total GDP we can observe that most of the countries here have an export commodity to GDP ratio of over 20%, indicating that export commodities are generally very significant to these economies and can accurately capture potential investment profit<sup>2</sup>. Second, this measure weights commodities by the importance of that export to each country's Gross Domestic Product (GDP). By considering the collection of commodities in a country and weighting them by the importance of the export, this measure functions as a good indicator of shifts in potential investment profit and ensures that price shocks have a real effect on potential profit.

Importantly, the primary reason for using this measure is that it is plausibly exogenous from judicial independence. While judicial independence might affect the price of goods in a single country, it is generally implausible that judicial independence in a single country could affect world commodity prices for the vast majority of goods and regimes. The one potential exception where this might not be true is in cases where a single country possesses the means to dominate world trade of a commodity, such as oil in Saudi Arabia, cocoa in Cote D'Ivoire, or copper in Chile. In these instances, national level changes could potentially affect the worldwide prices of the commodity and as a result the export commodity price shock measure would not be exogenous to national level changes. In order to account for this, the measure only includes commodities for which a nation is a 'price-taker' as opposed to a 'price-maker.' Price-makers dominate the export of a commodity to such an extent that domestic shifts could feasibly affect world prices, while price-takers have no such power. To account for this, any commodity where a nation produces over 10 percent of the world's output for that commodity is omitted from that nation's export price shock

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<sup>2</sup>See Appendix A.2 for the full distribution.

measures. This ensures that changes in export commodity prices for each country are truly exogenous to domestic politics.

### **Dependent Variables**

For the following empirical tests, I use five separate dependent variables. In order to test Hypothesis 1, I use the Linzer and Staton 2015 measure of judicial independence discussed in Chapter 2 as my dependent variable. I utilize the 2015 version of this measure, as the most recent version includes information from the V-dem project which function here as my outcome variables. This measure will allow me to identify changes in judicial independence within countries over time and to compare those changes across countries.

In order to test my next hypothesis, I need data that will capture the review of courts predicted by Hypothesis 2. While I cannot directly measure how much regime leaders review judicial cases, I argue that the frequency of judicial attacks and purges can function as a proxy measure for judicial review. If judicial decisions are being reviewed less frequently because courts are less independent, I argue this will decrease the frequency of judicial attacks and judicial purges. Judicial attacks and purges can be seen as a response to review which reveals that judges are ruling out of line with the government's interests. That is, attacks on the judiciary are a response to the discovery through review of the judiciary that regime leaders disagree with the court's statements and judgments. Knowing the status of individual judges and courts to be attacked or purged requires judicial review to take place that informs the regime of where judges and members of the court system stand. This is particularly true with judicial purges, where the dictator needs to know specifically which judges, if any, should be kept and which judges should be replaced. Because review of the judiciary is becoming less frequent as a result of increased potential investment profits and less independent judges, then it should also be the case that attacks and purges as a

consequence of reviewing the judiciary are also becoming less frequent.

I will test Hypothesis 2 using both judicial attacks and judicial purges as ways to proxy for the frequency of judicial review. For the first, I use a measure of judicial attacks, as measured by the V-dem project. This variable is obtained from a measurement model transforming a five-point response scale answer to the question “How often did the government attack the judiciary’s integrity in public?” by area experts. This measure will help to capture public attacks on the judiciary by the regime. To aid interpretation, I reverse this variable from the original coding. This means that higher values on this variable correspond to higher levels of judicial attacks, while lower values on the variable correspond to lower levels of judicial attacks.

The second outcome measure to capture review of the judiciary is judicial purges, as measured again by the V-Dem project. This variable is obtained from a measurement model transforming a five-point response scale answer to a question asking respondents to describe the nature of arbitrary removals of judges from office. This measure is written to capture only politically motivated and arbitrary removals, not removals for corruption, retirement, or other causes. To aid interpretation, I also reverse this variable from the original coding. This means that higher values on this variable correspond to higher levels of judicial purges, while lower values on the variable correspond to lower levels of judicial purges.

Hypothesis 3 requires a measure of government compliance with the judiciary as an outcome measure. As with the judicial attack and purge measures, this measure is taken from the V-Dem project and is obtained from a measurement model transforming a five-point response scale answer to the question “How often would you say the government complies with important decisions of the high court with which it disagrees?”

In order to capture the prediction of Hypothesis 4 with respect to the level of agent corruption and expropriation, ideally I would want a measure that captures the impact of agent corruption on firm profits. Unfortunately, this is difficult to observe and no

such measure exists in cross-national form. The closest substitutes, cross-national measures of corruption or government control of corruption, are not available for much of the late 20<sup>th</sup> century and would limit the sample size dramatically. Instead, as a way to proxy for the share of profits lost to corruption, the final measure that I use is a measure of property rights also drawing from the V-Dem project. This measure is obtained from combining the scores on questions asking about the property rights of men and women. This question is a six-point ordinal scale asking about the degree to which property rights are widespread in the country and the degree to which property rights are equally available. Respondents answer the question “Do men (women) enjoy the right to private property?” with responses ranging from “Virtually no men (women) enjoy private property rights of any kind” to “Virtually all men (women) enjoy all, or almost all, property rights.” I use this measure to attempt to capture the extent to which firms might be exposed to agent corruption and expropriation within a regime. While this measure is not a perfect match to the concept of the level of corruption experienced by firms, this measure should help me to capture some information about the extent to which firms are protected from corruption.

### **Alternate Explanations**

While the use of price shocks as an independent variable allows me to avoid threats of endogeneity from the outcome variables, there is still a threat of omitted variable bias from other mechanisms which might be affected by price shocks and in turn impact judicial institutions. A prominent theory in the literature has argued that a key explanation for why regimes might empower independent courts is in response to increasing political competition (Beer 2006; Chavez 2004; Epperly 2019; Leiras et al. 2015; Popova 2010). While this theory is not necessarily inconsistent with my theory, it could potentially bias results as shifts in political competition are likely to be correlated with shifts in export commodity prices. In order to measure political competition to

account for this possibility, I will utilize the Polity measure for constraints on the executive, not including the judicial branch, as a measure of political competition (Coppedge et al. 2017; Jagers and Gurr 1995). As argued by Epperly, this is an effective measure for both political constraints on the executive as well as a proxy for political competition in authoritarian regimes where measures such as vote share or party presence are either largely unreliable or unavailable.

In addition to political competition, price shocks have been thought to affect the propensity for countries to experience violent conflict (Bazzi and Blattman 2014). This would be an issue for my empirical results if this conflict also affected the relationship between the dictator and judicial institutions. There is reason to suspect this might be an issue, as violent conflict and war has been shown to affect the independence and ruling patterns of judicial actors (Clark 2006). In order to measure conflict, I will utilize data for armed conflicts of any kind that result in at least 25 deaths or more from the Uppsala Conflict Data Program and Peace Research Institute Oslo (UCDP/PRIO) armed conflict dataset (Bazzi and Blattman 2014; Gleditsch et al. 2002). This measure will help account for most violent conflict that might occur as a result of price commodity shocks. Another aspect of violent conflict that may occur as a result of commodity shocks is a coup d'état (Bazzi and Blattman 2014). In order to account for this possibility, I also include a measure of actual and attempted coup d'état events from the Powell & Thyne 2011 dataset (Bazzi and Blattman 2014; Powell and Thyne 2011).

### 4.2.2 Empirical Estimation

The goal of this analysis is to estimate the effect of price shocks on the dependent variables of interest for each of the four hypotheses outlined in this chapter. While global commodity prices are exogenous to the outcomes I am interested in, one concern



is that global commodity shocks affect other factors within a country which might also affect judicial institutions. If these alternate explanations are left unaccounted for, they could bias the estimated effect of price shocks on the dependent variables analyzed here. One method to account for this threat is to include variables capturing these alternate explanations as controls in my analysis. However, a problem with this approach is that the alternate explanations are likely to be affected by export commodity price shocks, and in turn they are likely to affect the dependent variables. As such, these alternate explanation variables are posttreatment mediators and controlling for these variables in the analysis would introduce potentially serious posttreatment bias of unknown direction into the estimation of the effect of price shocks on the dependent variables of interest (Acharya et al. 2016).

In order to account for these alternate explanations in a way that does not introduce bias into the estimation of price shock effects, I focus on estimating the average controlled direct effect (ACDE) of export commodity price shocks on the dependent variables. The ACDE in this design is defined as the causal effect of price shocks when mediator variables are fixed at a particular level (Acharya et al. 2016; Joffe and Greene 2009; Vansteelandt 2009). Focusing on estimating the ACDE will allow me to obtain a causal estimate of the direct effect of price shocks while accounting for the impact of mediator variables. By implementing the sequential-g estimator developed and discussed in Vansteelandt 2009 and in Acharya et al. 2016, I can produce an unbiased estimate of this effect which accounts for the mediator variables. The sequential-g estimator is a two-step estimator which transforms (or ‘demediates’) the dependent variable by subtracting the estimated effect of the mediator, and then estimating the effect of the explanatory variable on the transformed dependent variable. This involves estimating two regressions of the following forms:

$$Y_{it} = \gamma_0 + \gamma_p \mathbf{PS}_{it} + \gamma_x \mathbf{X}_{it} + \alpha_i + \alpha_i * t + \epsilon_{it} \quad (4.1)$$

$$\tilde{Y}_{it} = \beta_0 + \beta_p \mathbf{PS}_{it} + \alpha_i + \alpha_i * t + \epsilon_{it} \quad (4.2)$$

In equation 4.1,  $Y_{it}$  is the dependent variable of interest for the first stage regression, measured at the country-year level. Respectively, these are judicial independence, judicial attacks, compliance with the judiciary, and property rights. The dependent variable in the second stage regression,  $\tilde{Y}_{it}$ , is simply the dependent variable from the first stage regression adjusted by subtracting the estimated effect of the mediator variables from equation 4.2 so that  $\tilde{Y}_{it} = Y_{it} - \hat{\gamma}_x \mathbf{X}_{it}$ . By adjusting the dependent variable for the estimated effect of the mediator, equation 4.2 produces an unbiased and consistent estimate of the ACDE of price shocks on the dependent variable.

In both equations,  $\mathbf{PS}_{it}$  is a vector including the current year's shock and two lags. Positive values for  $\mathbf{PS}_{it}$  indicate an increase in global prices for commodities exported by country  $i$  in year  $t$ , and represent an increase in the attractiveness of the investment climate as a result. Similarly, negative values for these variables indicate a decline in the attractiveness of the investment climate. The vector  $\beta_p$  in equation 4.2 consists of estimated ACDE coefficients on the current and past two years' export commodity price shocks and are the main estimates of interest. The interpretation of these coefficients, based on the assumption that price shocks are exogenous to the outcomes of interest and there is no other omitted variable bias, is that  $\beta_p$  is the estimated effect of price shocks on the within-regime deviation from regime time trends.

The quantities  $\alpha_i$  and  $\alpha_i * t$  are regime-level fixed effects and regime-level linear time trends respectively, with regime captured by coding from Geddes et al. 2014. Because I am interested in the estimated coefficient of a time-varying shock, I include regime-year trends to avoid potential bias introduced by other time-varying effects that might be correlated with price shocks as well as impact the outcomes of interest. I include regime fixed effects to help account for potential heterogeneity across regimes

in the impact of price-shocks that could bias coefficients for the outcomes of interest. In addition, I report robust standard errors clustered at the regime level utilizing bootstrapped procedures that account for the clustered nature of the data as well as the two-step estimation procedure (Abadie et al. 2017; Cameron et al. 2008; Colin Cameron and Miller 2015)<sup>3</sup>.

In the following analyses, I present estimated coefficients from equation 4.2 where I adjust for all three potential mediator variables simultaneously in order to estimate the ACDE of export commodity price shocks. This allows me to estimate the effect of price shocks on each dependent variable when political competition, conflict, and attempted coups are held constant. In order to provide more robust and fuller picture of these results, for each dependent variable I include a regression table that presents the outcome of 5 regressions in addition to the main results.

In the following regression tables, Model 1 gives the estimated results from equation 4.1 without controls, while Model 2 gives the estimated results from equation 4.1 with controls. In these models, standard errors are reported clustered at the regime-level. Model 3 gives the estimated ACDE results from equation 4.2, only adjusting for the political competition mediator. Model 4 gives the estimated ACDE results from equation 4.2, only adjusting for the conflict mediator. Model 5 gives the estimated ACDE results from equation 4.2, only adjusting for the attempted coup mediator. Model 6 gives the estimated ACDE results from equation 4.2, adjusting for all three mediators simultaneously and is the main result reported in the figures. In all of these models, the standard errors reported are estimated through bootstrap replications that account for the clustered nature of the data as well as the two-step estimation of the ACDE.

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<sup>3</sup>I use fixed effects and clustered standard errors at the regime-level because I believe this level is more likely to capture any unobserved variables that might affect judicial independence and other outcomes. However, results are substantively unchanged when fixed effects and clustered errors are at the country level.

### 4.2.3 Hypothesis 1: Judicial Independence

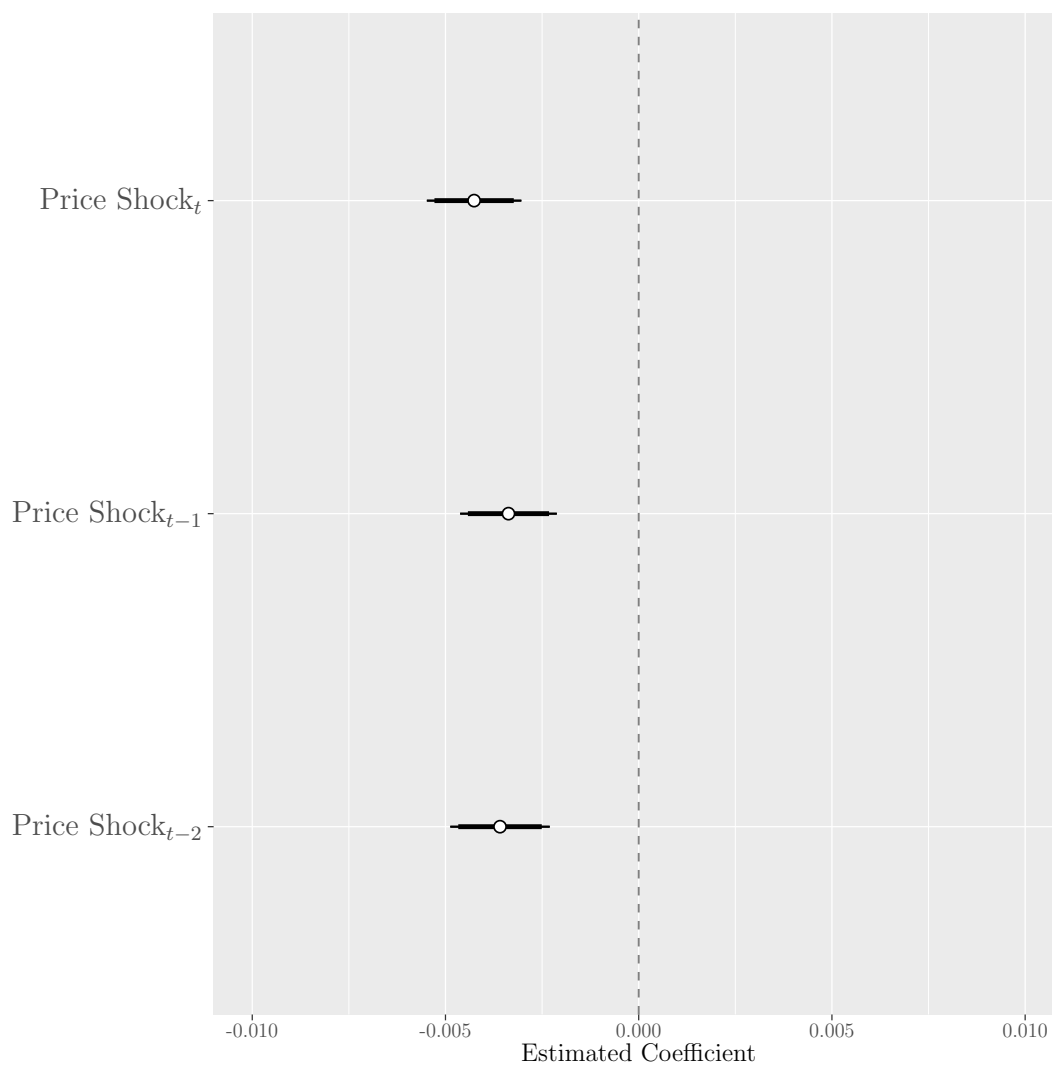


Figure 4.1: Estimated ACDE of Export Commodity Price Shocks on LJI

Hypothesis 1 predicted that as potential investment profit increases, judicial independence should decrease. To test this, Figure 4.1 presents the results of a sequential-g estimation of the linear regression of Latent Judicial Independence scores on price shocks according to the specification of equation 4.2, adjusting for all mediators. The figure presents the estimated coefficient and confidence intervals for the estimate of the ACDE of price shocks on Latent Judicial Independence. 95% confidence intervals

are shown in the thin black line, while 90% confidence intervals are shown by the bold black line. Both of these intervals were obtained using pairs-cluster bootstrapped standard errors, clustered at the regime level.

The empirical analyses presented here provide support for Hypothesis 1. Results for the export commodity price shock variables are precisely estimated, with relatively narrow confidence intervals, and are consistently statistically significant at the .05 level and in the direction predicted by the theory. In addition, Table 4.1 contains estimated coefficients for equations 4.1 with and without controls and estimated coefficients for equation 4.2 demediating LJI for each mediator separately. As Figure 4.1 and Table 4.1 make clear, the coefficients on the export commodity price shock variables are consistently estimated to be negative and do not vary widely in the estimated size of the effect regardless of which model is chosen. So even when accounting for alternate explanations in multiple ways, there is still strong support for Hypothesis 1. As a result of positive price shocks to export commodities, authoritarian countries tend to have lower levels of judicial independence. But how substantively meaningful are these results?

The export commodity price shock variable is constructed so that it has a mean of zero with a standard deviation of 1 and a 1 unit increase in the price shock variable represents an increase of 1 standard deviation in price shocks. Because the Latent Judicial Independence scale ranges from 0 to 1, it is not immediately clear whether or not price shocks have a substantively significant effect on judicial independence. One way to examine this effect is to compare it to the average variation in year-to-year LJI scores within regimes. There is generally little year-to-year variation within authoritarian countries and the average magnitude of change from year-to-year within country is about .012, with the median year-to-year change within country being .009. In light of the magnitude of the average and median yearly change in judicial independence, an estimated deviation in yearly trends in judicial independence

Table 4.1: Latent Judicial Independence Results

	<i>Dependent variable: Latent Judicial Independence</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Price Shock <sub>t</sub>	-0.00428*** (0.000746)	-0.00426*** (0.00076)	-0.00426*** (0.00062)	-0.00427*** (0.00061)	-0.00428*** (0.00061)	-0.00426*** (0.00062)
Price Shock <sub>t-1</sub>	-0.00354*** (0.000764)	-0.00337*** (0.00077)	-0.00336*** (0.00064)	-0.00354*** (0.00064)	-0.00354*** (0.00064)	-0.00337*** (0.00061)
Price Shock <sub>t-2</sub>	-0.00354*** (0.000788)	-0.00359*** (0.00079)	-0.00358*** (0.00066)	-0.00354*** (0.00065)	-0.00355*** (0.00066)	-0.00359*** (0.00062)
Competition		0.06872*** (0.02347)				
Conflict		0.00124 (0.003638)				
Coup Attempts		-0.00150 (0.003294)				
Mediator Adjusted?	None	None	Pol Comp	Conflict	Coup	All
Observations	3,051	3,009	3,009	3,051	3,051	3,009
R <sup>2</sup>	0.96472	0.96556	0.96383	0.96473	0.96472	0.96383
Adjusted R <sup>2</sup>	0.95964	0.96054	0.95860	0.95966	0.95964	0.95860

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

of roughly between -.0025 and -.005 as a result of price shocks is a substantively meaningful and significant shift in judicial independence.

#### 4.2.4 Hypothesis 2: Review of the Judiciary

Hypothesis 2 predicts that as potential firm profit increases, courts will on average become less independent, and the regime will have fewer opportunities or incentives to review these judges. Because I cannot directly measure judicial review, I instead examine two measures which I argue are good proxies of the frequency of judicial review: attacks on the judiciary, and purges of the judiciary.

##### Attacks on the Judiciary

The first measure I use to proxy for frequency of judicial review is government attacks on the judiciary. To test Hypothesis 2 using judicial attacks as proxy for review of the judiciary, Figure 4.2 presents the results of a sequential-g estimation of the linear regression of V-dem attacks on the judiciary measure on price shocks according to

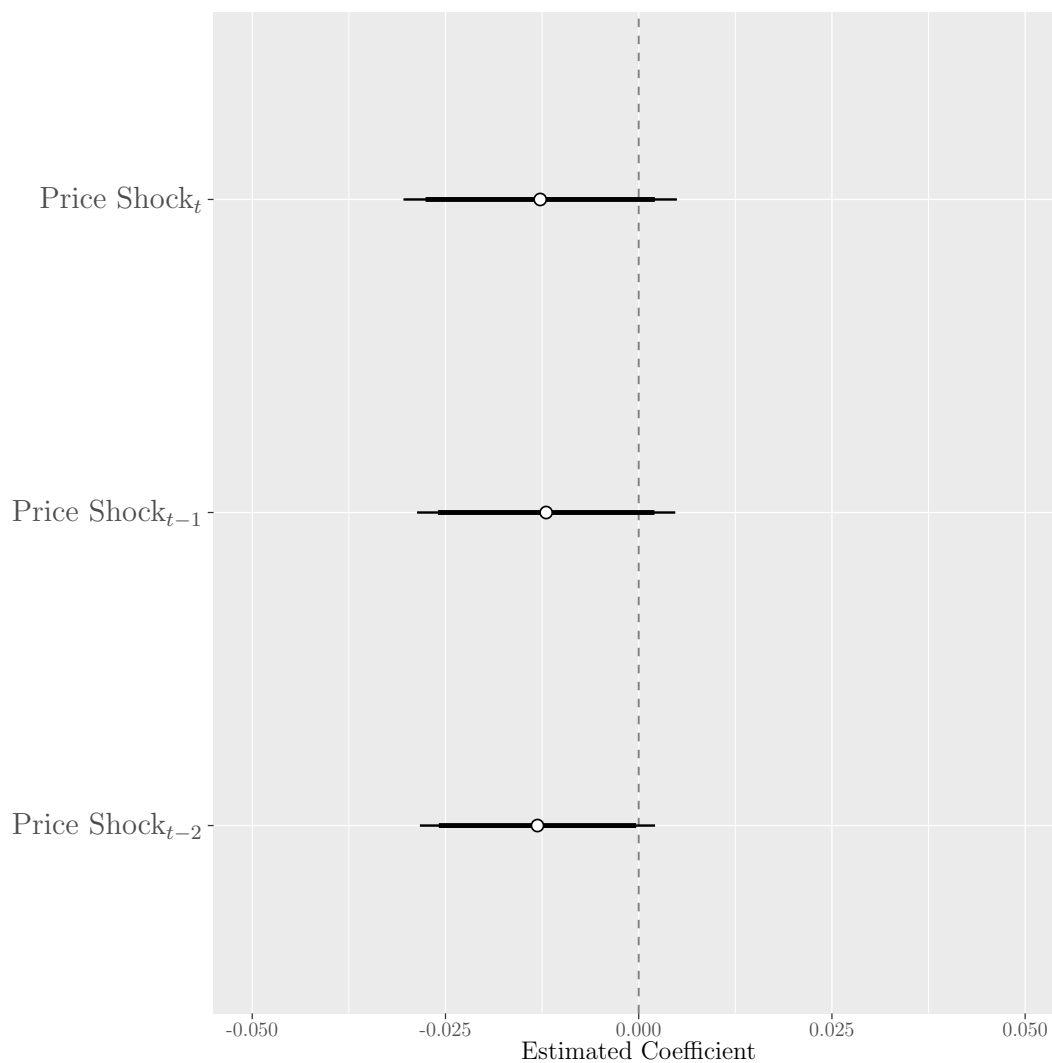


Figure 4.2: Estimated ACDE of Export Commodity Price Shocks on Judicial Attacks

the specification of equation 4.2, adjusting for all mediators. The figure presents the estimated coefficient and confidence intervals for the estimate of the ACDE of price shocks on Latent Judicial Independence. 95% confidence intervals are shown in the thin black line, while 90% confidence intervals are shown by the bold black line. Both of these intervals were obtained using pairs-cluster bootstrapped standard errors, clustered at the regime level.

As Figures 4.2 and Table 4.2 show, as export commodity prices increase in authoritarian regimes there is a decline in the frequency of judicial attacks even after

Table 4.2: Attacks on the Judiciary Results

	<i>Dependent variable: Attacks on the Judiciary</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Price Shock <sub>t</sub>	-0.01272 (0.01083)	-0.01274 (0.01108)	-0.01292 (0.00905)	-0.01252 (0.00878)	-0.01259 (0.00881)	-0.01274 (0.00902)
Price Shock <sub>t-1</sub>	-0.01142 (0.01020)	-0.01197 (0.0105)	-0.01207 (0.008407)	-0.01158 (0.00832)	-0.01138 (0.00824)	-0.01197 (0.00852)
Price Shock <sub>t-2</sub>	-0.01256 (0.00918)	-0.01310 (0.00946)	-0.01310* (0.00764)	-0.01263* (0.00762)	-0.01241* (0.00762)	-0.01310* (0.00776)
Competition		-0.06969 (0.1547)				
Conflict		0.07597** (0.03296)				
Coup Attempts		0.04335 (0.02645)				
Mediator Adjusted?	None	None	Pol Comp	Conflict	Coup	All
Observations	3,051	3,009	3,009	3,051	3,051	3,009
R <sup>2</sup>	0.95269	0.95359	0.95324	0.95235	0.95269	0.95285
Adjusted R <sup>2</sup>	0.94587	0.94682	0.94648	0.94549	0.94588	0.94604

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

demediating for alternate explanations. Despite a reduction in judicial independence as a result of increasing potential investment profit, judges are actually safer from judicial attacks. This is consistent with my theory which argues that as judicial independence decreases, judges will be reviewed less often with judicial attacks as a proxy for judicial review.

While the estimated effect of price shocks on judicial attacks is consistently in the direction predicted by my theory across all 6 models, the standard errors are such that only one of the price shock lag variables ever reaches significance at the .1 level. However, the substantive size of the effect is consistent and substantively significant across all models. The estimated effect size of around .0126 is substantial compared to the average within-regime year-to-year variation in judicial attacks of .0948. The median within-regime year-to-year variation in judicial attacks is only .278, in which case a change of .0126 is nearly half of the median yearly variation. However, the point estimates here have large standard errors and are not precisely estimated.



## Judicial Purges

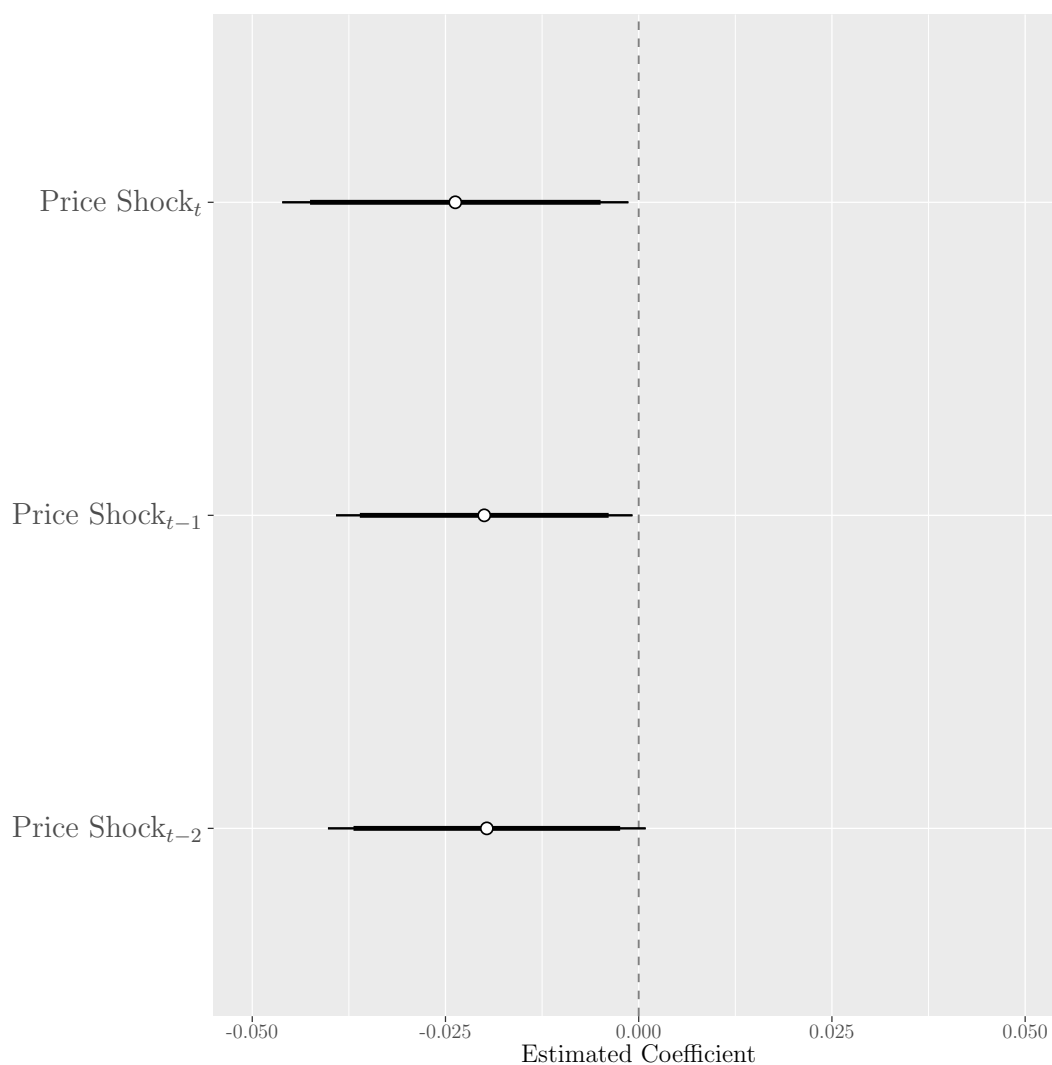


Figure 4.3: Estimated ACDE of Export Commodity Price Shocks on Judicial Purges

The second measure I use to proxy for frequency of judicial review is government purges of the judiciary. To test Hypothesis 2, Figure 4.3 presents the results of a sequential-g estimation of the linear regression of the V-dem measure of frequency of judicial purges on price shocks according to the specification of equation 4.2 adjusting for all mediators. The figure presents the estimated coefficient and confidence intervals for the estimate of the ACDE of price shocks on Latent Judicial Independence. 95%

Table 4.3: Purges of the Judiciary Results

	<i>Dependent variable: Purges of the Judiciary</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Price Shock <sub>t</sub>	-0.02245 (0.0138)	-0.02373* (0.014)	-0.02387** (0.0114)	-0.02235** (0.0113)	-0.02228** (0.0113)	-0.02373** (0.0114)
Price Shock <sub>t-1</sub>	-0.01767 (0.0123)	-0.01998* (0.0121)	-0.02013** (0.0097)	-0.01775* (0.00997)	-0.01763* (0.00993)	-0.01998** (0.00978)
Price Shock <sub>t-2</sub>	-0.01812 (0.0129)	-0.01965 (0.013)	-0.01976* (0.01044)	-0.01815* (0.01044)	-0.01792* (0.01035)	-0.01965* (0.0105)
Competition		-0.40228** (0.156)				
Conflict		0.03675 (0.0359)				
Coup Attempts		0.05513 (0.03162)				
Mediator Adjusted?	None	None	Pol Comp	Conflict	Coup	All
Observations	3,051	3,009	3,009	3,051	3,051	3,009
R <sup>2</sup>	0.93079	0.93265	0.93152	0.93039	0.93080	0.93108
Adjusted R <sup>2</sup>	0.92082	0.92282	0.92162	0.92037	0.92084	0.92112

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

confidence intervals are shown in the thin black line, while 90% confidence intervals are shown by the bold black line. Both of these intervals were obtained using pairs-cluster bootstrapped standard errors, clustered at the regime level.

The results here provide stronger evidence for Hypothesis 2. As a country experiences higher price shocks, the frequency of judicial purges decreases. This supports Hypothesis 2, which predicts that judicial review will become less frequent as potential profit increases. Using frequency of judicial purges as a proxy for judicial review, I find that the ACDE of price shocks on judicial purges is consistently negative and substantively and statistically significant. These results are consistently in the direction predicted by the theory across all 6 models, and the effects are statistically significant across most specifications.

Substantively, the estimated effects are quite significant. The average within-regime year-to-year change in judicial purges is .14, with a median of .062. So an estimated effect of a reduction of roughly .2 is quite substantively significant for this variable relative to average yearly changes for regimes. However, while these point estimates

are statistically significant the standard errors are fairly wide and the true effect may be quite smaller than the point estimate. In any case, the estimated effects are consistently in the direction predicted by my theory and the point estimates do not change much across the models.

### 4.2.5 Hypothesis 3: Compliance with the Judiciary

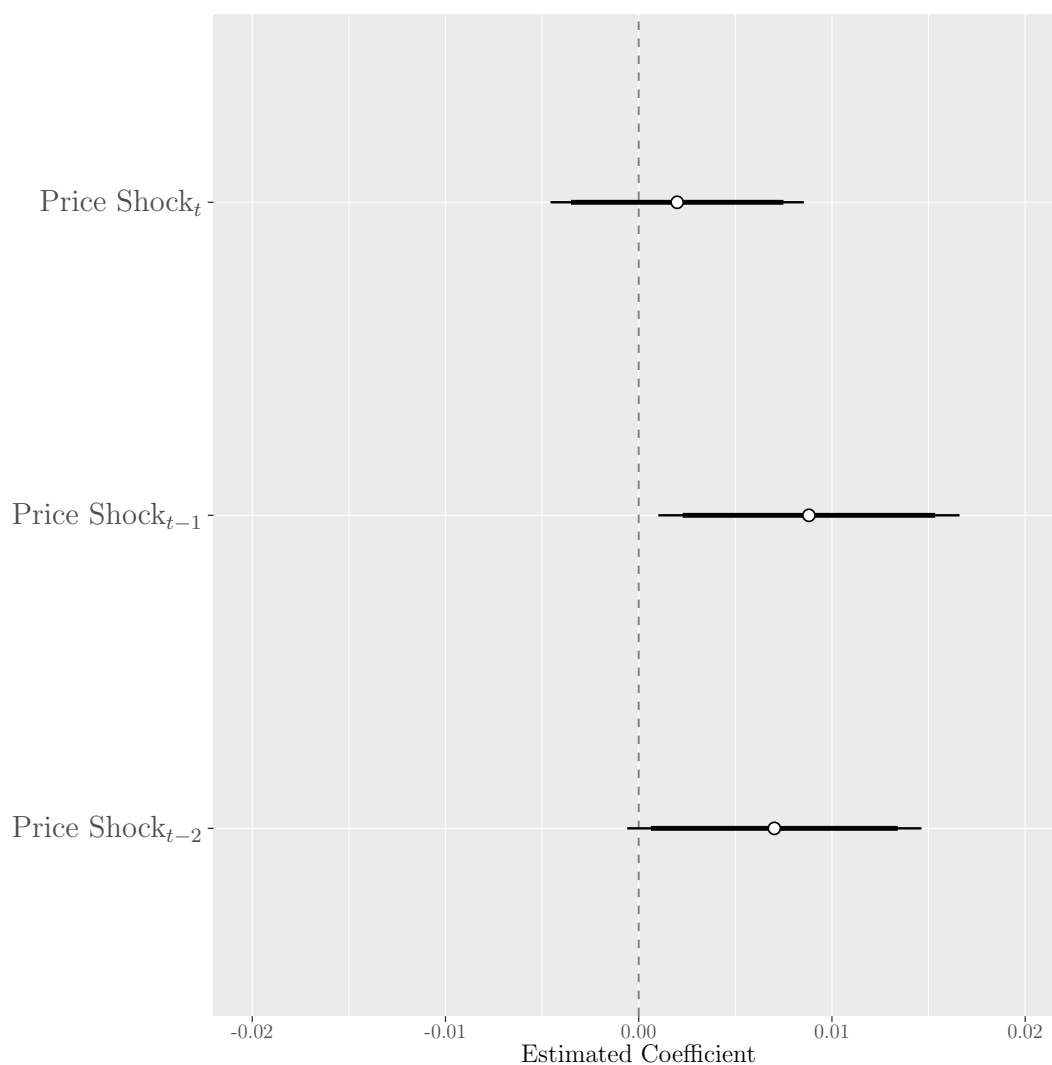


Figure 4.4: Estimated ACDE of Export Commodity Price Shocks on Judicial Compliance

Next, I examine how the level of regime compliance with the judiciary in a country changes as a result of exogenous price shocks. Hypothesis 3 predicts that as potential

Table 4.4: Judicial Compliance Results

	<i>Dependent variable: Compliance with the Judiciary</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Price Shock <sub>t</sub>	0.00164 (0.00397)	0.00199 (0.00395)	0.00193 (0.00334)	0.00167 (0.00335)	0.00172 (0.00334)	0.00199 (0.00334)
Price Shock <sub>t-1</sub>	0.00727 (0.0048)	0.00881* (0.00464)	0.00873** (0.00399)	0.00724* (0.00408)	0.00729* (0.00412)	0.00881** (0.00397)
Price Shock <sub>t-2</sub>	0.00632 (0.00461)	0.00702 (0.00455)	0.00696* (0.003897)	0.00631 (0.00388)	0.00642 (0.00392)	0.00702* (0.00388)
Competition		0.30311*** (0.08403)				
Conflict		0.01222 (0.03196)				
Coup Attempts		0.02750 (0.01954)				
Mediator Adjusted?	None	None	Pol Comp	Conflict	Coup	All
Observations	3,051	3,009	3,009	3,051	3,051	3,009
R <sup>2</sup>	0.98029	0.98019	0.97984	0.98033	0.98030	0.97991
Adjusted R <sup>2</sup>	0.97745	0.97730	0.97693	0.97749	0.97746	0.97700

*Note:*

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

firm profit increases, courts will become more dependent and compliance with the judiciary will increase as a result. To test Hypothesis 3, Figure 4.4 presents the results of a sequential-g estimation of the linear regression of the V-dem measure of judicial compliance on price shocks according to the specification of equation 4.2, adjusting for all mediators. The figure presents the estimated coefficient and confidence intervals for the estimate of the ACDE of price shocks on Latent Judicial Independence. 95% confidence intervals are shown in the thin black line, while 90% confidence intervals are shown by the bold black line. Both of these intervals were obtained using pairs-cluster bootstrapped standard errors, clustered at the regime level.

Figure 4.4 and Table 4.4 provide evidence largely supporting Hypothesis 3. The estimated ACDE of price shocks on judicial compliance is consistently positive. And though statistical significance varies across models and lags, the estimates are consistently in the direction predicted by Hypothesis 3 and are substantively significant given the variable's average year-to-year within-regime change of .046.

#### 4.2.6 Hypothesis 4: Agent Corruption and Expropriation

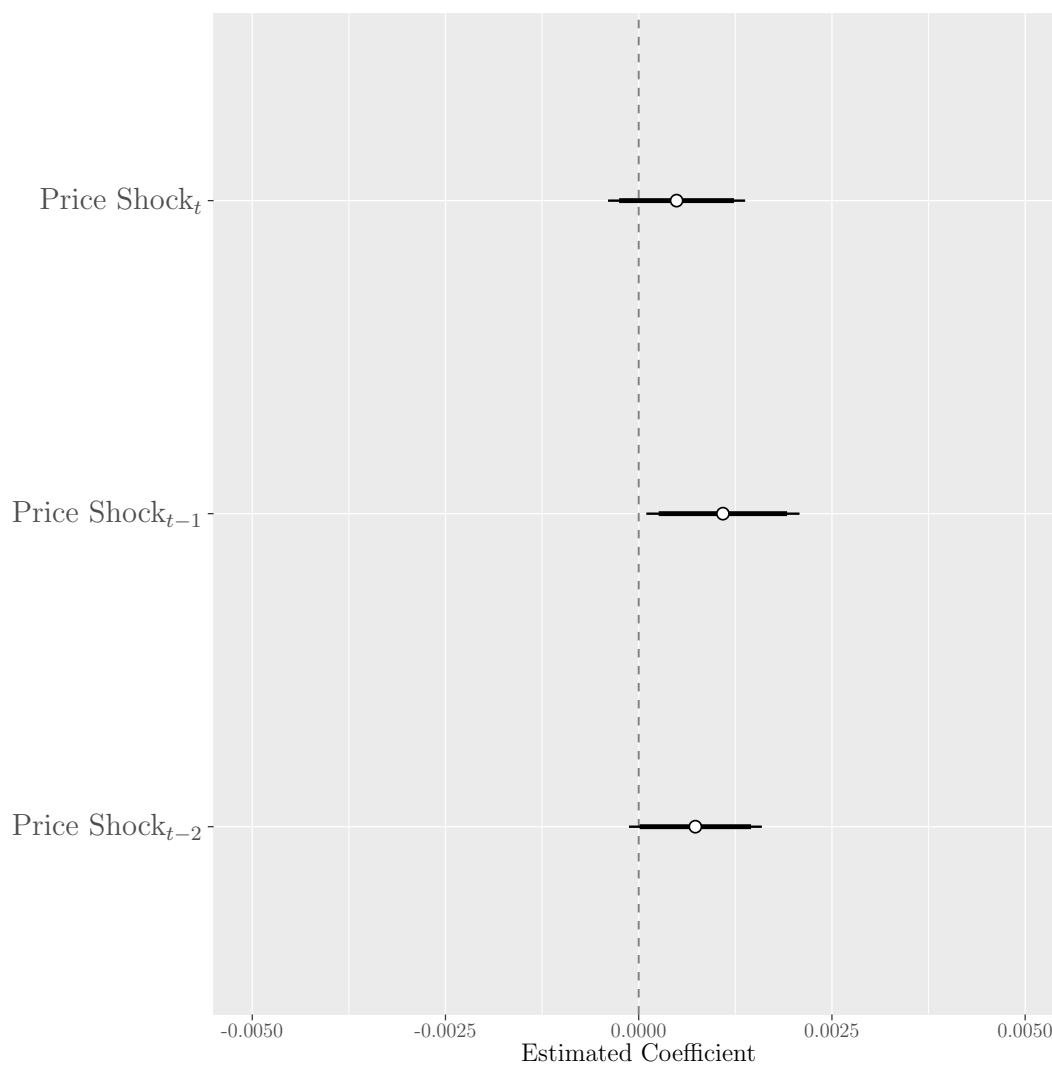


Figure 4.5: Estimated ACDE of Export Commodity Price Shocks on Property Rights

Finally, I examine how the level of property rights provision within a country changes as a result of exogenous price shocks. My fourth hypothesis described above predicts that as potential firm profit increases, courts are likely to become less independent and as a result firms will be exposed to greater average levels of corruption and expropriation. I proxy for this by using the V-dem measure of the availability of property rights to examine how exogenous price shocks affect the ability and inclination

Table 4.5: Property Rights Results

	<i>Dependent variable: Property Rights</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Price Shock <sub>t</sub>	0.00045 (0.000544)	0.00049 (0.000547)	0.00048 (0.000453)	0.00045 (0.000452)	0.00047 (0.000454)	0.00049 (0.000452)
Price Shock <sub>t-1</sub>	0.00100 (0.000612)	0.00109* (0.000622)	0.00108** (0.000502)	0.00100** (0.000499)	0.00100** (0.000497)	0.00109** (0.000504)
Price Shock <sub>t-2</sub>	0.00068 (0.000543)	0.00073 (0.000551)	0.00072* (0.000432)	0.00068 (0.000432)	0.00070 (0.000436)	0.00073* (0.000438)
Competition		0.04128** (0.01882)				
Conflict		-0.00100 (0.00642)				
Coup Attempts		0.00411 (0.00322)				
Mediator Adjusted	None	None	Pol Comp	Conflict	Coup	All
Observations	3,051	3,009	3,009	3,051	3,051	3,009
R <sup>2</sup>	0.98218	0.98231	0.98214	0.98217	0.98219	0.98214
Adjusted R <sup>2</sup>	0.97961	0.97973	0.97956	0.97960	0.97962	0.97956

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

of courts to protect property rights against corruption and expropriation.

To test Hypothesis 4, Figure 4.5 presents the results of a sequential-g estimation of the linear regression of the V-dem measure of availability of property rights on price shocks according to the specification of equation 4.2, adjusting for all mediators. The figure presents the estimated coefficient and confidence intervals for the estimate of the ACDE of price shocks on Latent Judicial Independence. 95% confidence intervals are shown in the thin black line, while 90% confidence intervals are shown by the bold black line. Both of these intervals were obtained using pairs-cluster bootstrapped standard errors, clustered at the regime level.

As Table 4.5 and Figure 4.5 display, the ACDE of price shocks on availability of property rights is consistently estimated to be positive. This is the opposite direction predicted by Hypothesis 4, so this test does not provide any support for Hypothesis 4. Like other measures, the estimates here are substantively significant compared to a mean within-regime year-to-year change of about .006.

### 4.3 Discussion of Empirical Results

These results provide evidence that is largely consistent with the hypotheses generated by comparative statics derived from my theoretical model. My theory predicts that as external factors make investment more potentially profitable, regimes can achieve the same amount of investment with less judicial independence and will decrease judicial independence as a result. As a result of this decreasing independence, my theory predicts that the regime will become less likely to review the court and more likely to comply with the court's rulings. The end result of these changes is that fewer cases of agent expropriation and corruption are enforced in a way favorable to investors.

The only hypothesis I do not find support for is Hypothesis 4 concerning an increase in the level of agent corruption the firm is exposed to. However, the best available measure I had to test this hypothesis over a sufficient period of time was how widespread property rights are among women and men. It is possible that this was simply not a sufficient measure to capture the concept of agent corruption, extortion, and low level expropriation all of which are difficult to observe and measure cross-nationally and over time. In future work, more detailed measures that are closer to the concept of the level of agent corruption that harms firm profits could be used to get more leverage on this hypothesis.

Taken as a whole, the evidence presented supports most of the predictions of my model and theoretical framework. These empirical results generally provide evidence consistent with my theory of courts in authoritarian regimes. Most estimates are consistently in the direction predicted by my theory and the size of the effects are substantively significant relative to typical yearly changes in the dependent variables. These patterns also all hold after accounting for the possibility that these exogenous changes in the attractiveness of investment are affecting political competition and constraints on the executive. These empirical tests make it clear that as a result of an exogenous increase in the attractiveness of investment opportunities in a regime,

judicial independence decreases. Further, these results clearly demonstrate patterns consistent with decreased review of the judiciary and increased compliance with the judiciary as a result. This is consistent with my theoretical framework whereby judicial independence can be manipulated to attract and retain investment through the ability of the judiciary to assist the regime in monitoring its agents for corruption and low level expropriation.



## Chapter 5 Conclusion

How could a dependent court be used to successfully challenge an authoritarian regime in an important administrative or commercial case? This question is difficult to answer if we adopt the view that dependent courts are at best tools for show trials and only independent courts can offer tangible economic or agent-control benefits for authoritarian regimes. Authoritarian regimes around the world tend to have dependent judicial systems, yet these courts appear to rule against the regime frequently at least in economic and administrative cases and experience middling to high levels of regime compliance with the judiciary.

This dissertation has developed a theoretical framework capable of understanding these patterns which provides a new view of the function and role of judicial institutions in authoritarian regimes. The argument in this dissertation is that judicial institutions allow dictators to solve a fundamental tension between attracting economic investment and allowing his agents to engage in illicit corruption. The key issue with this agent-investment tension is that the dictator has limited information about the actions of his agents and cannot trust economic actors or agents to convey the truth about agent corruption to the dictator. Judicial institutions can provide information to the dictator about the action of his agents, which allows the dictator to control agent corruption and limit it enough to attract investment.

However, I argue it is not independent courts which can best provide the dictator with information but rather dependent courts. The more independent courts are, the less likely it is that judicial rulings align with the dictator's preferences. While the dictator cannot trust courts that are too independent, if courts are sufficiently dependent the dictator knows that judicial rulings are likely to be in line with his own preferences. This will benefit both firms and the dictator, because firms rely on

the dictator having trustworthy information in order to reduce agent corruption that negatively affects firm profits.

The logic of this theory helps to account for the puzzling patterns shown in Chapter 2. This framework helps to understand why most courts in authoritarian regimes are of limited independence at best. If courts are too independent, they are no longer useful institutions to monitor regime agents because they no longer provide the regime with useful information. Additionally, this framework helps to understand why regimes comply with rulings against the regime even under a dependent judicial system incapable of constraining the regime. Under this theoretical framework, dependent courts play an important role in providing the dictator with information about the action of his agents. Rulings against the regime in this framework do not imply rulings against the interests of the dictator, and in fact can provide the dictator with important information about his agents. In this framework, it is not puzzling at all that dictators would choose to enforce these rulings some of the time. These are not necessarily rulings against the dictator, but rather rulings that allow the dictator to identify agents and actions which do not conform with his preferences.

This theoretical account of judicial institutions in authoritarian regimes produces several important observable implications. The first and main implication is that authoritarian regimes will manipulate judicial independence to function as a substitute for poor investment conditions. Chapter 4 provides evidence of this, as judicial independence scores consistently decrease as a result of increases in export commodity prices which make investment in a regime more attractive.

The second implication is that authoritarian regimes are less likely to review courts as they become more dependent, because these courts are providing more trustworthy information to the regime about the actions of agents. In addition, as the courts become more dependent, the regime becomes more likely to comply because the regime knows the rulings of these courts are increasingly aligned with the regime's preferences.

While review of court decisions is not possible to measure directly in a cross-national way, I utilize both frequency of judicial attacks and judicial purges as a proxy measure for this. Chapter 4 provides evidence that judicial compliance decreases as export commodity prices increase, and that judicial attacks and purges become more frequent as export commodity prices increase.

A final implication of the framework that was tested here is that, despite the fact that more independent courts are attacked and purged more often, and complied with less often, these courts will benefit economic actors by reducing illicit agent corruption and expropriation. This is a difficult concept to measure directly, and so I utilize a measure of property rights as a proxy in order to examine this implication. I do not find evidence supporting this implication, though future work might address this by utilizing measures more closely aligned to the implication of the theory.

On the whole, these results and findings are consistent with the view of courts in authoritarian regimes introduced in this dissertation. Courts in authoritarian regimes are institutions that provide the regime with information that allows the regime to reduce the amount of corruption and expropriation conducted by its agents. This has a number of implications for how we understand the role of judicial institutions in authoritarian regimes and their function. In this view, judicial institutions are but one of many institutions that help to solve the inherent secrecy endemic to authoritarian regimes. A powerful and useful institution, owing to the documentary nature of judicial proceedings and bottom-up generation of litigation, but not unique. This view of courts then brings courts more closely in line with how scholars view other nominally democratic institutions in authoritarian regimes.

This dissertation also questions the notion that independent judiciaries would be desirable in an authoritarian context from the perspective of citizens and economic actors. Many non-profits and academics have focused on attempting to generate rule of law in authoritarian regimes at least in part to attract investment where a key

component of rule of law initiatives is the establishment of an independent judiciary (Dam 2006; Helmke and McLean 2014; Helmke and Rosenbluth 2009; World Bank 2003). Yet, this dissertation argues it is more likely that attempting to appoint an independent judiciary would result in worse outcomes for economic actors. While dependent judiciaries do not constrain the regime, they can at least allow the regime information about the action of its agents in a way that more independent courts cannot. As such, this dissertation offers a caution to activists and scholars to be cognizant of the limitations of judicial independence in an authoritarian context.

A common assumption is that increased judicial independence indicates greater constraints on the executive in authoritarian regimes, and is potentially a move towards greater democratic governance and liberty. However, this dissertation casts doubt on this notion. Increased judicial independence in authoritarian regimes does not necessarily imply any greater constraint of the executive, and as the evidence in Chapter 5 demonstrates authoritarian regimes appear to have little difficulty in reducing judicial independence when convenient for them. Rather, limited increases in judicial independence might be more likely to prolong authoritarian rule instead, as slightly more independent courts can allow leaders to better manage the agent-investment tension.

But while this dissertation highlights the limitation of courts in authoritarian regimes, it also highlights the ways in which they can be used to successfully challenge regime action in a way that can benefit citizens and economic actors. While courts cannot necessarily constrain regime leaders, they can provide important information that allows regime leaders to counteract excessive corruption by its agents. By providing this information, courts can be a powerful venue to reduce predation and corruption in authoritarian regimes.

# Appendix A Empirical Appendix

## A.1 Countries in Analysis

Afghanistan	Algeria	Angola	Argentina
Azerbaijan	Bangladesh	Benin	Bolivia
Botswana	Brazil	Burkina Faso	Burundi
Cambodia	Cameroon	C.A.R.	Chad
Chile	China	Colombia	Congo
Cuba	DRC	Dominican Republic	Ecuador
Egypt	El Salvador	Eritrea	Ethiopia
Gabon	Gambia	Ghana	Guatemala
Guinea	Guinea-Bissau	Haiti	Honduras
Indonesia	Iran	Iraq	Ivory Coast
Jordan	Kazakhstan	Kenya	Kuwait
Kyrgyzstan	Laos	Lesotho	Liberia
Libya	Madagascar	Malawi	Malaysia
Mali	Mauritania	Mexico	Mongolia
Morocco	Mozambique	Myanmar	Namibia
Nepal	Nicaragua	Niger	Nigeria
Oman	Pakistan	Panama	Paraguay
Peru	Philippines	Rwanda	Saudi Arabia
Senegal	Sierra Leone	Singapore	Somalia
South Africa	South Korea	Sri Lanka	Sudan
Swaziland	Syria	Tajikistan	Tanzania
Thailand	Togo	Tunisia	Turkey
Turkemenistan	Uganda	U.A.E.	Uruguay
Venezuela	Vietnam	Zambia	Zimbabwe

## A.2 Export Commodity to GDP Ratio

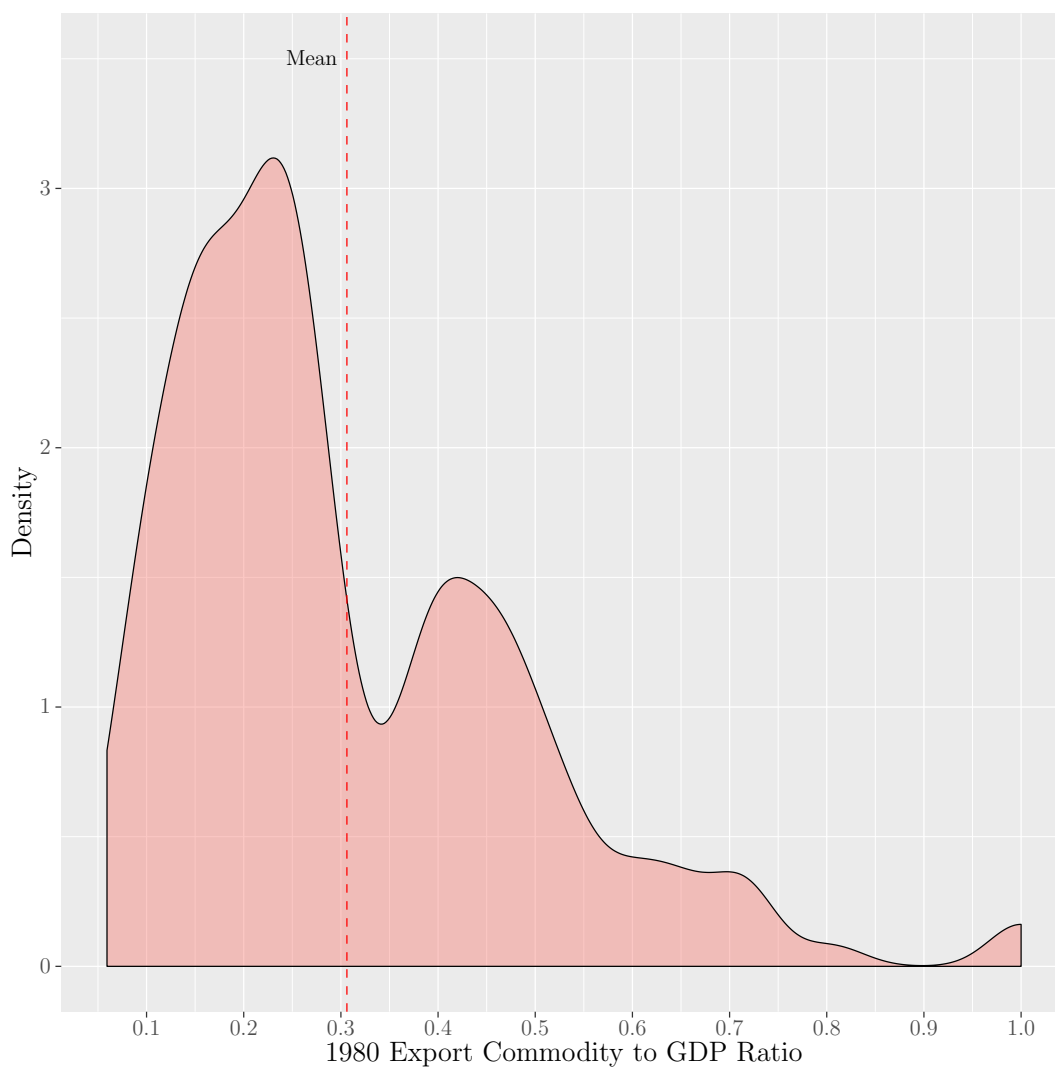


Figure A.1: Country-Average Export Commodities as a Share of GDP

## A.3 Instrumental Variable Analysis

As an alternate specification to test my hypotheses described in Chapter 4, I analyze the effect of judicial independence on the dependent variables using price shocks as an instrument. In order for price shocks to be a good instrument for judicial independence, price shocks must have a strong first stage and also satisfy the inclusion restriction. As Models 1 and 2 in Table 4.1 show, the first stage regression price shocks appear to

be strongly correlated with the endogenous variable, judicial independence. Further, as I have discussed the point predicts are of substantively large and important size. This provides evidence of a strong first stage correlation necessary for instrumental variables analysis.

Next, I consider the exclusion restriction. The exclusion restriction is that the instrument must only have an effect on the outcomes of interest through the instrument's effect on the endogenous variable. This means that price shocks should only affect judicial review, compliance, and property rights through their effect on judicial independence. The most obvious threat to this would be if price shocks impact other political variables which in turn affect the relationship of the regime to the court. I account for this potential threat to inference by controlling for political constraints. While this is a post-treatment variable, it also blocks the most threatening alternate pathways through which the instrument might affect the outcomes of interest.

I argue that it is unlikely that price shocks will have an effect on judicial attacks, compliance with the judiciary, or property rights except through their effect on either judicial independence or on political constraints. It is hard to imagine another path from price shocks to these outcomes that does not somehow go through political constraints on the regime or through judicial independence itself. As such, I believe the exclusion restriction to be satisfied. However, I simply present these estimations as an alternative specification that provides additional support for the empirical findings in Chapter 4, which are more robust to posttreatment bias and omitted variable bias than these results. I estimate the instrumental variable analysis using two stage least squares regression. Below, I present the first stage and second stage regressions for the analysis.

$$\hat{JI}_{it} = \beta_0 + \beta_p \mathbf{PS}_{it} + \beta_x \mathbf{X}_{it} + \alpha_i + \alpha_i * t + \epsilon_{it} \quad (\text{A.1})$$

$$Y_{it} = \beta_0 + \beta_j \hat{J}I_{it} + \beta_x \mathbf{X}_{it} + \alpha_i + \alpha_i * t + \epsilon_{it} \quad (\text{A.2})$$

Where variables and clustered standard errors are the same as in equation 4.1, and  $\hat{J}I_{it}$  is predicted LJI from the first stage regression in A.1. The outcomes of interest here are now judicial attacks, compliance with the judiciary, and property rights respectively. As my theory predicts, these outcomes will be driven by changes in judicial independence that are induced by changes in the investment climate. In order to capture this, I instrument for judicial independence in the first stage regression using lagged price shocks. Thus,  $\beta_j$  in equation three gives us a causal estimate of the effect of changing judicial independence on the outcomes of interest, if the exclusion restriction is satisfied.

Figure A.2 displays the  $\beta_j$  estimates for a two-stage least squares instrumental variable estimation for the effect of increasing judicial independence on each of the outcomes discussed above. Similar to the ACDE results, the estimates for judicial attacks, purges, and compliance are in the direction predicted by my theory. The estimate for judicial purges is statistically significant at the .10 level. Similar to the ACDE results, for these three variables the point estimated effects are substantively meaningful as well given the already small scale of change most countries experience with these variables on a yearly basis. The exception to these patterns is the estimate for property rights, which is both statistically and substantively insignificant here as well as in the opposite direction predicted by my theory. The patterns from an instrumental variables analysis provide some alternative support for my theory's predictions, as well as ensuring some support for the mechanism of the theory.



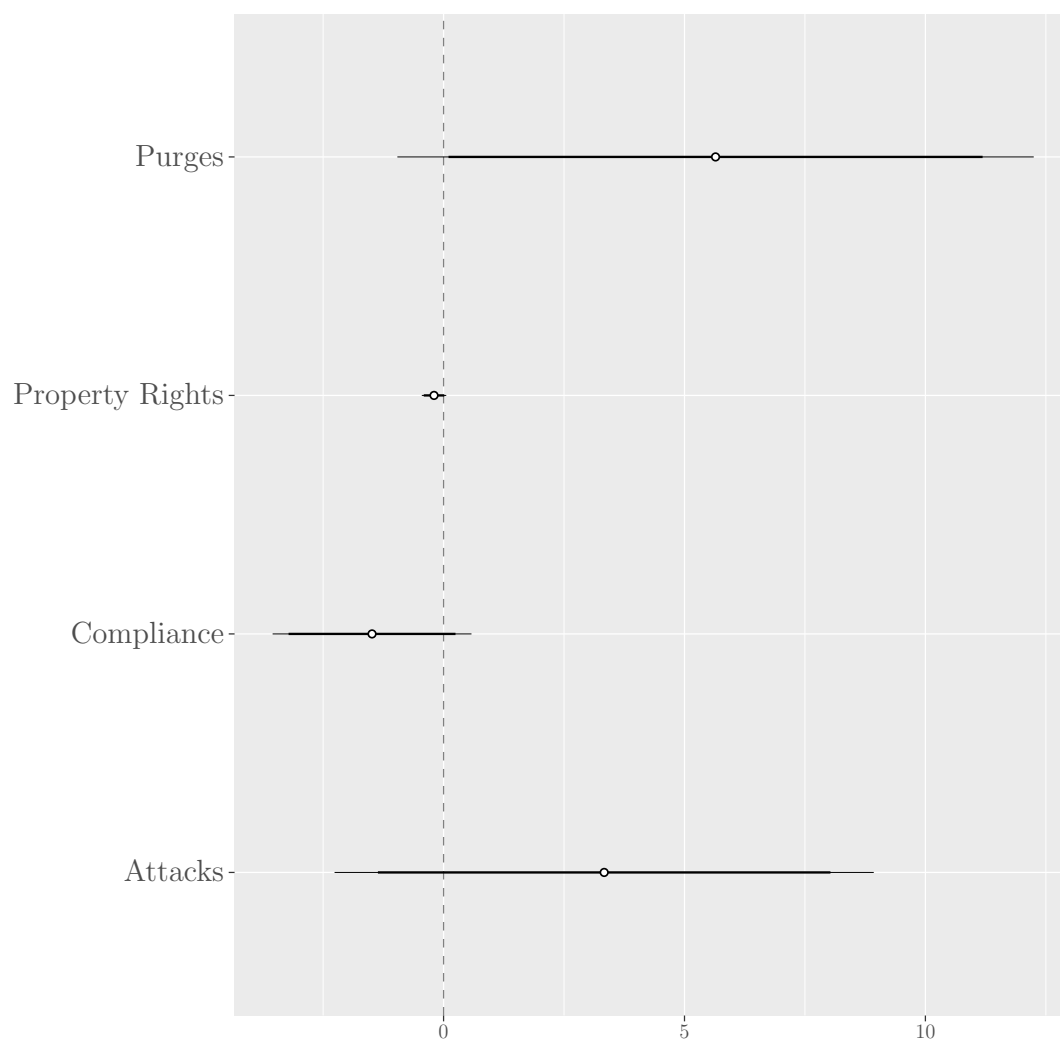


Figure A.2: Estimated Coefficient on LJI Instrumented by Price Shocks

## Appendix B Model Without a Court

Section 3.3 above describes the strategies, beliefs, timing, and information of the actors in this game. The firm's strategy tells it when to invest, and when to file. The dictator's strategy tells him when to review, whether or not to strike in the event he does not review, and whether or not to strike in the event he does review.

### B.1 Pooling

**Lemma 1** *Firm Equilibrium Strategy*

$$S_F = (1, 1)$$

**Lemma 2** *Dictator Equilibrium Strategy*

$$S_D = (I(\kappa_r \leq 1 - \delta), I(\kappa_r > 1 - \delta), I(\rho > \delta))$$

**Lemma 3** *Dictator Beliefs*

- $b_D(\rho \leq \delta | File) = \delta$  ,  $b_D(\rho > \delta | File) = 1 - \delta$
- $b_D(\rho \leq \delta | \neg File) = \delta$  ,  $b_D(\rho > \delta | \neg File) = 1 - \delta$

**Lemma 4** *Conditions under which these strategies and beliefs constitute a PBE*

- $\pi(1 - \frac{\delta + \delta^2 - \delta^3}{2}) - \kappa_i \geq 0$

Here I walk through a pooling PBE with passive conjectures, starting backwards from the dictator's decisions and working up to the firm's choice to invest.

1. If the dictator reviewed, the dictator will always get a payoff of  $1 - \kappa_r$ . This is because upon seeing the location of  $\rho$ , the dictator will either choose to strike

if  $\rho > \delta$ , or not strike if  $\rho \leq \delta$ . So the dictator always gets a payoff of 1 for ruling in accordance with his cut-line, and subtracts the cost of review from that payoff.

2. For this strategy to be a PBE, the dictator must play not strike when if it did not Review. Using the dictator's beliefs upon observing file, we can show when the dictator will choose to not strike when he does not review.

$$EU(\neg S|\neg R) \geq EU(S|\neg R)$$

$$0 * (1 - \phi_p(\delta)) + 1 * \phi_p(\delta) \geq 1 * (1 - \phi_p(\delta)) + 0 * \phi_p(\delta)$$

$$\delta \geq 1 - \delta$$

$$\delta \geq \frac{1}{2}$$

3. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$  regardless of the location of  $\rho$ . The dictator's choice then depends on the likelihood that his decision if it did not Review is correct.

$$EU(R) \geq EU(\neg R)$$

$$(1 - \kappa_r)(1 - \phi_p(\delta)) + (1 - \kappa_r)\phi_p(\delta) \geq 0 * (1 - \phi_p(\delta)) + 1 * \phi_p(\delta)$$

$$1 - \kappa_r \geq \delta$$

$$\kappa_r \leq 1 - \delta$$

The dictator will only review if  $\kappa_r$  is less than the probability that the dictator's action was incorrect from the dictator's perspective. This means the probability that the action it did not strike down was really one that it should have, which is equal to  $1 - \delta$ .

4. If the firm does not file the dictator has no chance to review and strike  $\rho$ . Because filing is costless, and the outcome of filing can never be worse for the firm than the outcome of not file the firm is never worse off by filing and sometimes better off by filing. So, the firm will always file a claim.

5. Because the firm receives a payoff of 0 if it does not invest, the will only invest if  $\pi(1 - \rho) - \kappa_i \geq 0$  in expectation. At the time of the investment decision the firm calculates its expected payoff given the value it observes of  $\delta$ , and invests if this expected payoff is greater than 0. Using the probability distributions of  $\rho$ , and  $\kappa_r$ , the expected value of  $\rho$  can be calculated by the firm at the time of investment as follows:

$$\begin{aligned}
& P(\neg S | \rho \in [0, \delta]) \int_0^\delta \rho f(\rho) dp + P(\neg S | \rho \in (\delta, 1]) \int_\delta^1 \rho f(\rho) dp \\
& 1 * \frac{\delta^2}{2\delta} + (1 - (1 - \delta)) * \frac{1 - \delta^2}{2(1 - \delta)} \\
& \delta * \frac{\delta^2}{2\delta} + (1 - \delta) * (1 - (1 - \delta)) * \frac{1 - \delta^2}{2(1 - \delta)} \\
& \frac{\delta^2}{2} + \delta * \frac{1 - \delta^2}{2} \\
& \frac{\delta + \delta^2 - \delta^3}{2}
\end{aligned}$$

In this case, for the firm to choose to invest it must be the case that:

$$\begin{aligned}
& \pi(1 - E[p|\delta]) - \kappa_i \geq 0 \\
& E[p|\delta] \leq 1 - \frac{\kappa_i}{\pi} \\
& \frac{\delta + \delta^2 - \delta^3}{2} \leq 1 - \frac{\kappa_i}{\pi}
\end{aligned}$$

6. For this equilibrium to hold, the dictator's prior beliefs must be updated consistently with Bayes' rule. The dictator's prior as a result of the uniform distribution is that  $Pr(\rho \leq \delta) = \delta$  and  $Pr(\rho > \delta) = 1 - \delta$ . Upon observing the firm's decision to file, the dictator's posterior belief about  $\rho$  is given by:

$$\begin{aligned}
& Pr(\rho \leq \delta | File) \\
& \frac{Pr(File | \rho \leq \delta) * Pr(\rho \leq \delta)}{Pr(File)} \\
& \frac{Pr(File | \rho \leq \delta) * \delta}{Pr(File)}
\end{aligned}$$

And when the firm chooses to file for all  $\rho$ ,  $Pr(File)$  is always equal to 1, and this expression simplifies to  $\delta$ . Similarly,  $Pr(\rho > \delta|File) = 1 - \delta$ . Because the dictator's posterior beliefs do not change, the firm's decision to file is not informative to the dictator in this equilibrium.

## B.2 Pooling No File

If the firm only chose to file when  $\rho > \delta$ , by Bayes' rule the dictator would believe that  $Pr(\rho > \delta|File) = 1$ , and the dictator would always choose to not review and strike. However if this were the case, the firm would choose to file even when  $\rho \leq \delta$  and the equilibrium would be unsustainable.

## B.3 Separating

For the firm to never file, it must be the case that the dictator will not review and not strike upon observing the firm file. For the dictator to do this, it must believe that  $Pr(\rho \leq \delta) > Pr(\rho > \delta)$  upon observing file. However, this would violate passive conjectures as the dictator's off path prior beliefs for seeing the firm file are  $b_D(\rho \leq \delta|File) = \delta$  and  $b_D(\rho > \delta|File) = 1 - \delta$ , where  $\delta \geq 1 - \delta$  because  $\delta \geq \frac{1}{2}$  by construction. Therefore, this equilibrium cannot exist under the passive conjectures criteria.

## B.4 Semi-Separating

**Lemma 5** *Firm Equilibrium Strategy*

$$S_F = (1, I(\rho \geq \rho^*))$$

**Lemma 6** *Dictator Equilibrium Strategy*

$$S_D = (I(\kappa_r \leq \frac{1-\delta}{1-\rho^*}), I(\kappa_r > \frac{1-\delta}{1-\rho^*}), I(\rho > \delta))$$

**Lemma 7** *Dictator Beliefs*

- $b_D(\rho \leq \delta|File) = \frac{\delta - \rho^*}{1 - \rho^*}$  ,  $b_D(\rho > \delta|File) = \frac{1 - \delta}{1 - \rho^*}$
- $b_D(\rho \leq \delta|\neg File) = 1$  ,  $b_D(\rho > \delta|\neg File) = 0$

**Lemma 8** *Conditions under which these strategies and beliefs constitute a PBE*

- $0 \leq \rho^* \leq 2\delta - 1$
- $\pi * (1 - (\frac{1}{2} - \frac{(1-\delta)(1-\delta^2)}{2(1-\rho^*)})) - \kappa_i \geq 0$

Expected  $\rho$  for the firm:

$$\begin{aligned}
& P(\neg S|\rho \in [0, \delta]) \int_0^\delta \rho f(\rho) dp + P(\neg S|\rho \in (\delta, 1]) \int_\delta^1 \rho f(\rho) dp \\
& 1 * \frac{\delta^2}{2(\delta)} + (1 - \frac{1-\delta}{(1-\rho^*)}) * \frac{1-\delta^2}{2(1-\delta)} \\
& \delta * \frac{\delta^2}{2(\delta)} + (1 - \delta)(1 - \frac{1-\delta}{(1-\rho^*)}) * \frac{1-\delta^2}{2(1-\delta)} \\
& \frac{\delta^2}{2} + \frac{1-\delta^2}{2} - \frac{(1-\delta)(1-\delta^2)}{2(1-\rho^*)} \\
& \frac{1}{2} - \frac{(1-\delta)(1-\delta^2)}{2(1-\rho^*)}
\end{aligned}$$

For this equilibrium to hold,  $b_D(\rho \leq \delta|File) \geq b_D(\rho > \delta|File)$  must be true. Otherwise, the dictator will choose to strike when it observes the firm file and does not review and the equilibrium cannot hold because the firm will then always face an incentive to file for any corruption. This means that  $\rho^* \leq 2\delta - 1$ . The firm is best off when  $\rho^*$  is as large as possible, that is when  $\rho^* = 2\delta - 1$ . The other conditions were derived similarly to proposition 1.

## Appendix C Model With a Court

I start by walking through the dictator and firm's sequentially rational strategies and beliefs for each subgame based on the type of judge,  $\beta$ , that is appointed as detailed in section 3.6.1. Then, I walk through the dictator's decision to appoint  $\beta$  given this knowledge. As detailed in sections 3.3.6 and 3.5.1, in each subgame the firm's strategy will describe whether or not it invests, and under what conditions the firm will choose to file. the dictator's strategy in each subgame consists of a decision to review, a decision to strike or not if it does not review, and a decision to strike or not if it does review. The difference in a model with a court is that now the dictator's decision to review and strike take into account the direction of the judge's ruling.

### C.1 Firm-Friendly

Sequentially rational strategies and beliefs if in this subgame:

**Lemma 9** *Firm Strategy*

$$S_F = (1, 1)$$

**Lemma 10** *Dictator Strategy*

$$S_D = (I(\text{Illegal} \ \& \ \kappa_r \leq \frac{1-\delta}{1-\beta}), I(\kappa_r > \frac{1-\delta}{1-\beta}), I(\rho > \delta))$$

**Lemma 11** *Dictator Beliefs*

- $b_D(\rho \leq \delta | \text{Legal}) = 1$  ,  $b_D(\rho > \delta | \text{Legal}) = 0$
- $b_D(\rho \leq \delta | \text{Illegal}) = \frac{\delta-\beta}{1-\beta}$  ,  $b_D(\rho > \delta | \text{Illegal}) = 1 - \frac{\delta-\beta}{1-\beta}$
- $b_D(\rho \leq \delta | \neg \text{File}) = \delta$  ,  $b_D(\rho > \delta | \neg \text{File}) = 1 - \delta$

1. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$ . This is because upon seeing the location of  $\rho$ , the dictator will either choose to strike if  $\rho > \delta$ , or not strike if  $\rho \leq \delta$ . So the dictator always gets a payoff of 1 for ruling in accordance with its cut-line, and subtracts the cost of review from that payoff.
2. Using the dictator's consistently updated beliefs upon observing the firm's decision to file and the judge's ruling, we can describe under what conditions it will be sequentially rational for the dictator to choose to strike if it does not review.

$$EU(\neg S|\neg R, Legal) \geq EU(S|\neg R, Legal)$$

$$0 * b_D(\rho > \delta|Legal) + 1 * b_D(\rho \leq \delta|Legal) \geq 1 * b_D(\rho > \delta|Legal) + 0 * b_D(\rho \leq \delta|Legal)$$

$$0 * (0) + 1 * (1) \geq 0 * (1) + 1 * (0)$$

$$1 \geq 0$$

$$EU(\neg S|\neg R, Illegal) \geq EU(S|\neg R, Illegal)$$

$$0 * b_D(\rho > \delta|Illegal) + 1 * b_D(\rho \leq \delta|Illegal) \geq 1 * b_D(\rho > \delta|Illegal) + 0 * b_D(\rho \leq \delta|Illegal)$$

$$1 * \left(\frac{\delta-\beta}{1-\beta}\right) + 0 * \left(1 - \frac{\delta-\beta}{1-\beta}\right) \geq 0 * \left(\frac{\delta-\beta}{1-\beta}\right) + 1 * \left(1 - \frac{\delta-\beta}{1-\beta}\right)$$

$$\beta \leq 2\delta - 1$$

So, in the firm-friendly subgame where a judge is appointed with a type  $\beta$  such that  $\beta \leq 2\delta - 1$ , it is always sequentially rational for the dictator to not strike if it does not review. As a result, the dictator would never strike down  $\rho$  if it did not review.

3. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$  regardless



of the location of  $\rho$ . The dictator's choice then depends on his belief that his decision if it did not review is correct.

$$EU(\neg R|Legal) \geq EU(R|Legal)$$

$$1 \geq 1 - \kappa_r$$

If the dictator does not review, he will not strike. Because the dictator believes with certainty that when the court issues a ruling of legal that  $\rho < \delta$ , the dictator believes with certainty he will get a payoff of 1 for not striking when the judge issues a legal ruling. Because review entails some cost, the dictator will never review if it observes a judge of  $\beta \leq 2\delta - 1$  rule legal.

$$EU(R|Illegal) \geq EU(\neg R|Illegal)$$

$$1 - \kappa_r \geq 1 * \frac{\delta - \beta}{1 - \beta}$$

$$\kappa_r \leq 1 - \frac{\delta - \beta}{1 - \beta}$$

$$\kappa_r \leq \frac{1 - \delta}{1 - \beta}$$

However if the dictator sees a judge of  $\beta \leq 2\delta - 1$  rule illegal, the dictator believes there is some chance that  $\rho$  is between  $\delta$  and  $\beta$  and some chance that  $\rho > \delta$ . Because it believes that it is more likely that  $\rho \leq \delta$ , the dictator will not review the policy in question unless the cost paid,  $\kappa_r$  is smaller than the probability that the dictator's beliefs are wrong,  $\frac{1 - \delta}{1 - \beta}$ .

4. If the firm does not file the dictator has no chance to review and strike  $\rho$ . Because filing is costless, and the outcome of filing can never be worse for the firm than the outcome of  $\neg File$ . So, the firm will always file a claim.
5. Because the firm receives a payoff of 0 if it does not invest, the will only invest if  $\pi(1 - \rho) - \kappa_i \geq 0$  in expectation. At the time of the investment decision the firm calculates its expected payoff given the values it observes of  $\delta$  and  $\beta$  as

well as  $\pi$  and  $\kappa_i$  and invests if this expected payoff is greater than 0. Using the probability distributions of  $\rho$ , and  $\kappa_r$ , the expected value of  $\rho$  can be calculated by the firm at the time of investment as follows:

$$\begin{aligned}
& P(\neg S|\rho \in [0, \beta)) \int_0^\beta \rho f(\rho) d\rho + P(\neg S|\rho \in (\beta, \delta]) \int_\beta^\delta \rho f(\rho) d\rho + P(\neg S|\rho \in \\
& \quad (\delta, 1]) \int_\delta^1 \rho f(\rho) d\rho \\
& 1 * \frac{\beta^2}{2\beta} + 1 * \frac{\delta^2 - \beta^2}{2(\delta - \beta)} + \left(1 - \frac{1 - \delta}{1 - \beta}\right) * \frac{1 - \delta^2}{2(1 - \delta)}
\end{aligned}$$

Conditioning for probabilities of  $\rho$

$$\begin{aligned}
& \beta * \frac{\beta^2}{2\beta} + (\delta - \beta) * \frac{\delta^2 - \beta^2}{2(\delta - \beta)} + (1 - \delta) * \left(1 - \frac{1 - \delta}{1 - \beta}\right) * \frac{1 - \delta^2}{2(1 - \delta)} \\
& \quad \frac{\beta^2}{2} + \frac{\delta^2 - \beta^2}{2} + \frac{1 - \delta^2}{2} - \frac{(1 - \delta)(1 - \delta^2)}{2(1 - \beta)} \\
& \quad \frac{\delta^2}{2} + \frac{1 - \delta^2}{2} - \frac{(1 - \delta)(1 - \delta^2)}{2(1 - \beta)} \\
& \quad \frac{1}{2} - \frac{(1 - \delta)(1 - \delta^2)}{2(1 - \beta)}
\end{aligned}$$

6. Given these beliefs and sequentially rational strategies, the dictator can calculate his utility for choosing  $\beta < 2\delta - 1$  if the firm invests. this can be found by considering the payoffs the dictator will get upon viewing a ruling of illegal or legal, in expectation, and then conditioning the sum of these expectations by the probability of a legal or illegal ruling occurring. If the dictator observes a legal ruling, which happens when  $\rho \leq \beta$ , the dictator knows with certainty it can keep this action and get its desired result and will not review. If the dictator observes a ruling of Illegal, which happens when  $\rho > \beta$ , then the dictator will choose to review in which case it will with certainty receive a payoff of 1 minus the cost of review it pays. If the dictator does not review, it will choose to instead keep the policy. In this case, the dictator only gets a payoff if it is the case that the policy is below  $\delta$ .

EU if Legal: 1

$$\text{EU if Illegal: } \frac{1-\delta}{1-\beta} \left(1 - \frac{1-\delta}{2(1-\beta)}\right) + \left(1 - \frac{1-\delta}{1-\beta}\right) \frac{\delta-\beta}{1-\beta}$$

Conditioning for Legal and Illegal Probabilities:

$$EU_d = \beta + (1-\beta) \left(\frac{1-\delta}{1-\beta}\right) \left(1 - \frac{1-\delta}{2(1-\beta)}\right) + (1-\beta) \left(1 - \frac{1-\delta}{1-\beta}\right) \left(\frac{\delta-\beta}{1-\beta}\right)$$

$$EU_d = \beta + 1 - \delta - \frac{(1-\delta)^2}{2(1-\beta)} + \delta - \beta - \frac{(\delta-\beta)(1-\delta)}{1-\beta}$$

$$EU_d = 1 - \frac{(1-\delta)^2}{2(1-\beta)} - \frac{(\delta-\beta)(1-\delta)}{1-\beta}$$

7. Beliefs for this are consistent if  $b < \delta$  and firm always files

## C.2 Regime-Aligned

Sequentially rational strategies and beliefs if in this subgame:

**Lemma 12** *Firm Strategy*

$$S_F = (1, 1)$$

**Lemma 13** *Dictator Strategy*

$$S_D = (I(\text{Illegal} \ \& \ \kappa_r \leq \frac{\delta-\beta}{1-\beta}), I(\text{Illegal} \ \& \ \kappa_r > \frac{1-\delta}{1-\beta}), I(\rho > \delta))$$

**Lemma 14** *Dictator Beliefs*

- $b_D(\rho \leq \delta | \text{Legal}) = 1$  ,  $b_D(\rho > \delta | \text{Legal}) = 0$
- $b_D(\rho \leq \delta | \text{Illegal}) = \frac{\delta-\beta}{1-\beta}$  ,  $b_D(\rho > \delta | \text{Illegal}) = 1 - \frac{\delta-\beta}{1-\beta}$
- $b_D(\rho \leq \delta | \neg \text{File}) = \delta$  ,  $b_D(\rho > \delta | \neg \text{File}) = 1 - \delta$

1. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$ . This is because upon seeing the location of  $\rho$ , the dictator will either choose to strike  $\rho > \delta$ , or not strike if  $\rho \leq \delta$ . So the dictator always gets a payoff of 1 for ruling in accordance with its cut-line, and subtracts the cost of review from that payoff.

2. Using the dictator's consistently updated beliefs upon observing the firm's decision to file and the judge's ruling, we can describe under what conditions it will be sequentially rational for the dictator to choose to strike if it does not review.

$$\begin{aligned}
EU(\neg S|\neg R, Legal) &\geq EU(S|\neg R, Legal) \\
0 * b_D(\rho > \delta|Legal) + 1 * b_D(\rho \leq \delta|Legal) &\geq 1 * b_D(\rho > \delta|Legal) + 0 * b_D(\rho \leq \\
&\delta|Legal) \\
0 * (0) + 1 * (1) &\geq 0 * (1) + 1 * (0) \\
1 &\geq 0
\end{aligned}$$

$$\begin{aligned}
EU(S|\neg R, Illegal) &\geq EU(\neg S|\neg R, Illegal) \\
1 * b_D(\rho > \delta|Illegal) + 0 * b_D(\rho \leq \delta|Illegal) &\geq 0 * b_D(\rho > \\
&\delta|Illegal) + 1 * b_D(\rho \leq \delta|Illegal) \\
1 * \left(\frac{\delta-\beta}{1-\beta}\right) + 0 * \left(1 - \frac{\delta-\beta}{1-\beta}\right) &\geq 0 * \left(\frac{\delta-\beta}{1-\beta}\right) + 1 * \left(1 - \frac{\delta-\beta}{1-\beta}\right) \\
\beta &\geq 2\delta - 1
\end{aligned}$$

In this regime-aligned subgame, it is sequentially rational for the dictator to not strike if he observes a legal ruling, and to strike if he observes an illegal ruling.

3. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$  regardless of the location of  $\rho$ . The dictator's choice then depends on his belief that his decision if he does not review is correct.

$$\begin{aligned}
EU(\neg R|Legal) &\geq EU(R|Legal) \\
1 &\geq 1 - \kappa_r
\end{aligned}$$

If the dictator does not review, he will not strike. Because the dictator believes with certainty that when the court issues a ruling of legal that  $\rho \leq \delta$ , the dictator believes with certainty he will get a payoff of 1 for not striking when the judge issues a legal ruling.

$$EU(R|Illegal) \geq EU(\neg R|Illegal)$$

$$1 - \kappa_r \geq 1 * \frac{1-\delta}{1-\beta}$$

$$\kappa_r \leq 1 - \frac{1-\delta}{1-\beta}$$

However if the dictator sees a judge of  $\beta \leq 2\delta - 1$  rule illegal, the dictator believes there is some chance that  $\rho$  is between  $\delta$  and  $\beta$  and some chance that  $\rho > \delta$ . Because he believes that it is more likely that  $\rho > \delta$  if the judge is in the regime-aligned range the dictator will choose to strike if it does not review and observes an illegal ruling. So the dictator will not review the policy in question unless the cost paid,  $\kappa_r$  is smaller than the probability that the dictator's beliefs are wrong, which is equal to the probability that corruption is in the conflict range given an illegal ruling:  $\frac{\delta-\beta}{1-\beta}$ .

4. If the firm does not file the dictator has no chance to review and strike  $\rho$ . Because filing is costless, and the outcome of filing can never be worse for the firm than the outcome of  $\neg File$ . So, the firm will always file a claim.
5. Because the firm receives a payoff of 0 if it does not invest, the will only invest if  $\pi(1 - \rho) - \kappa_i \geq 0$  in expectation. At the time of the investment decision the firm calculates its expected payoff given the values it observes of  $\delta$  and  $\beta$  as well as  $\pi$  and  $\kappa_i$  and invests if this expected payoff is greater than 0. Using the probability distributions of  $\rho$ , and  $\kappa_r$ , the expected value of  $\rho$  can be calculated by the firm at the time of investment as follows:

$$P(\neg S|\rho \in [0, \beta)) \int_0^\beta \rho f(\rho) d\rho + P(\neg S|\rho \in (\beta, \delta]) \int_\beta^\delta \rho f(\rho) d\rho + P(\neg S|\rho \in (\delta, 1]) \int_\delta^1 \rho f(\rho) d\rho$$

$$1 * \frac{\beta}{2} + \left(\frac{1-\delta}{1-\beta}\right) * \frac{\delta^2 - \beta^2}{2(\delta - \beta)} + 0 * \frac{1-\delta^2}{2(1-\delta)}$$

Conditioning for probabilities of  $\rho$

$$\beta * \frac{\beta}{2} + (\delta - \beta) * \left(\frac{1-\delta}{1-\beta}\right) * \frac{\delta^2 - \beta^2}{2(\delta - \beta)}$$

$$\frac{\beta^2}{2} + \frac{(1-\delta)(\delta^2 - \beta^2)}{2(1-\beta)}$$

6. Given these beliefs and sequentially rational strategies, the dictator can calculate his expected utility if he appoints a judge with type  $\beta$  such that  $\delta \geq \beta \geq 2\delta - 1$ , conditional on the firm investing:

EU if Legal: 1

EU if Illegal:

$$\left(1 - \frac{1-\delta}{1-\beta}\right) * \left(1 - \frac{1 - \frac{1-\delta}{1-\beta}}{2}\right) + \left(\frac{1-\delta}{1-\beta}\right) \left(\frac{1-\delta}{1-\beta}\right)$$

Conditioning for Legal and Illegal Probabilities:

$$EU_d = \beta + (1 - \beta) \left(1 - \frac{1-\delta}{1-\beta}\right) * \left(1 - \frac{1 - \frac{1-\delta}{1-\beta}}{2}\right) + (1 - \beta) \left(\frac{1-\delta}{1-\beta}\right) \left(\frac{1-\delta}{1-\beta}\right)$$

$$EU_d = \beta + ((1 - \beta) - (1 - \delta)) * \left(1 - \frac{1 - \frac{1-\delta}{1-\beta}}{2}\right) + \frac{(1-\delta)^2}{1-\beta}$$

$$EU_d = \beta + (\delta - \beta) * \left(1 - \frac{1 - \frac{1-\delta}{1-\beta}}{2}\right) + \frac{(1-\delta)^2}{1-\beta}$$

7. Beliefs for this are consistent if  $b < \delta$  and firm always files

### C.3 Anti-Firm

**Lemma 15** *Firm Strategy*

$$S_F = (1, 1)$$

**Lemma 16** *Dictator Strategy*

$$S_D = (I(\text{Legal} \ \& \ \kappa_r \leq \frac{\beta - \delta}{\beta}), I(\text{Illegal}), I(\rho > \delta))$$

**Lemma 17** *Dictator Beliefs*

- $b_D(\rho \leq \delta | \text{Legal}) = \frac{\delta}{\beta}$  ,  $b_D(\rho > \delta | \text{Legal}) = \frac{\beta - \delta}{\beta}$
- $b_D(\rho \leq \delta | \text{Illegal}) = 0$  ,  $b_D(\rho > \delta | \text{Illegal}) = 1$

- $b_D(\rho \leq \delta | \neg File) = \delta$  ,  $b_D(\rho > \delta | \neg File) = 1 - \delta$
1. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$ . This is because upon seeing the location of  $\rho$ , the dictator will either choose to strike  $\rho > \delta$ , or not strike if  $\rho \leq \delta$ . So the dictator always gets a payoff of 1 for ruling in accordance with its cut-line, and subtracts the cost of review from that payoff.
  2. Using the dictator's consistently updated beliefs upon observing the firm's decision to file and the judge's ruling, we can describe under what conditions it will be sequentially rational for the dictator to choose to strike if it does not review.

$$EU(\neg S | \neg R, Legal) \geq EU(S | \neg R, Legal)$$

$$0 * b_D(\rho > \delta | Legal) + 1 * b_D(\rho \leq \delta | Legal) \geq 1 * b_D(\rho > \delta | Legal) + 0 * b_D(\rho \leq \delta | Legal)$$

$$0 * \frac{\beta - \delta}{\beta} + 1 * \frac{\delta}{\beta} \geq 1 * \frac{\beta - \delta}{\beta} + 0 * \frac{\delta}{\beta}$$

$$\frac{\delta}{\beta} \geq \frac{\beta - \delta}{\beta}$$

$$2\delta \geq \beta$$

If the judge in the anti-firm range issues a legal ruling, the dictator knows there is some chance that  $\rho \leq \delta$  and some chance that  $\rho$  is between his type and the judge's type. However, in the anti-firm range the dictator's belief that  $\rho \leq \delta$  outweighs his belief that  $\delta < \rho \leq \beta$  because  $\delta \geq \frac{1}{2}$  and  $\beta \leq 1$ . So the dictator will choose to not strike if it observes a legal ruling and does not review.

$$EU(S | \neg R, Illegal) \geq EU(\neg S | \neg R, Illegal)$$

$$\begin{aligned}
1 * b_D(\rho > \delta | \text{Illegal}) + 0 * b_D(\rho \leq \delta | \text{Illegal}) &\geq 0 * b_D(\rho > \\
&\delta | \text{Illegal}) + 1 * b_D(\rho \leq \delta | \text{Illegal}) \\
1 &\geq 0
\end{aligned}$$

Because  $\beta > \delta$  in this subgame, the dictator always believes with certainty that  $\rho > \delta$  when he observes an illegal ruling. So it always in the dictator's interest to strike when he observes an illegal ruling.

3. If the dictator reviews, the dictator will always get a payoff of  $1 - \kappa_r$  regardless of the location of  $\rho$ . The dictator's choice then depends on his belief that his decision if he does not review is correct.

$$\begin{aligned}
EU(R | \text{Legal}) &\geq EU(\neg R | \text{Legal}) \\
1 - \kappa_r &\geq 1 * Pr(\rho \leq \delta) + 0 * Pr(\rho > \delta) \\
1 - \kappa_r &\geq \frac{\delta}{\beta} \\
\kappa_r &\leq \frac{\beta - \delta}{\beta}
\end{aligned}$$

$$\begin{aligned}
EU(\neg R | \text{Illegal}) &\geq EU(R | \text{Illegal}) \\
1 &\geq 1 - \kappa_r
\end{aligned}$$

The dictator will never review if he observes a ruling of illegal, because he believes with certainty in this circumstance that  $\rho > \delta$ . In the anti-firm subgame, the dictator will only review if he observe a ruling of legal when  $\kappa_r$  is smaller than the probability that  $\rho$  is between  $\beta$  and  $\delta$  given a legal ruling.

4. If the firm does not file the dictator has no chance to review and strike  $\rho$ . Because filing is costless, and the outcome of filing can never be worse for the firm than the outcome of  $\neg \text{File}$ . So, the firm will always file a claim.



5. Because the firm receives a payoff of 0 if it does not invest, the will only invest if  $\pi(1 - \rho) - \kappa_i \geq 0$  in expectation. At the time of the investment decision the firm calculates its expected payoff given the values it observes of  $\delta$  and  $\beta$  as well as  $\pi$  and  $\kappa_i$  and invests if this expected payoff is greater than 0. Using the probability distributions of  $\rho$ , and  $\kappa_r$ , the expected value of  $\rho$  can be calculated by the firm at the time of investment as follows:

$$\begin{aligned}
& P(\neg S | \rho \in [0, \delta]) \int_0^\delta \rho f(\rho) d\rho + P(\neg S | \rho \in (\delta, \beta]) \int_\delta^\beta \rho f(\rho) d\rho + P(\neg S | \rho \in \\
& \quad (\beta, 1]) \int_\beta^1 \rho f(\rho) d\rho \\
& 1 * \frac{\delta^2}{2\delta} + \left(\frac{\delta}{\beta}\right) \frac{\beta^2 - \delta^2}{2(\beta - \delta)} + 0 * \frac{1 - \beta^2}{2(1 - \beta)}
\end{aligned}$$

Conditioning for probability of  $\rho$

$$\begin{aligned}
& \delta * \frac{\delta^2}{2\delta} + (\beta - \delta) * \left(\frac{\delta}{\beta}\right) \frac{\beta^2 - \delta^2}{2(\beta - \delta)} \\
& \frac{\delta^2}{2} + \frac{\delta(\beta^2 - \delta^2)}{2\beta}
\end{aligned}$$

6. Given these beliefs and sequentially rational strategies, the dictator can calculate his expected utility if he appoints a judge with type  $\beta$  such that  $\delta < \beta$ , conditional on the firm investing:

$$\text{EU if Legal: } \left(1 - \frac{\beta - \delta}{\beta}\right) \left(\frac{\delta}{\beta}\right) + \left(\frac{\beta - \delta}{\beta}\right) \left(1 - \frac{\beta - \delta}{2\beta}\right)$$

$$\text{EU if Illegal: } 1$$

Conditioning for Legal and Illegal Probabilities:

$$EU_d = \beta * \left(1 - \frac{\beta - \delta}{\beta}\right) \left(\frac{\delta}{\beta}\right) + \beta * \left(\frac{\beta - \delta}{\beta}\right) \left(1 - \frac{\beta - \delta}{2\beta}\right) + (1 - \beta)$$

$$EU_d = \delta - \frac{\delta(\beta - \delta)}{\beta} + (\beta - \delta) - \frac{(\beta - \delta)^2}{2\beta} + (1 - \beta)$$

$$EU_d = 1 - \frac{\delta(\beta - \delta)}{\beta} - \frac{(\beta - \delta)^2}{2\beta}$$

7. These beliefs are consistent with Bayes' rule for  $\beta > \delta$

## C.4 The Dictator's Choice of Judge and The Firm's Investment Decision

Now that we know the dictator and firm's expected utility conditional upon investment and appointment of  $\beta$  at every point in the space  $[0,1]$ , we can solve for the dictator's choice of  $\beta$ . Recall that the dictator gets a payoff of zero if the firm does not invest. Thus, the dictator is always better off appointing any  $\beta$  that induces the firm to invest so long as their expected utility with a judge of that  $\beta$  is positive. So the dictator must choose a  $\beta$  that maximizes the dictator's utility conditional on satisfying the firm's investment constraint.

$$EU_d(\beta) \begin{cases} 1 - \frac{(1-\delta)^2}{2(1-\beta)} - \frac{(\delta-\beta)(1-\delta)}{1-\beta}, & \text{if } \beta < 2\delta - 1 \\ 1 - \frac{(\delta-\beta)^2}{2(1-\beta)} - \frac{(1-\delta)(\delta-\beta)}{(1-\beta)}, & \text{if } 2\delta - 1 \leq \beta < \delta \\ 1 - \frac{\delta(\beta-\delta)}{\beta} - \frac{(\beta-\delta)^2}{2\beta}, & \text{if } \delta < \beta \\ 0, & \text{if } \neg Invest \end{cases} \quad (C.1)$$

$$EU_F(\beta) \begin{cases} \pi \left( 1 - \left( \frac{1}{2} - \frac{(1-\delta)(1-\delta^2)}{2(1-\beta)} \right) - \kappa_i, \right. & \text{if } \beta < 2\delta - 1 \\ \pi \left( 1 - \left( \frac{\beta^2}{2} + \frac{(1-\delta)(\delta^2-\beta^2)}{2(1-\beta)} \right) - \kappa_i, \right. & \text{if } 2\delta - 1 \leq \beta < \delta \\ \pi \left( 1 - \left( \frac{\delta^2}{2} + \frac{\delta(\beta^2-\delta^2)}{2\beta} \right) - \kappa_i, \right. & \text{if } \delta < \beta \\ 0, & \text{if } \neg Invest \end{cases} \quad (C.2)$$

The dictator's decision is now to pick a  $\beta$  that satisfies the firm's investment constraint, and maximizes its own utility. I use the propositions below to demonstrate that the dictator will always choose a  $\beta \in [2\delta - 1, \delta]$ .

### C.4.1 Firm Utility Monotonicity

Now, I will examine how the firm's expected utility changes with the dictator's choice of a judge of type  $\beta$  within each subgame analyzed in order to determine how the dictator will choose  $\beta$ .

### Firm-Friendly

The derivative of the firm's expected cost of corruption with respect to  $\beta$  in the firm-friendly subgame is:

$$-\frac{(1-\delta)(1-\delta^2)}{2(1-\beta)^2}$$

Because both the numerator and the denominator of this quantity are always positive for the ranges of  $\beta$  and  $\delta$ , this entire term is always negative. This means the expected cost of agent action to the firm is decreasing in  $\beta$ , and the firm's expected utility then is increasing in  $\beta$  in this range.

### Regime-Aligned

The derivative of the firm's expected cost of corruption with respect to  $\beta$  in the regime-aligned subgame is:

$$\beta + \frac{(1-\delta)(\delta^2-\beta^2)}{2(1-\beta)^2} - \frac{\beta(1-\delta)}{1-\beta}$$

Solve to see when positive

$$\begin{aligned} \beta + \frac{(1-\delta)(\delta^2-\beta^2)}{2(1-\beta)^2} - \frac{\beta(1-\delta)}{1-\beta} &\geq 0 \\ \beta + \frac{(1-\delta)(\delta^2-\beta^2)}{2(1-\beta)^2} &\geq \frac{\beta(1-\delta)}{1-\beta} \end{aligned}$$

Because both terms on the left are positive, and because the right-hand term is always less than  $\beta$ , this is always positive. Thus the firm's expected cost of corruption is increasing in  $\beta$  in this range, and the firm's utility is decreasing in  $\beta$  in this range.

### Anti-Firm

The derivative of the firm's expected cost of corruption with respect to  $\beta$  in the anti-regime subgame is:

$$\frac{\delta(b^2 - \delta^2)}{2\beta}$$

For the values of  $\beta$  and  $\delta$  in this range, this is always positive. This means the firm's expected cost of corruption is always increasing in this range, and the firm's expected utility is decreasing.

### C.4.2 Maximum Firm Utility

Because the previous section has shown that the firm's utility is monotonic in each of the subgames, I now seek to demonstrate that the firm is always better off in the regime-aligned subgame by comparing the firm's highest expected cost of corruption in the regime-aligned subgame to the firm's lowest expected cost of corruption in the firm-friendly and anti-firm ranges. I show that the worst expected cost of corruption for the firm in the regime-aligned range is better than the best expected cost of corruption for the firm in the firm-friendly and anti-firm ranges. And because the firm's expected cost of corruption is monotonic in each range, we can say that the firm's expected cost of corruption is always lower in the regime-aligned range.

For the regime-aligned subgame, the firm is worst off when the judge is totally dependent such that  $\beta = \delta$ . For the firm-friendly subgame, the firm is best off when  $\beta = 2\delta - 1$ . For the anti-firm subgame, the firm is best off when  $\beta = \delta + \epsilon$  where  $\epsilon > 0$ . Below, I demonstrate that the highest expected level of corruption under a regime-aligned judge is lower than the lowest expected level of corruption under either a firm-friendly or anti-firm judge.

#### Regime-Aligned and Firm-Friendly

$$\frac{1}{2} - \frac{(1-\delta)(1-\delta^2)}{2(1-(2\delta-1))} \geq \frac{\delta^2}{2}$$

$$\frac{1}{2} - \frac{(1-\delta)(1-\delta^2)}{4(1-\delta)} \geq \frac{\delta^2}{2}$$

$$1 - \frac{(1-\delta^2)}{2} \geq \delta^2$$

$$2 - (1 - \delta^2) \geq 2\delta^2$$

$$1 + \delta^2 \geq 2\delta^2$$

$$1 \geq \delta^2$$

This is always true, so the expected cost of corruption for the firm is always higher with a firm-friendly judge than with a regime-aligned judge.

### Regime-Aligned and Anti-Firm

$$\frac{\delta^2}{2} + \frac{(\delta)((\delta+\epsilon)^2 - \delta^2)}{2(\delta+\epsilon)} \geq \frac{\delta^2}{2}$$

Because  $\epsilon > 0$ , this is always true for any value of  $\delta$ . This means the firm's expected level of corruption is always higher with an anti-firm judge than with a regime-aligned judge.

### C.4.3 Dictator Utility Monotonicity

Next, I seek to characterize how the dictator's expected utility changes within each subgame as a result of changes in  $\beta$  in order to understand with what type of judge the dictator is best off and what type of judge the dictator will appoint.

#### Firm-Friendly

The derivative of the dictator's expected utility with respect to  $\beta$  in the firm-friendly subgame is:

$$\frac{1-\delta}{1-\beta} - \frac{(1-\delta)^2}{2(1-\beta)^2} - \frac{(1-\delta)(\delta-\beta)}{(1-\beta)^2}$$

Simplified, this is:

$$\frac{(1-\delta)^2}{2(\beta-1)^2}$$

This is always positive for any value of  $\beta$  and  $\delta$ , and the dictator's utility is always increasing in  $\beta$  in the firm-friendly subgame.

### Regime-Aligned

The derivative of the dictator's expected utility with respect to  $\beta$  in the regime-aligned subgame is:

$$\frac{1}{2} * \left(1 - \frac{1-\delta}{1-\beta}\right) + \frac{(1-\delta)^2}{(1-\beta)^2} + \frac{(1-\delta)(\delta-\beta)}{2(1-\beta)^2}$$

Under what conditions is this positive?

$$\begin{aligned} \frac{1}{2} * \left(1 - \frac{1-\delta}{1-\beta}\right) + \frac{(1-\delta)^2}{(1-\beta)^2} + \frac{(1-\delta)(\delta-\beta)}{2(1-\beta)^2} &\geq 0 \\ \frac{1}{2} + \frac{(1-\delta)^2}{(1-\beta)^2} + \frac{(1-\delta)(\delta-\beta)}{2(1-\beta)^2} &\geq \frac{1-\delta}{2(1-\beta)} \\ (1-\beta) + \frac{2(1-\delta)^2}{(1-\beta)} + \frac{(1-\delta)(\delta-\beta)}{(1-\beta)} &\geq 1-\delta \\ \frac{2(1-\delta)^2}{(1-\beta)} + \frac{(1-\delta)(\delta-\beta)}{(1-\beta)} &\geq \beta - \delta \end{aligned}$$

Because  $\beta \leq \delta$  in the regime-aligned subgame and  $\delta \leq 1$ , this is always true. The right side is always a negative quantity, and the left side is always positive. Dictator utility is always positive in  $\beta$  in the regime-aligned subgame.

### Anti-Firm

The derivative of the dictator's expected utility with respect to  $\beta$  in the anti-firm subgame is:

$$-\frac{\beta-\delta}{\beta} + \frac{(\beta-\delta)^2}{2\beta^2} - \frac{\delta}{\beta} + \frac{(\beta-\delta)(\delta)}{\beta^2}$$

Simplified this is:

$$-\frac{\beta^2 + \delta^2}{2\beta^2}$$

This is always negative, so the government's utility is always decreasing in  $\beta$  for the anti-firm subgame.

### C.4.4 Dictator's Choice of Judge

In this section, I demonstrate that the dictator is always better off by choosing a judge of type  $\beta$  such that  $2\delta - 1 \leq \beta \leq \delta$ . The dictator will seek to appoint a judge that maximizes his utility, subject to the constraint that the firm will invest for that judge. I first demonstrate, similar to the method used in the firm utility maximization section, that the dictator's lowest expected utility in the regime-aligned subgame is always better than the dictator's highest expected utility in the firm-friendly subgame. Because I have previously shown that the firm is also better off with a regime-aligned judge, the dictator never faces an incentive to appoint a firm-friendly judge.

Next, I show that the dictator is always better off appointing a judge of type  $\beta = \delta$  in the regime-aligned range compared to any judge in the anti-firm range. Because I have shown that the firm is always better off in the regime-aligned range, the dictator then never faces an incentive to appoint a judge higher than  $\beta = \delta$ . If the firm would invest for a anti-regime judge, they would always also invest for a regime-aligned judge and both the firm the dictator would be better off with such a judge.

#### Never Appoints Firm-Friendly

$$\begin{aligned}
 1 - \frac{1-\delta}{2(1-(2\delta-1))} - \frac{(\delta-(2\delta-1))(1-\delta)}{1-(2\delta-1)} &\leq 1 - \frac{(\delta-(2\delta-1+\epsilon))^2}{2(1-(2\delta-1+\epsilon))} - \frac{(1-\delta)(\delta-(2\delta-1+\epsilon))}{(1-(2\delta-1+\epsilon))} \\
 \frac{1}{4} + \frac{(1-\delta)(1-\delta)}{2-2\delta} &\geq \frac{(1-\delta-\epsilon)^2}{2(2-2\delta-\epsilon)} + \frac{(1-\delta)(1-\delta-\epsilon)}{(2-2\delta-\epsilon)} \\
 \frac{1}{2} + \frac{(1-\delta)(1-\delta)}{1-\delta} &\geq \frac{(1-\delta-\epsilon)^2}{2(1-\delta-\frac{\epsilon}{2})} + \frac{(1-\delta)(1-\delta-\epsilon)}{1-\delta-\frac{\epsilon}{2}}
 \end{aligned}$$

Because  $\epsilon > 0$  each term on the left is always greater than each term on the right, this is always true. Because the dictator's utility is monotonic in each region, we can then say that any  $\beta$  in the regime-aligned low region produces a higher utility for the government than any  $\beta$  in the firm-friendly region. Because the firm is also better off in the regime-aligned range, the dictator will never face an incentive to appoint a firm-friendly judge.

### Never Appoints Anti-Firm

$$\begin{aligned}
 1 &\geq 1 - \frac{\delta(\beta-\delta)}{\beta} - \frac{(\beta-\delta)^2}{2\beta} \\
 1 &\geq 1 - \frac{\delta((\delta+\epsilon)-\delta)}{(\delta+\epsilon)} - \frac{((\delta+\epsilon)-\delta)^2}{2(\delta+\epsilon)} \\
 1 &\geq 1 - \frac{\delta(\epsilon)}{(\delta+\epsilon)} - \frac{(\epsilon)^2}{2(\delta+\epsilon)}
 \end{aligned}$$

Because  $\epsilon > 0$ , this is always true. For any  $\beta > \delta$ , the government would always be better off picking  $\beta = \delta$ . Since any firm that will invest when  $\beta > \delta$  will also invest when  $\beta = \delta$  as shown previously, the dictator then never has any incentive to appoint  $\beta > \delta$ . This combined with the result from the section above means that the dictator will always appoint a judge such that  $2\delta - 1 \leq \beta \leq \delta$ .

## C.5 Pooling Equilibria Comparative Statics

### C.5.1 Dictator's Choice of Judge

Because both the firm and the dictator's utility is monotonic in  $\beta$  in equilibrium, we can say the dictator will choose the largest  $\beta$  in the equilibrium range that will support investment, up to and including  $\beta = \delta$ . Below, I analyze how the investment constraint changes as a result of  $\pi$ :

$$\begin{aligned}
 \pi \left( 1 - \left( \frac{\beta^2}{2} - \frac{(1-\delta)(\delta^2-\beta^2)}{2(1-\beta)} \right) \right) - \kappa_i \\
 1 - \left( \frac{\beta^2}{2} - \frac{(\delta-\beta)(\delta^2-\beta^2)}{2(1-\beta)} \right) &\geq 0 \\
 1 &\geq \frac{\beta^2}{2} - \frac{(\delta-\beta)(\delta^2-\beta^2)}{2(1-\beta)}
 \end{aligned}$$

This is always true for all values of these parameters. So in equilibrium, the firm's investment constraint is then monotonically increasing in  $\pi$ , meaning that the investment constraint is becoming less binding. As discussed previously, the investment constraint is monotonically decreasing in  $\beta$  and becoming more restrictive, while the dictator's utility is monotonically increasing in  $\beta$ . Recall that the dictator's strategy is best off when appointing  $\beta$  as close to  $\delta$  as possible subject to the investment



constraint. If the investment constraint is increasing in  $\pi$ , this means that  $\beta$  is either not changing or strictly increasing in  $\pi$  to the extent that it still satisfies the investment constraint which increases in  $\pi$ . If the constraint was not binding in the first place, then  $\beta = \delta$  and there is no change. If the constraint was binding before increasing  $\pi$ , then  $\beta$  will increase up until  $\beta = \delta$ . Thus the effect of increasing  $\pi$  on  $\beta$  is always greater than or equal to 0. This fact means that in equilibrium we can treat changes in  $\pi$  as changes in  $\beta$  for simplicity, noting that the effect of increasing  $\pi$  on the value of  $\beta$  for the following probabilities will either be 0 in the event that the constraint is not binding and  $\geq 0$  in the event that the constraint was binding. So for the following probabilities, I examine how they change as a response to an increase in  $\beta$  to understand how changing  $\pi$  affects them.

### C.5.2 Probability of Review

The probability that the dictator will review any given ruling of the court in equilibrium can be written as:

$$(1 - \beta) * \left(1 - \frac{1-\delta}{1-\beta}\right) \\ \delta - \beta$$

This is always decreasing in  $\beta$ .

### C.5.3 Probability of Dictator's Compliance

The probability that the dictator will comply with any given ruling of the court in equilibrium can be written as:

$$1 - (\delta - \beta) * \left(1 - \frac{1-\delta}{1-\beta}\right) \\ 1 - (\delta - \beta) - \frac{(\delta-\beta)(1-\delta)}{1-\beta} \\ 1 - \delta + \beta - \frac{(\delta-\beta)(1-\delta)}{1-\beta}$$

The derivative of this is  $\frac{(\beta-\delta)(\beta+\delta-2)}{(1-\beta)^2}$ , which is always positive for all values of  $\beta$  and  $\delta$ . Thus, intuitively, the dictator's probability of compliance increases in  $\beta$  as  $\beta$

approaches the dictator's own cut-line of  $\delta$ . This means that the probability of the dictator's compliance with the court is decreasing in  $\pi$ .

#### **C.5.4 Firm's Expected Corruption Level**

Section C.4.1 has established that the firm's expected cost of agent corruption in equilibrium is monotonically increasing in  $\beta$ , which is increasing in  $\pi$ .

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